2024 Oklahoma Standard Setting Report

OSTP ELA and Mathematics—Grades 3–8

June 17–21, 2024—Broken Arrow, Oklahoma

Prepared by Cognia for the Oklahoma Department of Education

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Chapter 1. Overview of Standard Setting Procedures

The purpose of this report is to summarize the activities involved in the Standard Setting process for the Oklahoma School Testing Program (OSTP) in English Language Arts (ELA) and mathematics grades 3–8 on behalf of the Oklahoma State Department of Education (OSDE). Changes in the Oklahoma Academic Standards for ELA and mathematics were implemented in Fall 2021 and 2022 respectively, prompting the need to reset standards. The primary goal of the standard setting was to determine the knowledge, skills, and abilities (KSAs) that students must demonstrate to be classified into one of the performance levels (i.e., Advanced, Proficient, Basic, or Below Basic).

The standard setting process used was a modified version of the Item-Descriptor (ID) Matching method (Ferrara & Lewis, 2012; Cizek & Bunch, 2007). The ID Matching method was selected because it reduces cognitive burden on panelists as compared to other standard setting methods that require probability judgments about hypothetical high- and low-performing students, and it most clearly translates content standards into performance categories as compared to other methods of standard setting (Cizek, Bunch, & Koons, 2004).

The standard setting meeting was held from June 17th through June 21st of 2024. In all, 66 panelists participated in the process and were organized into six grade-band panels. Each panel completed the standard setting activities for two grades. Within the breakout sessions, panelists were organized into three tables of 3–4 panelists each plus a facilitator provided by Cognia. At the end of the week, two articulation panels were convened (one each for ELA and mathematics) that consisted of 10–12 panelists from the original standard setting panels.

This report is organized into three major sections, describing tasks completed prior to, during, and after the standard setting meeting.

Chapter 2. Tasks Completed Prior to Standard Setting

2.1 Creation of Performance Level Descriptors

Oklahoma State Statute: Title 70. Schools, Chapter 22 – Testing and Assessment, Section 1210.541 – Student Performance Levels and Cut Scores – Accountability System mandates the adoption of "a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act." The law states that performance levels must be labeled and defined as follows:

1. Advanced, which shall indicate that students demonstrate superior performance on challenging subject matter;
2. Proficient, which shall indicate that students demonstrate mastery over appropriate grade-level subject matter and that students are ready for the next grade, course, or level of education, as applicable;
3. Basic, which shall indicate that students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level or course; and
4. Below Basic, which shall indicate that students have not performed at least at the Basic level.

Cognia collaborated with the Oklahoma State Department of Education (OSDE) to develop Range performance level descriptors (PLDs) for OSTP ELA and mathematics grades 3–8. Prior to this collaboration, Policy PLDs were established by the OSDE to define the knowledge and skill level expectations for the Oklahoma Academic Standards for ELA (OAS-ELA) and mathematics (OAS-M).

In developing the draft Range PLDs, Cognia worked collaboratively with OSDE and took into consideration the content standards and the achievement construct the PLDs represent, and used statements developed for the OSTP ELA and mathematics grades 3–8 assessments to organize Range PLDs for each assessable OSTP standard and objective. Cognia reviewed the content standards to select (a) verbs that define ELA and mathematics skills and thinking processes, (b) nouns to identify knowledge and understanding of ELA and mathematics facts and concepts, and (c) when necessary, modifiers (i.e., adverbs, adjectives) that indicate levels of frequency, consistency, or quality of student performance. Following the framework described in Egan et al. (2012), Cognia collaborated with OSDE and Oklahoma educators to review the draft Range PLDs (i.e., knowledge and skill expectations for all students who have achieved the range of scores in a performance level). Lastly, Cognia and OSDE worked together to approve final Range PLDs ahead of the standard setting meeting. The final Range PLDs were approved by OSDE in April of 2024.

See Appendix A for the final approved Range PLDs for OSTP ELA and mathematics grades 3–8.

2.2 Preparation of Materials

Preparing for the standard setting meeting involved analyzing operational test data and organizing key materials. The materials that were prepared prior to the standard setting meeting included the following:

- Ordered Item Booklets (OIBs)
- Content-based benchmarks
- The Cognia Standard Setting Toolkit
- Panelist materials
- Presentation materials
- Data, information, and analysis materials

Details related to the materials preparation for each of the above categories are provided below.

2.2.1 Ordered Item Booklets (OIBs)

The standard setting was conducted using test items from prior administrations of the OSTP ELA and mathematics grades 3–8 assessments. The initial OIBs comprised operational test items, which were ordered in terms of difficulty. Item difficulty, as defined by its scale location given a response probability (RP) value, was calculated based on data from OSTP ELA and mathematics grades 3–8 students during the prior test administrations. Items ascended in order of difficulty through the OIB. Easier items appeared earlier in the OIB, and more difficult items appeared later.

Response probability (RP) criterion. The RP 67 criterion, defined by the Item Response Theory (IRT) scale value associated with a 67% chance of answering the item correctly, was used to order items in the OIB for the OSTP ELA and mathematics standard setting meeting.

Collection of items for the OIB. To ensure that the items included in the OIB spanned the difficulty continuum—from easy to difficult—and that items were found around the points on the test scale where cut scores were likely to appear, the following procedure was used for building the final OIBs that were used during the standard setting meeting:

- Start with an operational test form: Cognia ordered the items from the Spring 2024 operational test form. Operational items that fell below the statistical thresholds for psychometric adequacy were replaced with items from the same domain that did meet the thresholds.
- Augment the OIB with additional items: As needed, Cognia chose additional items for the OIB from previously field-tested items. For example, if the OIB did not have many items near the point in the test scale where the Proficient benchmark was expected, then items were added to the OIB that had locations around this point based on availability of such items in the pool.
- Review the balance of content against the blueprint: Since additional items were substituted in or added to the OIB, Cognia confirmed that the items had a balance of content consistent with the

test blueprint to ensure that individual content strands were less likely to be over or underrepresented in the OIB through the augmentation process.

Appendix B includes tables showing the blueprints for each subject- and grade-specific OIB.

2.2.2 Content-Based Benchmarks

In standard setting, benchmarks refer to any content- or policy-based information that comes from an external source and is presented to panelists. The exact way that the benchmarks are used in the standard setting depends upon the methodology implemented. However, the general use is the same: standard setting panelists see and consider information from these external measures as they engage in the standard setting meeting activities.

Content-based benchmarks were used for the OSTP ELA and mathematics grades 3–8 standard setting. The procedure for determining the content-based benchmarks was as follows:

- Prior to the standard setting meeting, Cognia and SDE content teams reviewed each item in the OIB and matched the items to one of three PLD levels (Basic, Proficient, or Advanced). Note that the content specialists did not assign any items to the Below Basic PLD. This is because the Below Basic performance level is described simply as the inability to perform at the Basic level.
- Cognia psychometricians then compiled the content specialists' item-PLD alignments and calculated threshold regions through logistic regression. Specifically, the regions were calculated by combining the item-PLD judgments to derive a set of cut scores with a margin of error added around each cut score. See Appendix C for calculation details.
- The above process resulted in content-based benchmark regions for the Proficient and Advanced levels.

Special Considerations for the Basic Benchmark Region. As mentioned previously, the Below Basic performance level is described as the inability to perform at the Basic level; therefore, items were not written to the Below Basic level and, by extension, it was not feasible to align items to the Below Basic level. Since there were no Below Basic item-PLD alignments, the above logistic regression method could not be employed to calculate a cut and corresponding region for the Basic level.

Thus, to facilitate the Basic level cut score identification, Cognia psychometricians empirically derived the cut score by constructing a mini–Test Characteristic Curve (TCC) based on items that were aligned to the Basic PLD. Cognia calculated a theta value that was associated with 50% beyond chance of the expected score of the mini–TCC. The '50% beyond chance' criterion is reflected in the performance level descriptor and takes guessing into account. Three OIB pages were added below and above the empirical cut score to create an empirical threshold region for the Basic level.

2.2.3 Cognia Standard Setting Toolkit

This section provides details about the Cognia Standard Setting Toolkit that panelists used to complete the main standard setting activities during the meeting. The Cognia Standard Setting Toolkit was

developed, tested, and set up by Cognia prior to the meeting and included digital ordered item booklets with integrated item lists, judgment forms, readiness surveys, and the final workshop evaluation survey.

The Cognia Standard Setting Toolkit consisted of a digital interface that first presented the ordered item list view (i.e., a list of items separated by rows with the easiest item at the top and the most difficult at the bottom). From the initial screen, panelists could toggle to the corresponding item detail view and use navigation arrows to move 'up' or 'down' in the booklet. The item detail view showed a PDF of the full item with the response options, as well as any stimuli or rubrics associated with the item. The ordered item booklets were created as discussed in a previous section of this document. Integrated judgment forms were available within both the item list and detail views. The judgment forms provided space for users to note (1) the relevant knowledge, skills, and abilities (KSAs) needed to answer the item, (2) any additional information that came to mind as panelists undertook the judgment task for each item, and (3) item descriptor matches. Any notes entered by the user in the item list view screen persisted when the user switched to the item detail view screen and vice versa. In addition to the above, the Cognia Standard Setting Toolkit included the round-specific readiness surveys that panelists completed before undertaking each judgment round. Finally, the toolkit included the final workshop evaluation survey that panelists completed at the conclusion of the standard setting meeting.

Additional details and screenshots of the Cognia Standard Setting Toolkit are available in Appendix D.

2.2.4 Panelist Materials

Cognia developed specific and relevant materials that were used by panelists during the meeting. Because panelists utilized the Cognia Standard Setting Toolkit for most of the standard setting activities, some of the materials were presented digitally within the Toolkit. Table 2-1 includes a list of the materials developed for the panelists and their mode of presentation.

Table 2-1. Panelist Materials Prepared Prior to the Standard Setting Meeting

Panelist Material	Paper	Digital Online	Digital Within the Toolkit
Meeting Agenda	✓	✓	
Non-disclosure Agreement	✓		
OSTP ELA or Mathematics Test		✓	
Performance Level Descriptors (PLDs)	✓		✓
ELA and Mathematics Standards	✓		✓
Formula Sheets (Mathematics Grades 6-8)	✓		
Definition Sheets (ELA)	✓		
Practice Items and Judgment Forms			✓
Round Readiness Surveys			✓
Ordered Item Booklets (OIBs)			✓
Integrated Item Map and Judgment Forms			✓
Workshop Evaluation Survey			✓

2.2.5 Presentation Materials

Several PowerPoint presentations were used throughout the duration of the meeting. An orientation PowerPoint presentation was delivered during the opening session of the standard setting meeting, while panel-specific facilitation PowerPoint presentations guided the facilitators through the distribution of information and materials during the main portion of the standard setting meeting. Finally, content-specific PowerPoint presentations were used during the ELA and mathematics articulation meetings that occurred at the conclusion of the standard setting portion of the meeting. Cognia developed the initial presentations and OSDE reviewed and approved the presentations prior to the standard setting meeting.

Notes and scripts that coincided with the PowerPoint slides were added within the presentations to guide facilitators. The notes and scripts for the meeting provided information, including procedural steps, talking points, definitions to explain concepts to panelists, answers to commonly asked questions, and specific materials to distribute to panelists. Copies of the facilitation, orientation, and articulation PowerPoint presentations are available in Appendices E, I, and L, respectively.

2.2.6 Data, Information and Analysis Materials

Prior to the standard setting meeting, all necessary data, information, and other relevant analysis materials were generated for use during the meeting. Table 2-2 shows a list of materials that were generated, as well as the purpose of each.

Table 2-2. Data, Information, and Analysis Materials Generated Before the Standard Setting Meeting

Data, Information, and Analysis Materials	Description/Purpose
Ordered Item Booklets (OIBs)	Each OIB comprised a set of items ordered by item difficulty and was generated according to the procedures outlined in section 2.2.1 of this report. Panelists worked within the OIBs to review items and follow the ID Matching process.
Content-based benchmark regions	Benchmark regions were calculated according to the procedures outlined in section 2.2.2 of this document. Panelists viewed and considered information from these benchmark regions as they engaged in the standard setting meeting activities.
Cognia Standard Setting Toolkit	A digital platform that was set up and tested prior to the meeting and included all necessary item data and information, as well as information related to the standards and PLDs.
Student Test Data	Student test data from the Spring 2024 administration of the OSTP ELA and mathematics grades 3-8 test were prepared to enable the calculation of impact data during and after the meeting.
Programming	Cognia created and tested programming for computing the following: - Theta cut scores: Cut scores on the theta scale based on panelists' judgments after each judgment round. - Various statistics: Standard errors, percent exact and adjacent (based on differences between judgments from panelists and content specialists). - Panelist judgment frequency distributions: Computed for all panelists after each round. The code also produced presentation artifacts for use during the discussion session after each round. - Impact data: Code that used the theta cut scores and student test data to calculate the percentage of students in each performance level category.

2.3 Selection of Panelists

As emphasized in Cizek and Bunch (2007), regardless of the method used, the selection of panelists is a principal factor in determining standard setting outcomes and maximizing the validity of the standard-setting process. The guidance provided by *Standards for Educational and Psychological Testing* (AERA et al., 2014) states that "a sufficiently large and representative group of judges should be involved to provide reasonable assurance that results would not vary greatly if the process were repeated." Consistent with the above guidance and respecting practical considerations regarding the maximum size of a group that can be successfully managed, the goal was to recruit standard setting panels of 10–12 members per grade-band panel representing different stakeholder groups to set standards for OSTP ELA and mathematics. Targets for the size and composition of the panel were also consistent with federal guidelines as described in *Standards and Assessment Peer Review Guidance: Information and examples for meeting requirements of the No Child Left Behind Act of 2001* (U.S. Department of Education, 2009).

Two goals were proposed for recruiting standard setting panelists: (a) diverse experience and points of view regarding students, student learning, and Oklahoma content standards and (b) diverse representation among panelists in years of teaching, geographic regions in the state, school system sizes, school system urbanicity, and the racial/ethnic make-up of the student populations.

Chapter 3. During the Standard Setting Meeting

3.1 Overview of the ID Matching Method

The Item-Descriptor (ID) Matching method is appropriate for setting standards for standards-aligned assessments like the OSTP ELA and mathematics grades 3–8 assessments. Assessment programs around the world have used ID Matching (e.g., Delaware, Massachusetts, Maryland, Mississippi, New Mexico, New York, South Carolina, and West Virginia; the Chicago and Philadelphia Public Schools; and programs in Brazil, Germany, and Finland).

ID Matching has advantages over Bookmark, Angoff, and other standard setting methods. Specifically, its cognitive-judgmental task requires that standard setting panelists, who are typically classroom educators, undertake a judgmental task that they are well suited for—matching item knowledge and skill response demands with knowledge and skill expectations in performance level descriptors (PLDs). The Bookmark and other methods require panelists to make probability judgments—something that people in general do not do well (e.g., Murphy, 2002). In addition, panelists do not need to hold a hypothetical borderline student in mind when they match items to descriptors and recommend cut scores, so the cognitive load and complexity of ID Matching is more manageable.

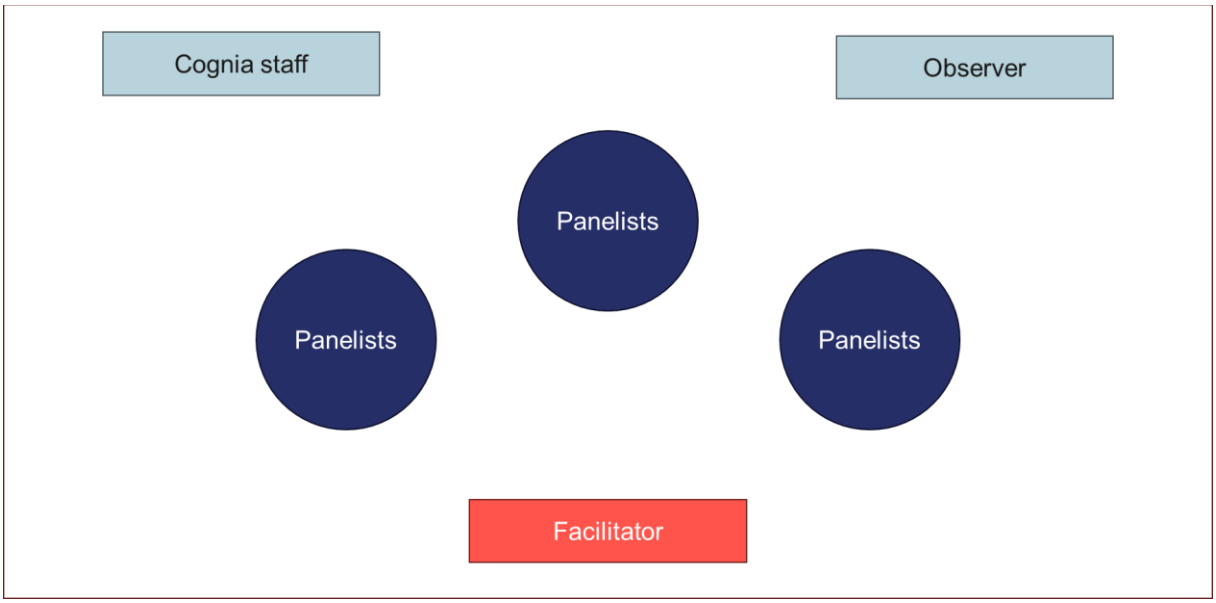
During standard setting using ID Matching, panelists review test items to identify the response demands of each item and then use the PLDs as their guide to match the item response demands to one of the performance level descriptors. The structure of the PLDs provides a general characterization of expected student knowledge and skill at each level and examples of the knowledge and skills that students at each performance level can be expected to demonstrate. By matching test items to specific claims from the Proficient PLD, for example, panelists identify the evidence in test items that supports the claims in that descriptor. Supporting the claims represented in the Proficient PLD contributes to the validity of interpretations of student performance, based on the PLDs, and to the overall validity argument that a student who achieves that level on the assessment has demonstrated adequate understanding of essential concepts with respect to the standards being measured. This logic applies to all cut scores and performance levels.

3.2 Meeting Logistics

3.2.1 Standard Setting Panelists and Workshop Staff

Participants of the OSTP ELA and mathematics standard setting meeting included meeting facilitators, content specialists, panelists, observers, and psychometricians. For the main standard setting activities, each of the six panels convened in a separate breakout room. Figure 3-1 illustrates the general setup for the breakout rooms.

Figure 3-1. Standard Setting Breakout Room Setup



Facilitators

Each standard setting panel was led by a facilitator. The facilitators were members of Cognia's staff who have experience facilitating standard setting meetings and were responsible for leading the panelists through the standard setting process.

The facilitators, with support from Cognia psychometricians and content specialists, ensured that appropriate standard setting processes were followed throughout all phases of the meeting and verified that panelists had a solid understanding of the tasks they were being asked to complete. The facilitators underwent preparatory training to lead the standard setting meeting. Psychometric staff from Cognia conducted the training, which included:

- OSTP ELA or mathematics overview: The facilitators were provided with an overview of the OSTP ELA or mathematics tests, including the different item types, scoring rules, and performance levels.
- Cognia Standard Setting Toolkit: The Cognia Standard Setting Toolkit was used by panelists throughout the standard setting meeting. The facilitators became familiar with the Toolkit to lead the standard setting process.
- Standard setting process: Facilitators participated in a walkthrough of the standard setting meeting, with a focus on specific issues for these meetings, such as time management, the use of the Cognia Standard Setting Toolkit, and communicating feedback information.
- Training slides and presentation script/notes: As part of the walkthrough of the standard setting process, facilitators reviewed the standard setting training slides. Notes in the standard setting training slides and a presentation script provided the facilitators guidance, including when specific language was to be used.

Content Specialists

Two Cognia content specialists, one each for ELA and mathematics, supported the standard setting meeting throughout the week. They presented information during the orientation session related to the development of the tests, procedures for scoring the items, and development/organization of the PLDs. In addition, the content specialists supported the facilitators throughout the standard setting process. Finally, the content specialists were co-facilitators during the articulation meetings.

Panelists

The OSDE selected panelists prior to the standard setting meeting. The goal for panel selection was to include participants who were primarily teachers, but also to include school administrators, higher education personnel, and stakeholders from other interest groups. Moreover, to the extent possible, panelists were selected to reflect a balance of gender, race/ethnicity, and geographic location. Finally, panelists were selected who were familiar with the relevant ELA or mathematics grades 3–8 subject matter. Table 3-1 provides summary information about the panelists that participated in the OSTP ELA and mathematics standard setting.

Appendix F contains detailed panelist information for each panel, including districts represented along with the gender and ethnicity breakdowns.

Table 3-1. Number of Panelists Overall and across Years of Teaching Experience

		Years of Teaching Experience			
Panel	**Overall**	**1 – 5**	**6 – 10**	**11 – 20**	**21+**
ELA Grades 3-4	11	8	2	1	--
ELA Grades 5-6	10	5	1	3	1
ELA Grades 7-8	10	5	3	1	1
Mathematics Grades 3-4	11	4	2	3	2
Mathematics Grades 5-6	12	4	--	4	4
Mathematics Grades 7-8	12	2	4	3	3
ELA Articulation	10	7	1	2	--
Mathematics Articulation	12	2	2	4	4

Observers

The purpose of the observers was to allow select individuals the opportunity to observe the standard setting process and, in some cases, provide feedback. Two types of observers, general and independent, were present during the meeting. The general observers consisted primarily of OSDE staff members that were assigned to specific breakout rooms and observed in those rooms for the duration of the meeting. In addition, three independent observers (two for ELA and one for mathematics) were also present during the meeting in an official observer capacity. The goal of the independent observers was to observe and take notes during the standard setting meeting and then write a report based on their observations. Cognia supplied the independent observers with Cognia Chromebooks, as well as specific observer-status log in credentials for the Cognia Standard Setting Toolkit. Within the Toolkit, the observers had the same access and permissions as a panelist; however, any actions they took or data they entered were excluded from the analyses and proceedings. Thus, the observers were able to follow along with the standard setting process. During the meeting, the independent observers floated between breakout sessions, timing their entries and exits to coincide with natural breaks to minimize any disturbances. The

independent observers also had access to the approved standard setting plan, PowerPoint presentations, facilitation scripts, PLDs and any other documents that were used during the meeting.

Psychometricians

Three Cognia psychometricians were on site to manage the Cognia Standard Setting Toolkit, complete real-time analyses during the meeting, and support the facilitators as needed throughout the standard setting process. A fourth Cognia psychometrician worked off-site to replicate the analyses conducted by the on-site psychometrician, thereby ensuring accuracy of the results. The lead psychometrician presented measurement-related information, as well as a broad overview of standard setting concepts, to the panelists during the orientation session. During the breakout sessions, the psychometricians floated between breakout rooms and answered any measurement questions or provided support to the facilitators as needed. In addition, they performed all calculations throughout the standard setting and presented during debrief meetings with OSDE whenever results were available. Finally, psychometricians presented impact data to panelists at the conclusion of the standard setting portion of the meeting and co-facilitated the articulation meetings.

3.2.2 Standard Setting Meeting Schedule

The standard setting portion of the meeting consisted of four days of activities. The meeting started with an opening session on the morning of day one before continuing with training, practice, and round one for the upper grade associated with each grade-band panel. Panelists engaged in the standard setting activities until they completed three rounds for each grade in their respective grade-band panels. After completing the activities for both grades, panelists completed a final standard setting workshop evaluation survey. The standard setting portion of the meeting concluded midday on day four for the mathematics panels, while the ELA panels concluded at the end of day four. At the conclusion of the standard setting portion of the meeting, select panelists from each panel convened for half a day to complete content-specific articulation activities. Table 3-2 presents an overview of the schedule for the standard setting meeting. A detailed meeting agenda can be found in Appendix G.

Table 3-2. Overview of Schedule for OSTP ELA and Mathematics Standard Setting Meeting

<table>
<tr><th>Meeting Day</th><th>Time</th><th colspan="6">Sessions</th></tr>
<tr><td rowspan="2">Day 1</td><td>AM</td><td colspan="6">General Orientation Session (All Participants)</td></tr>
<tr><td>PM</td><td rowspan="8">ELA 3 – 4 panel standard setting breakout session</td><td rowspan="8">ELA 5 – 6 panel standard setting breakout session</td><td rowspan="8">ELA 7 – 8 panel standard setting breakout session</td><td rowspan="6">Mathematics 3 – 4 panel standard setting breakout session</td><td rowspan="6">Mathematics 5 – 6 panel standard setting breakout session</td><td rowspan="6">Mathematics 7 – 8 panel standard setting breakout session</td></tr>
<tr><td rowspan="2">Day 2</td><td>AM</td></tr>
<tr><td>PM</td></tr>
<tr><td rowspan="2">Day 3</td><td>AM</td></tr>
<tr><td>PM</td></tr>
<tr><td rowspan="2">Day 4</td><td>AM</td></tr>
<tr><td>PM</td><td colspan="3">Mathematics Vertical Articulation Meeting</td></tr>
<tr><td>Day 5</td><td>AM</td><td colspan="3">ELA Vertical Articulation Meeting</td><td colspan="3"></td></tr>
</table>

3.2.3 Standard Setting Meeting Security

During the meeting, panelists reviewed operational test items, preliminary cut score recommendations, and associated impact data. Due to the nature of this information, security was a critical component of the meeting. Specific procedures were established to ensure the security of all materials was maintained.

As part of the meeting, facilitators reviewed the process for maintaining the security of materials, discussions, and preliminary results from the meeting. Panelists were not permitted to share or discuss secure materials and information outside of meeting rooms. To confirm that the panelists understood and agreed to the security conditions, they signed security and non-disclosure agreements (an example is provided in Appendix H).

To preserve the security of the materials and activities within the Cognia Standard Setting Toolkit, each panelist was provided a Chromebook and unique login credentials. The supporting Cognia psychometrician-controlled panelist access to each section of the Toolkit throughout the meeting. Access to the Toolkit was disabled at the conclusion of the standard setting meeting and the Chromebooks were wiped clean of all data.

3.2.4 ID Matching Standard Setting Procedure

Over the course of four days, panelists engaged in standard setting activities, starting with an opening session on day one. The opening session was followed by the main standard setting session during which panelists received training and engaged in a practice round. Next, panelists engaged in three consecutive judgment rounds for the upper grade associated with their respective grade-band panels, with preparation and discussion between rounds. Panelists then engaged in the same activities for the lower grade associated with their respective grade-band panels. The standard setting portion of the meeting was concluded after the third round for the lower grade, at which point a final workshop evaluation survey was administered.

3.3 Data Review, Cut Score Calculation, and Analyses

3.3.1 Initial Data Review

Given the content-based nature of the standard setting method, it was critically important that panelists remained on task (i.e., made content-based judgments) while engaging in the standard setting process. While the panelist training was targeted and special emphasis was placed on the content-based nature of the work, content specialists were also on hand to review panelists' initial data during the judgment rounds of the standard setting meeting.

Content specialists reviewed panelists' notes on the knowledge, skills, and abilities required by the items, as well as their content-based reasoning to determine whether the panelists were on task. This qualitative evaluation process served as an initial check and allowed for early intervention and adjustment of training procedures as needed.

3.3.2 Cut Score Calculation

To calculate the Proficient and Advanced cut scores during the standard setting meeting, all item-PLD alignment judgments from each panelist were gathered and used as input in a logistic regression calculation (see Appendix C for details).

For example, to calculate the Proficient cut score all items that were aligned to the Basic level were coded as 0, while all items aligned to Proficient and above were coded as 1. The 0/1 coding was required as input for the regression analysis. The result from the above analyses was a theta cut score between the Basic and Proficient performance levels (i.e., the Proficient cut).

To facilitate the Basic level cut score identification, Cognia psychometricians empirically derived the cut score by constructing a miniature Test Characteristic Curve (TCC) based on items that were aligned to the Basic PLD.

Note that during the first round of standard setting, panelists made item-PLD alignments for each item. During rounds 2 and 3, they could revise or retain their item-PLD alignments as they saw fit. Thus, the above process was used to calculate cuts during each round of the standard setting by using the complete set of panelists' judgments for that specific round.

The cut score calculation process was repeated for each grade within each content area.

3.3.3 Analysis Procedure

Cognia psychometricians conducted a series of analyses on the final set of item-PLD alignment data for each grade within each content area. These analyses aimed to identify aberrant and/or outlier data and were performed as follows:

1. Cognia conducted statistical analyses of panelists' item-PLD alignment data by calculating the percent exact, adjacent, and discrepant for each panelist on each performance level, as compared to the results from SDE and Cognia content specialists. Panelists with the least percentage exact were identified as showing statistically aberrant behavior.
2. Content specialist(s) then reviewed the qualitative data for all panelists identified as statistically aberrant. The specialist(s) reviewed panelists' notes on the knowledge, skills, and abilities required by the items, as well as their content-based reasoning to determine if the panelists were on task.
3. After analyses and qualitative review, none of the panelists were identified as both statistically and qualitatively aberrant; therefore, all panelist data were retained.
4. The next phase of the analyses included conducting logistical regression to calculate cut scores. Since the logistical regression method is sensitive to statistical outliers and the presence of such outliers violates the assumptions of the model, an outlier analysis was performed in the form of visual inspection of the initial logistic regression curves to identify any

statistical outliers. Data points identified as statistical outliers were removed before final cut scores were calculated.

5. Final logistic regression analyses were conducted to calculate the Proficient and Advanced cut scores, and the TCC method was used to calculate the Basic cut scores.
6. The resulting cut scores were applied to student data from the spring 2024 administration of the OSTP ELA and mathematics assessments to calculate the impact data (i.e., the percentage of students that were classified into each performance level based on the standard setting cut scores).

3.4 Opening Session and General Orientation

The opening session on day one was the panelists' first opportunity to meet OSDE and Cognia staff. It was important that the panelists felt appreciated and valued for their content expertise. A copy of the orientation session PowerPoint presentation is available in Appendix I.

Cognia representatives set the tone for the workshop in the opening session by

1. welcoming all panelists and expressing appreciation for their commitment to the process.
2. describing the development of the OSTP ELA and mathematics assessments, as well as the associated performance level descriptors.
3. explaining expectations for outcomes they anticipated from the standard setting process.
4. explaining procedures that would be used to review and approve the cut scores.

3.5 Standard Setting Breakout Sessions

After the general orientation session, panelists and relevant staff convened in their assigned grade band and subject-specific breakout sessions. A copy of the general facilitation PowerPoint presentation is available in Appendix E. During the breakout sessions, panelists were organized such that three to four panelists were assigned to each table. Chromebooks, supplied by Cognia and set up for the standard setting, were distributed to all panelists. Facilitators guided panelists through the following activities:

- Overview and introductions
- Experience the test
- Use of the Cognia Standard Setting Toolkit
- Review of the standards and PLDs
- Training on the ID Matching process
- Modeling and practice
- Judgment rounds and feedback
- Final workshop evaluation survey

3.5.1 Overview and Introductions

To begin the breakout sessions, the individuals in each room introduced themselves. After introductions, the facilitator reviewed the security and non-disclosure information. The facilitator then provided a high-level overview of the process. Facilitators also reiterated some of the important points raised during the orientation session as needed. The panelists had an opportunity to ask questions before proceeding.

3.5.2 Experience the Test

After the overview and introductions, panelists experienced the OSTP ELA or mathematics test. Using individual Chromebooks provided by Cognia, panelists were instructed on how to log into their Chromebooks and navigate to the testing platform site. Cognia staff provided panelists with unique login credentials and once they successfully accessed the testing platform, panelists experienced the test the same way students do to become familiar with the test from the students' perspective.

In the interest of time and efficiency, panelists completed the 'Experience the Test' activity only once during the standard setting meeting and a maximum of 45 minutes was allocated for this activity. Except for the ELA 5–6 panel, all panels experienced the test based on the upper grade in their respective breakout session. For example, panelists in the mathematics 3–4 group experienced the grade 4 mathematics test. In the case of the ELA 5–6 panel, panelists experienced the ELA grade 5 test so that panelists in this grade-band panel were exposed to the writing prompt that was part of the grade 5 test (but not part of the grade 6 test; OSTP only administers writing prompts in ELA in grades 5 and 8).

The purpose behind this activity was for panelists to have a sense of the test and testing platform from the student perspective. Panelists were encouraged to experience the test but were directed not to linger over items or spend time evaluating any items.

3.5.3 Use of the Cognia Standard Setting Toolkit

The facilitator guided panelists through the steps needed to log in and access the Cognia Standard Setting Toolkit. Each panelist used their email and an initial assigned password to access the site. After their initial log in, panelists were directed to change their passwords, and then prompted to log back into the system with their new passwords. Their emails and individual passwords were used to access the Toolkit for the duration of the standard setting meeting. Once everyone completed the log in procedure, they viewed an initial screen with tabs that linked to the standards and PLDs.

3.5.4 Review of the Standards and Performance Level Descriptors

Before engaging in their item judgment tasks, panelists studied the standards and the performance level descriptors (PLDs). This important step was designed to ensure that panelists thoroughly understood the knowledge, skills, and abilities (KSAs) needed for students to be classified into the four performance levels (Below Basic, Basic, Proficient, and Advanced).

Throughout the standard setting process, panelists studied the standards and PLDs associated with the OSTP ELA or mathematics assessments relevant to the content area and grades for their respective breakout sessions. Panelists were asked to consider the KSAs detailed in the standards, and how they were reflected in the PLDs.

Facilitators used their PowerPoint training slides and associated scripts to guide panelists through an in-depth review of the PLDs after viewing the standards. Facilitators encouraged panelists to pay attention to the verbiage in the descriptors with the goal of reaching a common understanding of the meaning behind the verbiage, and the elements that distinguished the different performance levels from each other.

Within each content area and grade band, panelists reviewed the standards and PLDs before starting the judgment rounds for each of the two grades. To begin, panelists focused on the standards and PLDs for the upper grade relative to their breakout session. For example, panelists in the ELA 3–4 group first focused on the standards and PLDs for ELA grade 4. Once they completed all training and the standard setting activities (including three rounds of judgment) for grade 4, the panelists in the ELA 3–4 group then moved on to ELA grade 3. Facilitators guided panelists through an in-depth review of the ELA grade 3 standards and PLDs before panelists completed the three judgment rounds for the grade. This same sequential process was followed in each of the six breakout sessions.

The PLDs across all grades and content areas are provided in Appendix A.

3.5.5 Training on the ID-Matching Judgmental Task

Once panelists reviewed and discussed the standards and PLDs associated with the upper grade level within their breakout session (e.g., grade 8 for the mathematics 7–8 group), the facilitator led them through more detailed training on the ID-Matching judgmental task. The facilitator used a customized PowerPoint slide deck and script to explain the following concepts: the ordered item booklet (OIB), how to review items and what information to consider while doing so, and how to make item-descriptor matches. The facilitator emphasized the importance of considering the knowledge, skills, and abilities (KSAs) required by an item, as well as the information in the PLDs, to make their item-descriptor matches.

After explaining the main concepts and the process for making item-descriptor matches, the facilitator provided a high-level description of the round-by-round judgment procedures and what to expect before (i.e., readiness surveys), during (i.e., judgmental tasks and, when relevant, consideration of benchmarks), and after (i.e., presentation of results and discussion) each round.

During the training, facilitators provided clear explanations and directions while ensuring that the panelists had all the information and support needed to undertake the standard setting process. The facilitators encouraged panelists to ask questions during the training but also reminded panelists that they would have the opportunity to practice before beginning the first round. In addition, the facilitators reminded panelists that they would review concepts as needed throughout the standard setting process.

A generalized version of the breakout session PowerPoint presentation is available in Appendix E. Note that the generalized version of the PowerPoint presentation was used as the foundation but was customized for each panel within each content area to account for grade or content specific needs. The PowerPoint presentations were also accompanied by facilitation scripts.

3.5.6 Modeling and Practice

After training on the ID-Matching process, the facilitator provided a brief demonstration of the Cognia Standard Setting Toolkit. A Cognia psychometrician, with dedicated access to a management screen

within the Cognia Standard Setting Toolkit, was responsible for managing aspects related to the system. Once all panelists successfully accessed the system, the Cognia psychometrician advanced all participants to the practice round.

Before proceeding with modeling and practice, the facilitators took some time to make sure panelists knew how to navigate within the Cognia Standard Setting Toolkit. Specifically, the facilitators pointed out that the first screen presented the item list view (a list of items ordered by difficulty) and then demonstrated how to: use the text boxes and item-descriptor dropdown menu, navigate to the item detail view, and use available tabs to access any additional item information when relevant (i.e., stimuli or rubrics).

After the demonstration of the Cognia Standard Setting Toolkit, facilitators proceeded with the practice round which consisted of three sample items. Facilitators used the three sample items to model the judgmental task and guided panelists through making their own item-descriptor matches. During this practice round, the facilitators reinforced the training concepts.

The three sample items were chosen such that (1) none of the items were part of the OIB, (2) the first two items were relatively easy to identify in terms of item-PLD alignment, and (3) the last item was more challenging to identify in terms of item-PLD alignment (i.e., the item was expected to fall in a borderline region). Using sample items that were not part of the OIB allowed the facilitator to avoid undue influence over panelists' judgmental tasks in the standard setting rounds. In addition, the mix of items allowed panelists the opportunity to experience different levels of cognitive load while making their judgments, as would be the case once they considered the full set of items contained in the OIB.

Additionally, in the case of the ELA grades, the sample items were chosen such that a 2-point constructed response item was part of the sample set for grades where these items appeared on the operational test. This allowed panelists the opportunity to be exposed to this item type and practice how to engage with a multi-point item type during judgment rounds. During the modeling and practice session, panelists also had the opportunity for discussion with each other, to ask questions, and become more familiar with the Toolkit.

3.5.7 Judgment Rounds and Feedback

During the main portion of the standard setting meeting, panelists completed three consecutive rounds of judgments for each of the two grades relevant to the content area and grade band of their respective breakout sessions. Each panel began with the upper grade and concluded with the lower grade.

Each judgment round consisted of three distinct sessions: preparation, judgment, and feedback/discussion. This was an iterative process during which the outcomes of each judgment round were considered during the next judgment round. Table 3-3 provides a crosswalk of the activities, analyses, and outcomes for each session within each judgment round.

Table 3-3. Crosswalk of Activities, Analyses, and Outcomes by Judgment Round

Round	Session	Panelist Activities	Analyses	Outcomes
1	Preparation	Training; modeling and practice. Complete Round 1 readiness survey.	Determine if all panelists are ready to proceed.	--
	Judgment	Review all items. Determine the KSAs required to respond to the item and align each item to a PLD.	1. Calculate cut scores and standard errors 2. Calculate % exact agreement on OIB items 3. Create presentation artifacts	1. Initial cut scores 2. Presentation artifacts
	Feedback & Discussion	Discuss Round 1 results: focus on items with the most disagreement.	--	--
2	Preparation	Introduce content-based benchmarks. Complete Round 2 readiness survey.	Determine if all panelists are ready to proceed.	--
	Judgment	Review items (with special attention to items discussed in Round 1 feedback) and make changes to item-PLD alignments as desired.	1. Calculate cut scores and standard errors 2. Calculate % exact agreement on OIB items 3. Create presentation artifacts	1. Revised cut scores 2. Presentation artifacts
	Feedback & Discussion	Discuss Round 2 results: focus on items with the most disagreement, and benchmark regions.	--	--
3	Preparation	Briefly reiterate judgement process. Complete Round 3 readiness survey.	Determine if all panelists are ready to proceed.	--
	Judgment	Review items (with special attention to items discussed in Round 2 feedback) and make changes to item-PLD alignments as desired.	1. Complete series of analyses as described 2. Calculate cut scores and standard errors 3. Calculate associated impact data 4. Create presentation artifacts	1. Cut scores and impact data 2. Presentation artifacts
	Feedback & Discussion	Present final cut scores and impact data to panelists	--	

Readiness Surveys: Before each judgment round, panelists completed a readiness survey that consisted of questions about whether they felt prepared to undertake the upcoming round of judgments. Responses to the survey questions were reviewed before proceeding with the judgment round. If one or more panelists' answers indicated that they were not ready or did not understand one or more of the concepts, such information was relayed to the facilitator who then reviewed the necessary concepts with the panel. Panelists were then asked to complete the readiness survey again. Panelists moved on to the judgment round only when everyone indicated that they were ready to do so. The readiness survey for each round is available in Appendix J.

Feedback and Discussion: After each judgment round, Cognia psychometricians calculated a variety of statistics as described previously. In addition, the psychometricians created presentation artifacts in the form of frequency charts. During the feedback and discussion portion that followed each judgment round, the facilitator presented the frequency chart to the panelists and used it to facilitate table and room discussions. The discussions focused on items that showed the most disagreement between panelists, and panelists were encouraged to share their thoughts and viewpoints. Panelists were also encouraged to refer to training materials (e.g., OIB, item information, PLDs, and standards) as well as their own notes (taken within the Toolkit) throughout this discussion. Panelists were reminded that the goal of the discussion was not to persuade or influence others. Instead, the discussion centered around sharing their own reasoning for their PLD matches and listening to other panelists' reasons as additional information to consider.

Round 1 Judgments

During the first round, panelists worked individually with the PLDs, the standards, and the ordered item booklet (OIB). For each item in the OIB, panelists considered the knowledge, skills, and abilities (KSAs) needed to respond to the item (i.e., asking themselves 'what does a student need to know and be able to do to respond to this item?'). After identifying the KSAs required by the item, panelists then assigned an item descriptor match (i.e., basic, proficient, or advanced) to the item. They continued in this manner until they reviewed all items in the OIB. All panelists made their round 1 judgments individually and without discussion.

As panelists completed their round 1 work, content specialist(s) were on hand to review their data. Specifically, specialists reviewed panelists' notes on the knowledge, skills, and abilities required by the items, as well as their content-based reasoning to determine if the panelists were on task. This qualitative evaluation process served as an initial reasonableness check and allowed for early intervention and adjustment of training procedures as needed.

At the conclusion of round 1 judgments, Cognia psychometricians compiled all judgments from all panelists to calculate cut scores, associated standard errors, and various other statistics as described in Section 3.3.3 of this document. In addition, the psychometricians produced the presentation artifact (i.e., a graphical representation of results) that was handed off to the facilitator for use during the round 1 discussion.

Round 2 Judgments and Introduction of Content-based Benchmarks

Before starting the second round of judgments, the panelists were introduced to the content-based benchmarks. Facilitators, with support from a psychometrician, described how the benchmarks were calculated, demonstrated how they would be presented within the Cognia Standard Setting Toolkit, and explained how panelists should consider the information represented by the benchmarks as they engaged in round 2 of the standard setting activities. Panelists were reminded that benchmarks were provided for their consideration, and not to influence their judgments. Next, panelists completed the round 2 readiness survey and once all panelists indicated that they were ready to proceed, they continued to round 2 of the judgment task.

During the second round, panelists once again worked individually with the PLDs, the standards, and the ordered item booklet (OIB). Taking into consideration the feedback and discussion after round 1, as well as the additional information represented by the content-based benchmarks, panelists reviewed their work from round 1. Panelists could keep their judgments from round 1 or revise them. All panelists made their round 2 judgments individually and without discussion. At the conclusion of round 2 judgments, Cognia psychometricians again compiled all judgments from all panelists to calculate cut scores and associated standard errors. In addition, the psychometricians produced the presentation artifact (i.e., a graphical representation of results) that was handed off to the facilitators for use during the round 2 discussion.

Round 3 Judgments

After the round 2 feedback and discussion portion, but before round 3 judgments, panelists once again completed a readiness survey. Once all panelists indicated that they were ready to proceed, they continued to round 3 of the judgment task. During the third round, panelists once again worked individually with the PLDs, the standards, and the ordered item booklet (OIB). Taking into consideration the feedback and discussion after round 2, panelists reviewed their work from round 2. Panelists could keep their judgments from round 2 or revise them. All panelists made their round 3 judgments individually and without discussion.

At the conclusion of the round 3 judgments, Cognia psychometricians again compiled all judgments from all panelists and, using the same procedures already detailed in previous sections, used the panelists' item-PLD judgments to calculate the final cut scores, as well as associated impact data.

3.5.8 Standard Setting Results and Impact Data

The frequency charts of panelists item-PLD judgments across the basic, proficient, and advanced levels for each of the three rounds across all grades and content areas are available in Appendix J. Note that these frequency charts are the same graphical displays that were presented to panelists after each round.

Once panelists completed the standard setting activities for both grades in their respective grade band panels, the final cut scores and associated impact data were calculated. A Cognia psychometrician presented the impact data for the relevant grades to each panel. Table 3-4 shows the standard setting results for ELA and mathematics grades 3–8 and include the OIB page range, theta values, and standard errors associated with the cut scores. In addition, the table includes the impact percentage for each performance level based on the standard setting cut scores.

Table 3-4. Standard Setting Results for OSTP ELA and Mathematics Grades 3-8

		ELA Results				Mathematics Results			
Grade	Performance Level	OIB #	Theta	Standard Error	Impact %	OIB #	Theta	Standard Error	Impact %
3	Below Basic	--	--	--	30.0	--	--	--	27.3
	Basic	3 - 4	-0.890	--	19.2	11 - 12	-1.000	--	36.3
	Proficient	11 - 12	-0.288	0.035	40.0	21 - 22	0.106	0.041	21.0
	Advanced	41 - 42	0.949	0.042	10.8	42 - 43	0.739	0.058	15.4
	Proficient + Advanced	--	--	--	50.8	--	--	--	36.4
4	Below Basic	--	--	--	36.1	--	--	--	31.9
	Basic	4 - 5	-0.700	--	16.7	5 - 6	-0.770	--	28.3
	Proficient	17 - 18	-0.225	0.042	38.1	12 - 13	0.092	0.023	30.7
	Advanced	35 - 36	0.941	0.043	9.1	47 - 48	1.180	0.076	9.1
	Proficient + Advanced	--	--	--	47.2	--	--	--	39.8
5	Below Basic	--	--	--	22.8	--	--	--	35.5
	Basic	5 - 6	-1.120	--	18.0	7 - 8	-0.660	--	27.2
	Proficient	11 - 12	-0.531	0.042	32.7	18 - 19	0.141	0.025	27.0
	Advanced	42 - 43	0.315	0.038	26.5	45 - 46	1.109	0.017	10.3
	Proficient + Advanced	--	--	--	59.2	--	--	--	37.3
6	Below Basic	--	--	--	41.6	--	--	--	42.8
	Basic	2 - 3	-0.670	--	15.6	9 - 10	-0.480	--	20.3
	Proficient	9 - 10	-0.232	0.044	38.6	19 - 20	0.078	0.027	32.6
	Advanced	45 - 46	1.222	0.059	4.2	48 - 49	1.503	0.120	4.2
	Proficient + Advanced	--	--	--	42.8	--	--	--	36.9
7	Below Basic	--	--	--	51.3	--	--	--	54.7
	Basic	8 - 9	-0.380	--	14.3	6 - 7	-0.180	--	16.5
	Proficient	15 - 16	0.015	0.070	32.2	14 - 15	0.314	0.026	15.3
	Advanced	47 - 48	1.551	0.124	2.2	32 - 33	0.881	0.024	13.5
	Proficient + Advanced	--	--	--	34.5	--	--	--	28.8
8	Below Basic	--	--	--	40.3	--	--	--	58.8
	Basic	8 - 9	-0.740	--	20.1	6 - 7	-0.090	--	16.9
	Proficient	10 - 11	-0.207	0.068	37.3	10 - 11	0.416	0.021	13.8
	Advanced	50 - 51	1.351	0.172	2.3	32 - 33	0.971	0.028	10.6
	Proficient + Advanced	--	--	--	39.6	--	--	--	24.4

3.5.9 Standard Setting Workshop Evaluation

At the conclusion of the standard setting meeting, panelists completed a final workshop evaluation survey and gave their feedback on various aspects of the standard setting meeting. Overall, panelists indicated that they felt positive about how Cognia conducted the workshop and about their final recommendations. Specifically, panelists expressed support for the workshop overall; workshop facilitation; training, practice, and the workshop process; the Cognia Standard Setting Toolkit; and other details in the workshop process. The standard setting evaluation questions and results are available in Appendix K.

3.6 Articulation Meetings

At the conclusion of the standard setting meeting, a vertical articulation of the standard setting cut scores was completed. The purpose of the articulation was to allow a subset of panelists from the initial six standard setting panels to review the results from the standard setting meeting and determine if they represented reasonable expectations. This review was completed across grades within each of the two content areas. The two (ELA and mathematics) articulation panels were made up of 3–5 panelists from each of the initial grade-band panels, for a total of 10–12 educators in each content-specific articulation panel. The articulation meetings were co-facilitated by a Cognia psychometrician and either the ELA or mathematics content specialist.

Given the content-based nature of the standard setting, the vertical articulation process consisted of a qualitative review and discussion regarding performance expectations across grades based on the performance level descriptors (see Appendix L for a PowerPoint presentation). Articulation facilitators guided panelists through the following activities:

- Introduction, overview, and key concepts
- Modeling of standard setting panel decisions
- Familiarization with standards, blueprints, and PLDs
- Expectations for between-grade transitions
- Presentation of impact data and discussion
- Articulation workshop evaluation survey

3.6.1 Introduction, Overview, and Key Concepts

Panelists and articulation facilitators briefly introduced themselves. Next, the articulation facilitators provided an overview of the goals and expected outcomes of the articulation meeting. Finally, the facilitators reviewed key concepts related to the articulation process. Specifically, the facilitators addressed the “why” and “how” of the articulation process, as well as the shift to a consensus-based process for articulation compared to the independent judgment process for standard setting. Panelists had the opportunity to ask questions and were encouraged to describe concepts in their own words to facilitate their understanding.

3.6.2 Modeling of Standard Setting Panel Decisions

The content specialist facilitated the modeling and discussion of standard setting panel decisions so that articulation panelists became more familiar with the work done in the panels and grades unfamiliar to them. The standard setting judgment task was modeled for three items (one item for each of the original three grade band panels). As the facilitator presented and modeled each item, articulation panelists followed along in the Cognia Standard Setting Toolkit. Panelists who were participants in specific standard setting panels (e.g., mathematics grade 3–4 panel) were encouraged to share their thoughts and experiences when an item relevant to their specific panel was modeled. Panelists from the other panels were encouraged to ask questions and engage in a discussion with each other throughout the

process. The same process was used until an item relevant to each of the original standard setting panel's work was modeled and discussed.

3.6.3 Familiarization with Standards, Blueprints, and PLDs

Next, panelists engaged in a review and discussion of the standards, test blueprints, and PLDs across the six grades. In the interest of time, the content specialist asked each table to focus on a specific strand or objective. The panelists then engaged in table discussions about their strand/objective across the grades and performance levels. After table discussions, there was a brief discussion among all panelists about the activity and any patterns they noticed across grades. The purpose of this review was to have the panelists familiarize themselves with the standards, blueprints, and PLDs of the grades unfamiliar to them, as well as across the grades at the different performance levels.

3.6.4 Expectations for Between-Grade Transitions

Next, panelists discussed their expectations for student performance relative to between-grade transitions. The discussion was facilitated with guided questions to consider for each of the five grade transitions (i.e., from grade 3 to 4, 4 to 5, 5 to 6, 6 to 7, and 7 to 8). For each grade transition the guided question that panelists were asked to consider followed the same pattern. For example, when considering the first transition (from grade 3 to 4), the question posed to panelists was: "How much more/less challenging is it for 4th graders to demonstrate proficiency in a 4th-grade test (blueprint), assessing 4th-grade standards, as described by 4th grade PLDs THAN IT IS for 3rd graders to demonstrate proficiency on the blueprint, standards, and PLDs of their grade?"

Panelists engaged in a group discussion about the question. Response options for the transition questions were on a Likert-type scale: (1) Much less challenging, (2) less challenging, (3) about the same, (4) more challenging, or (5) much more challenging. Panelists were asked for a consensus response with associated rationale for their response. When consensus could not be reached, the majority response was recorded. Two Cognia staff members took notes of the discussion and recorded responses in the Cognia Standard Setting Toolkit for reference.

The results and qualitative data relevant to the between-grade transition questions and discussions are included in the Cognia Standard Setting Memo (see Appendix N).

3.6.5 Presentation of Impact Data and Discussion

Following the between-grade discussion of performance expectations, panelists were shown impact data across tests from the spring 2024 administration. These impact data were based on the standard setting cut scores. The facilitator led a discussion about the reasonableness of the cut score recommendations, when comparing student performance and performance level classification across tests, in relation to their expectations they had identified in the previous discussion.

With one clear exception, panelists generally agreed that the impact data aligned with the grade transition expectations they had discussed. ELA grade 5 was the only grade for which panelists recommended a significant adjustment. During the grade-transition discussion, the ELA articulation panel determined that it was more challenging for 5th graders to attain proficiency on the 5th grade test than it was for fourth

graders to attain proficiency on the 4th grade test. The following text is an excerpt from the notes in the discussion:

“Especially in standard 3, this seemed to be a big leap; there are harder concepts in the standards. For example, 4.R.1 describing the purpose, vs. 5th grade more evaluation of achieving the purpose. ii. Writing is essentially the same, but reading is more challenging. iii. More inference required in grade 5. iv. Votes for more challenging: consensus”

Given the expectation outlined above, panelists expected impact data to show that fewer students were categorized as proficient and above in 5th grade compared to 4th grade; however, the standard setting impact data showed the opposite with many more students categorized as proficient and above in 5th grade compared to 4th grade. After considerable discussion and review of PLDs and content relative to ELA grades 4, 5, and 6, the articulation panel agreed that an adjustment was needed to bring the result in line with performance expectations they identified.

3.6.6 Closing and Articulation Evaluation Survey

At the end of the articulation meeting, panelists were reminded of the review and approval process their recommendations would go through and the nondisclosure agreement they previously signed. Panelists also completed an evaluation of the process used during the articulation meeting. The articulation evaluation survey questions and results for both articulation panels are available in Appendix M.

Chapter 4. Tasks Completed After the Standard Setting Meeting

Upon conclusion of the standard setting meeting, several important tasks were completed. These tasks centered on the following: reviewing the standard setting process and addressing issues presented by the outcomes, making adjustments based on the articulation panel's recommendations, adjusting cut scores based on policy considerations, and final approval of the operational cut scores. Shortly after the standard setting meeting, Cognia provided SDE with a standard setting memo that included an overview of the standard setting process, as well as the provisional cut scores as recommended by the standard setting panels. A copy of the memo is available in Appendix N.

4.1 Review and Articulation Adjustments

The standard setting literature considers evaluation of the workshop and its results to be another product of the standard setting process (e.g., Reckase and Chen, 2012), as it provides important validity evidence supporting the cut scores that are obtained. To that end, a review and analysis of the standard setting results was conducted. In addition, to provide evidence of the participants' views of the standard setting process, a review and analysis of panelists' feedback on the workshop evaluation surveys was also conducted. This review did not reveal any anomalies in the standard setting process. Panelist responses on the evaluation surveys indicated that panelists: understood the content-based judgement task, tools and feedback at each step throughout the process; had adequate time for training and practice as well as opportunities to ask questions; and felt like the facilitators responded to questions and requests for clarification in a clear and timely manner. In general, participants felt that the standard setting method was appropriate and that their judgments were based on appropriate information and decision making.

Based on the data and recommendations from the ELA and mathematics articulation panels, Cognia psychometricians made adjustments to the cut scores to achieve cross-grade articulation. With the exception of ELA grade 5, minor adjustments were made within the margin of error so as to stay consistent with the standard setting and articulation panel results while still ensuring that expectations were articulated across grades. In the case of ELA grade 5, a significant adjustment was made to align with the articulation panel's recommendation. Please refer to Tables 4 and 8 in the Memo (Appendix N) for the details regarding the ELA and mathematics articulation adjustments. The articulated cut scores were presented to OSDE for their consideration.

4.2 Policy Review and Approval of Final Cut Scores

The final part of the standard setting process consisted of a policy review during which policy makers established the final operational cut scores used to classify students into various performance levels. OSDE engaged in a review and discussion of possible policy adjustments. Based on the recommendations of the Oklahoma Technical Advisory Committee, Cognia psychometricians calculated and then presented adjustment options to OSDE for their consideration. After discussion and review, the OSDE made no policy adjustments to the articulated standard setting results. The full set of cuts, shown in Appendix O, were presented to the Commission for Educational Quality and Accountability (CEQA) at a meeting on July 10, 2024, and were approved for use assigning students to performance levels in the

2023–2024 Oklahoma ELA and mathematics grades 3–8 assessments. See Appendix P for the CEQA PowerPoint Presentation.

4.3 Preparation of Standard Setting Report

Following the final compilation of standard setting results, Cognia prepared this report, which documents the procedures and results of the 2024 Oklahoma Standard Setting Meeting that was held to establish performance standards for the OSTP ELA and mathematics grades 3–8 assessments.

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Appendices

APPENDIX—A
PERFORMANCE LEVEL DESCRIPTORS

OSTP ELA Grade 3 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: *Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:*	***OK Policy PLD Proficient:*** *Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:*	***OK Policy PLD Advanced:*** *Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:*
Reading & Writing Process			
3.2.R.1	Identify the main idea of a portion of text and identify key details related to the main idea of a portion of the text.	Determine the main idea and supporting details of a text.	Explain how key details support the main idea of a text.
3.2.R.2	Identify elements of fiction and nonfiction texts.	Identify elements of various genres in fiction, poetry, and nonfiction texts.	Compare elements of various genres in fiction, poetry, and nonfiction texts and provide supporting details.
3.2.R.3	Summarize portions of a text or sequence the main events of a story (first, next, last).	Summarize and sequence the important events of a story.	Analyze a story to summarize and correctly sequence the events in a story; evaluate the best summary; explain why details are included in a summary.
3.2.R.4	Summarize facts and details in a portion of an informational text.	Summarize facts and details from an informational text.	Explain why certain facts and details are included in an informational text.
3.2.W.1	Identify the parts of and use the writing process to prewrite, organize, and develop narrative, informative, and opinion drafts of a single paragraph.	Prewrite, organize, and develop narrative, informative, and opinion drafts that display evidence of paragraphing.	
3.2.W.2	Use a process to revise content in a paragraph for correct organization (e.g., logical order and transitions) and clarity.	Revise content for clarity, coherence, and organization (e.g., logical order and transitions).	
3.2.W.3	Edit drafts of a sentence for punctuation (end marks), capitalization (beginnings of sentences), and correctly spelled high-frequency words, using resources as needed.	Edit drafts for punctuation, capitalization, and correctly-spelled grade-level words, using resources as needed.	
Critical Reading & Writing			
3.3.R.1	Identify if the author's purpose is to entertain, inform, or persuade.	Determine if the author's purpose is to entertain, inform, or persuade.	Analyze a text to determine whether the author's purpose is to entertain, inform, or persuade.

Objective	Basic	Proficient	Advanced
3.3.R.2	Identify features of first- or third-person point-of-view texts.	Determine whether a grade-level literary text is narrated in first- or third-person point of view.	Determine whether a grade-level literary text is narrated in first- or third-person point of view and provide evidence to support their determination.
3.3.R.3	Identify literary elements: • setting • plot • characters • characterization	Find textual examples of literary elements: • setting • plot • characters • characterization	Identify the effect of literary elements: • setting • plot • characters • characterization
3.3.R.4	Identify examples of literary devices: • personification • simile • alliteration • onomatopoeia	Find examples of literary devices: • personification • simile • alliteration • onomatopoeia	Identify the effect of literary devices: • personification • simile • alliteration • onomatopoeia
3.3.R.5	Answer simple inferential questions from a portion of a text and use evidence from a portion of a text to support inferences.	Answer inferential questions, using a text to support answers.	Answer complex inferential questions, using a text to support answers.
3.3.R.6	Identify fact and opinion in an informational text.	Distinguish fact from opinion in an informational text.	Identify how the fact or opinion supports the main idea of a text.
3.3.R.7	Identify the structure of a portion of an informational text: • problem/solution • description • sequential	Describe the structure of a portion of an informational text: • problem/solution • description • sequential	Analyze the structure of a portion of an informational text: • problem/solution • description • sequential
3.3.W.1	Write simple narratives with support (e.g., graphic organizers) that incorporate: • setting • plot • characters • characterization	Write narratives that incorporate: • setting • plot • characters • characterization	Write complex narratives reflecting real or imagined experiences that include: • setting • plot • characters • characterization
3.3.W.2	With support (e.g., graphic organizers), write facts about a subject, including a main idea with supporting details, in a paragraph.	Write facts about a subject, including a main idea with supporting details, in multiple paragraphs with transitional words and phrases.	Write complex facts about a subject, including a main idea with supporting details, in multiple paragraphs with transitional words and phrases.
3.3.W.3	With support (e.g., graphic organizers), write an opinion about a topic and provide relevant evidence as support in a paragraph.	Write an opinion about a topic and provide relevant evidence as support in multiple paragraphs with transitional words and phrases.	Write a complex opinion about a topic and provide relevant evidence as support in multiple paragraphs with transitional words and phrases.
Vocabulary			
3.4.R.1	Identify relationships among words, including synonyms, and antonyms.	Identify relationships among words, including synonyms, antonyms, homophones, and homographs.	Identify relationships among words, including synonyms, antonyms, homophones, and homographs.

Objective	Basic	Proficient	Advanced
3.4.R.2	Use context clues to clarify the meaning of words.	Use context clues to clarify the meaning of words.	Use context clues to clarify the meaning of words.
3.4.R.3	Use word parts (e.g., simple affixes, simple Anglo-Saxon roots, stems) to identify the meaning of words.	Use word parts (affixes, Anglo-Saxon roots. and stems) to define and determine the meaning of new words.	Define and determine the meaning of new words by using familiar word parts including affixes, Anglo-Saxon roots, and stems.
3.4.R.4	Consult reference materials (e.g., dictionaries, glossaries) to identify the meaning of words in a text.	Consult reference materials (e.g., dictionaries, glossaries, thesauruses) to demonstrate comprehension of the words in a text.	
3.4.R.5		Acquire new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in various contexts.	Use new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in various contexts.
3.4.W.1	Use high-frequency vocabulary in writing to clearly communicate ideas.	Use grade-level vocabulary in writing to clearly communicate ideas.	Use above-grade-level vocabulary in writing to clearly communicate ideas.
3.4.W.2	Use precise and vivid basic vocabulary in writing.	Use precise and vivid grade-level vocabulary in writing for the intended mode and effect on the audience.	
Language			
3.5.R.1	Recognize simple sentences.	Recognize simple and compound sentences.	Define the features of simple and compound sentences in grade-appropriate texts.
3.5.R.2	Recognize parts of speech in basic sentences: • concrete and abstract nouns • different types of verbs (i.e., action, linking, helping) • the subject and predicate of a sentence • adjectives • prepositions • possessive pronouns • adverbs • coordinating conjunctions (i.e., and, but, or)	Recognize parts of speech in sentences: • concrete, abstract, and possessive nouns • different types of verbs (i.e., action, linking, helping) and their roles in a sentence • the complete subject and complete predicate of a sentence • possessive adjectives • prepositional phrases • possessive pronouns and the nouns they replace • coordinating conjunctions (i.e., for, and, nor, but, or, yet, so) • adverbs of frequency (e.g., always, often, never)	Analyze parts of speech in complex sentences: • concrete, abstract, and possessive nouns • different types of verbs (i.e., action, linking, helping) and their roles in a sentence • the complete subject and complete predicate of a sentence • possessive adjectives • prepositional phrases • possessive pronouns and the nouns they replace • coordinating conjunctions (i.e., for, and, nor, but, or, yet, so) • adverbs of frequency (e.g., always, often, never)
3.5.W.1	Compose simple and compound declarative, interrogative, imperative, and exclamatory sentences.	Compose simple and compound declarative, interrogative, imperative, and exclamatory sentences, avoiding and correcting fragments.	
3.5.W.2	Use nouns, verbs, adjectives, and adverbs.	Use nouns, verbs, adjectives, prepositions, and adverbs to add clarity and variety to their writing.	Explain the effect of nouns, verbs, adjectives, prepositions, and adverbs in their writing.
3.5.W.3	Capitalize titles of respect, words in titles, and geographical names.	Capitalize and punctuate titles of respect, words in titles, and geographical names.	Recognize and correct errors in capitalization and punctuation in titles of respect, words in titles, and geographical names.

Objective	Basic	Proficient	Advanced
3.5.W.4	Use periods with declarative and imperative sentences and question marks with interrogative sentences.	Use periods with declarative and imperative sentences, question marks with interrogative sentences, and exclamation points with exclamatory sentences.	Recognize and correct errors in punctuation: periods with declarative and imperative sentences, question marks with interrogative sentences, and exclamation points with exclamatory sentences.
3.5.W.5	Use apostrophes to form simple contractions (e.g., can't, doesn't, isn't) and to show possession.	Use apostrophes to form complex contractions (e.g., should've, won't, y'all) and to show possession.	Recognize and correct errors in apostrophes when forming complex contractions (e.g., should've, won't, y'all) and to show possession.
3.5.W.6	Identify the placement of commas when using a coordinating conjunction and when separating individual words in a series.	Use commas before a coordinating conjunction and to separate individual words in a series.	Recognize and correct errors in comma usage before a coordinating conjunction and to separate individual words in a series.
3.5.W.7		Use a colon to indicate time.	
3.5.W.8	Explain why quotation marks are used.	Use quotation marks to indicate dialogue.	Recognize and revise errors in quotation mark usage when indicating dialogue.
Research			
3.6.R.1	Conduct research to answer assigned questions and to build knowledge.	Conduct research to answer questions, including self-generated questions, and to build knowledge.	Conduct research and evaluate if research questions are fully answered.
3.6.R.2	Identify some text features (e.g., captions, subheadings, charts) to comprehend informational texts.	Identify and use text features (e.g., graphics, captions, subheadings, italics, charts, tables, legends) to comprehend informational texts.	Analyze text features (e.g., graphics, captions, subheadings, italics, charts, tables, legends) to comprehend complex informational texts.
3.6.R.3	Identify relevant sources.	Begin to determine the relevance of the information gathered.	Determine the relevance of more complex information gathered.
3.6.W.1	Identify questions related to a topic.	Choose a topic of interest and generate several questions about it for research.	Choose a topic of interest and generate several valid questions about it for research.
3.6.W.2	With support (e.g., a partially completed graphic organizer), organize information found during research and follow a modified citation style (i.e., author, title, publication year).	Begin to organize information found during research, following a modified citation style (i.e., author, title, publication year).	

OSTP ELA Grade 4 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: *Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:*	***OK Policy PLD Proficient:*** *Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:*	***OK Policy PLD Advanced:*** *Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:*
Reading & Writing Process			
4.2.R.1	Identify the main idea and key supporting details of a text.	Determine the key details that support the main idea of a text.	Evaluate the key details that support the main idea of a text.
4.2.R.2	Identify features of fiction, poetry, and nonfiction to distinguish various genres.	Compare fiction, poetry, and nonfiction to distinguish various genres.	Compare and explain the differences in fiction, poetry, and nonfiction to distinguish various genres.
4.2.R.3	Summarize or sequence the important events in a portion of a story (e.g., first, next, last).	Summarize and sequence the important events of a story.	Analyze a story, summarize and sequence the important events of a story, evaluate for the best summary, and explain why certain details should be included in a summary.
4.2.R.4	Summarize facts and details from a portion of an informational text.	Summarize facts and details from an informational text.	Explain why certain facts and details from an informational text are included in a summary.
4.2.W.1	Identify the parts of and use the writing process to: prewrite, organize, and develop narrative, informative, and opinion drafts of a paragraph.	Use the writing process to prewrite, organize, and develop narrative, informative, and opinion drafts that display evidence of paragraphing.	Use the writing process to prewrite by selecting a strategy, organize by selecting a particular structure, and develop narrative, informative, and opinion drafts that display evidence of paragraphing.
4.2.W.2	Revise content in a paragraph for clarity and organization (e.g., logical order).	Revise content for clarity, coherence, and organization (e.g., logical order and transitions).	Revise content for clarity (using precise language geared toward the audience), coherence, and organization (e.g., logical order and transitions) using effective language.
4.2.W.3	Edit drafts of a sentence for punctuation (end marks), capitalization (beginnings of sentences), and correctly spelled grade-level words, using resources as needed.	Edit drafts for punctuation, capitalization, and correctly spelled grade-level words, using resources as needed.	
Critical Reading & Writing			
4.3.R.1	Identify the author's purpose (i.e., entertain, inform, persuade).	Determine the author's purpose (i.e., entertain, inform, persuade) by identifying key details.	Determine the author's purpose (i.e., entertain, inform, persuade) and determine how key details reveal the author's purpose was achieved.
4.3.R.2	Identify features of first- or third-person point of view.	Determine whether a grade-level literary text is narrated in first- or third-person point of view.	Determine whether a grade-level literary text is narrated in first- or third-person point of view and provide evidence to support their determination.

Objective	Basic	Proficient	Advanced
4.3.R.3	Identify textual evidence of literary elements: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict	Find textual evidence of literary elements: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict	Determine the effect of literary elements: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict
4.3.R.4	Identify textual evidence of literary devices: ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia	Find textual evidence of literary devices: ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia	Determine the effect of literary devices: ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia
4.3.R.5	Answer simple inferential questions and use evidence from a text to support answers.	Answer inferential questions using evidence from one or more texts to support answers.	Answer complex inferential questions using evidence from one or more texts to support answers.
4.3.R.6	Distinguish fact from opinion in an informational text and identify how reasons and facts support specific points.	Distinguish fact from opinion in an informational text and explain how reasons and facts support specific points.	Distinguish fact from opinion in an informational text and draw a conclusion about their effectiveness.
4.3.R.7	Identify the structures of an informational text: ● cause/effect ● problem/solution ● description ● sequential	Distinguish the structures of an informational text: ● cause/effect ● problem/solution ● description ● sequential	Determine the structure of an informational text: ● cause/effect ● problem/solution ● description ● sequential
4.3.W.1	Compose simple narratives reflecting real or imagined experiences that: ● include a plot with a climax and resolution ● include characters who overcome conflicts and use dialogue ● unfold in chronological sequence ● use some sentence variety and sensory details to create interest ● replicate literary elements and/or literary devices from mentor texts	Compose narratives that reflect real or imagined experiences that: ● include plots with a climax and resolution ● include developed characters who overcome conflicts and use dialogue ● use a consistent point of view ● unfold in chronological sequence ● use sentence variety, sensory details, and vivid language to create interest ● model literary elements and/or literary devices from mentor texts	Compose complex narratives that reflect real or imagined experiences that: ● include plots with a climax and resolution ● include developed characters who overcome conflicts and use dialogue ● use a consistent point of view ● unfold in chronological sequence ● use sentence variety, sensory details, and vivid language to create interest ● model literary elements and/or literary devices from mentor texts

Objective	Basic	Proficient	Advanced
4.3.W.2	Compose simple informative essays that: ● introduce and develop a topic ● incorporate evidence (e.g., specific facts, examples) ● maintain an organized structure ● replicate literary devices from mentor texts	Compose informative essays that: ● introduce and develop a topic ● incorporate evidence (e.g., specific facts, examples) ● maintain an organized structure with transitional words and phrases ● use sentence variety and word choice to create interest ● model literary devices from mentor texts	Compose complex informative essays that: ● introduce and develop a topic ● incorporate and explain evidence (e.g., specific facts, examples) ● maintain an organized structure with complex transitional words and phrases ● use sentence variety and precise word choice to create interest ● model literary devices from mentor texts
4.3.W.3	Write simple opinion essays that: ● introduce a topic and state an opinion ● incorporate text-based evidence to support the opinion ●maintain an organized structure with simple transitional words and phrases	Write opinion essays that: ● introduce a topic and state an opinion ● incorporate relevant, text-based evidence to support the opinion ● use sentence variety and word choice to create interest ●maintain an organized structure with transitional words and phrases	Write complex opinion essays that: ● introduce a topic and state an opinion ● incorporate and explain relevant, text-based evidence to support the opinion ● use sentence variety and precise word choice to create interest ●maintain an organized structure with complex transitional words and phrases
Vocabulary			
4.4.R.1	Identify relationships among words, including synonyms, antonyms, homophones, and homographs.	Identify relationships among words, including synonyms, antonyms, analogies, homophones, and homographs.	Identify relationships among words, including synonyms, antonyms, analogies, homophones, and homographs.
4.4.R.2	Use context clues to clarify the meaning of words.	Use context clues to clarify the meaning of words.	Use context clues to clarify the meaning of words.
4.4.R.3	Use word parts (e.g., simple affixes, simple Latin roots, stems) to define and determine the meaning of new words.	Use word parts (e.g., affixes, Latin roots, stems) to define and determine the meaning of new words.	Use word parts (e.g., complex affixes, complex Latin roots, stems) to define and determine the meaning of new words.
4.4.R.4	Consult reference materials (e.g., dictionaries, glossaries) to identify the meaning of words in a text.	Consult reference materials (e.g., dictionaries, glossaries, thesauruses) to comprehend the words in a text.	
4.4.R.5		Acquire new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in various contexts.	
4.4.W.1		Use grade-level vocabulary in writing to clearly communicate ideas.	
4.4.W.2	Use precise and vivid vocabulary in writing.	Use precise and vivid vocabulary in writing for the intended mode and effect on the audience.	
Language			
4.5.R.1	Recognize simple and compound sentences.	Recognize simple and compound sentences.	Define the features of simple and compound sentences.

Objective	Basic	Proficient	Advanced
4.5.R.2	Recognize parts of speech in sentences: ● possessive nouns ● irregular verbs ● subject of a verb ● comparative adjectives ● prepositional phrases ● possessive pronouns ● coordinating conjunctions ● comparative adverbs	Recognize parts of speech in sentences: ● irregular possessive nouns (e.g., children's) ● irregular and past participle verbs and verb tense to identify settings, times, and sequences ● subject and verb agreement ● comparative and superlative adjectives ● prepositional phrases ● possessive pronouns and the nouns they replace (i.e., antecedents) ● coordinating conjunctions ● comparative and superlative adverbs ● interjections	
4.5.W.1	Compose simple declarative, interrogative, imperative, and exclamatory sentences, and recognize fragments.	Compose simple and compound declarative, interrogative, imperative, and exclamatory sentences, avoiding and correcting fragments.	
4.5.W.2	Use nouns, verbs, adjectives, prepositions, and adverbs to add variety to their writing.	Use nouns, verbs, adjectives, prepositions, and adverbs to add clarity and variety to their writing.	Explain why nouns, verbs, adjectives, prepositions, and adverbs are included in their writing.
4.5.W.3	Recognize or correct errors in subject and verb agreement.	Recognize and correct errors in subject and verb agreement.	Compose sentences with correct subject and verb agreement.
4.5.W.4	Capitalize familial relations and proper adjectives.	Capitalize familial relations, proper adjectives, conventions of letter writing, and the first letter of a quotation.	
4.5.W.5		Use periods with declarative and imperative sentences, question marks with interrogative sentences, and exclamation points with exclamatory sentences.	Recognize and revise errors in end punctuation including: periods with declarative and imperative sentences, question marks with interrogative sentences, and exclamation points with exclamatory sentences.
4.5.W.6	Use apostrophes to show possession of singular nouns.	Use apostrophes to show possession of singular and plural nouns and recognize and remove apostrophes used to form plurals.	Recognize and revise errors in apostrophe use to show possession of singular and plural nouns and recognize and remove apostrophes used to form plurals.
4.5.W.7	Use commas to separate individual words in a series.	Use commas in greetings and closings in letters and emails, to separate individual words in a series, and to indicate dialogue.	Recognize and revise errors in comma usage in greetings and closings in letters and emails, to separate individual words in a series, and to indicate dialogue.
4.5.W.8	Recognize where a colon should be placed when introducing a list (e.g., Deb only needed three things from the grocery store: milk, eggs, and bread.).	Use a colon to introduce a list (e.g., Deb only needed three things from the grocery store: milk, eggs, and bread.).	Recognize and revise errors when using a colon to introduce a list (e.g., Deb only needed three things from the grocery store: milk, eggs, and bread.).
4.5.W.9	Recognize where quotation marks belong when being used to indicate dialogue and titles of works; explain why quotation marks are used.	Use quotation marks to indicate dialogue, quoted material, and titles of works.	Recognize and revise errors when using quotation marks to indicate dialogue, quoted material, and titles of works.

Objective	Basic	Proficient	Advanced
4.5.W.10	Recognize the correct way to use underlining to indicate titles of works.	Use underlining or italics to indicate titles of works.	Recognize and revise errors when using underlining or italics to indicate titles of works.
Research			
4.6.R.1	Conduct research to answer questions, including self-generated questions, and to build knowledge, using one source (e.g., visual and text reference sources, electronic resources, and/or interviews).	Conduct research to answer questions, including self-generated questions, and to build knowledge, using multiple sources (e.g., visual and text reference sources, electronic resources, and/or interviews).	Conduct research to answer questions, including self-generated questions, and to evaluate knowledge, using multiple sources (e.g., visual and text reference sources, electronic resources, and/or interviews).
4.6.R.2	Identify and/or use some text features (e.g., graphics, captions, subheadings, italicized words, charts, tables, legends) to comprehend informational texts.	Identify and use text features (e.g., graphics, captions, headings/subheadings, bold/italicized words, charts, tables, legends) to comprehend informational texts.	Analyze text features (e.g., graphics, captions, headings/subheadings, bold/italicized words, charts, tables, legends) to comprehend informational texts.
4.6.R.3	Determine the relevance of sources.	Determine the relevance of the information gathered.	Explain the relevance of the information gathered.
4.6.W.1	Identify a viable research question about a topic.	Generate a viable research question about a topic.	Generate more than one viable research question about a topic.
4.6.W.2	With support (e.g., a graphic organizer) organize information found during research.	Organize information found during research, following a modified citation style (i.e., author, title, publication year).	

OSTP ELA Grade 5 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:
Reading & Writing Process			
5.2.R.1	Identify key supporting details that support the main idea of a text.	Explain how key supporting details support the main idea of a text.	Analyze how key supporting details support the main idea of a text.
5.2.R.2	Use features of fiction, poetry, and nonfiction texts to distinguish various genres.	Identify details in fiction, poetry, and nonfiction texts to distinguish various genres.	Compare details within or across fiction, poetry, and nonfiction texts to distinguish various genres.
5.2.R.3	Summarize or sequence the important events from a portion of a story.	Summarize and sequence the important events of a story.	Analyze a complex story, summarize and sequence the important events of a story, evaluate for the best summary, and explain why certain details should be included in a summary.
5.2.R.4	Summarize facts and details from portions of an informational text.	Summarize facts and details from an informational text.	Summarize facts and details from a complex informational text; evaluate for the best summary.
5.2.W.1	Identify the parts of and use the writing process to: prewrite, organize, and develop narrative, informative, and opinion drafts of a paragraph.	Use a recursive process to prewrite, organize, and draft multi-paragraph narrative, informative, and opinion drafts.	Show knowledge of a recursive process to prewrite and organize for intended purpose, and draft multi-paragraph narrative, informative, and opinion drafts.
5.2.W.2	Revise content in a paragraph for clarity and organization (e.g., logical order and transitions).	Revise content for clarity, coherence, and organization (e.g., logical order and transitions).	Revise content for clarity (using precise language geared toward the audience), coherence, and organization (e.g., logical order and effective use of transitions).
5.2.W.3	Edit drafts of a sentence for punctuation (end marks), capitalization (beginnings of sentences), and correctly spelled grade-level words, using resources as needed.	Edit drafts for punctuation, capitalization, and correctly spelled grade-level words, using resources as needed.	
Critical Reading & Writing			
5.3.R.1	Identify the author's purpose (i.e., entertain, inform, persuade).	Determine the author's purpose (i.e., entertain, inform, persuade), and draw conclusions to determine if the author's purpose was achieved.	Analyze key details to determine if the author's purpose was achieved.

Objective	Basic	Proficient	Advanced
5.3.R.2	Determine whether a grade-level literary text is narrated in first- or third-person point of view.	Determine whether a grade-level literary text is narrated in first- or third-person point of view (limited and omniscient) and describe its effect.	Analyze key details to determine if the text is narrated first- or third-person point of view (limited and omniscient) and describe its effect.
5.3.R.3	Identify textual evidence of literary elements: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict	Determine how literary elements contribute to the meaning of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict ● theme	Using textual evidence, explain how literary elements contribute to the meaning of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict ● theme
5.3.R.4	Identify textual evidence of literary devices: ● imagery ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia	Determine how literary devices contribute to the meaning of a text: ● imagery ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia	Using textual evidence, explain how literary devices contribute to the meaning of a text: ● imagery ● metaphor ● idiom ● personification ● hyperbole ● simile ● alliteration ● onomatopoeia
5.3.R.5	Analyze ideas in a portion of a text, providing textual evidence to support their inferences.	Analyze ideas in one or more texts, providing textual evidence to support their inferences.	Draw evaluative conclusions from one or more texts, providing textual evidence to support their inferences.
5.3.R.6	Identify fact or opinion in an informational text and locate reasons and facts that support specific points.	Distinguish fact from opinion in an informational text and explain how reasons and facts support specific points.	Distinguish relevant fact from opinion in an informational text and explain how reasons and facts support specific points using supporting evidence from the informational text.
5.3.R.7	Identify the structures of informational texts: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Distinguish the structures of informational texts: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze the structures of informational texts and provide supporting evidence for that analysis: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential

Objective	Basic	Proficient	Advanced
5.3.W.1	Compose simple narratives reflecting real or imagined experiences that: ● include plots with a climax and resolution ● include developed characters who overcome conflicts and use dialogue ● unfold in chronological sequence ● use some sentence variety, sensory details, and vivid language to create interest ● replicate literary elements and/or literary devices from mentor texts	Compose narratives experiences reflecting real or imagined that: ● include plots with a climax and resolution ● include developed characters who overcome conflicts and use dialogue ● use a consistent point of view ● unfold in chronological sequence ● use sentence variety, sensory details, and vivid language to create interest ● model literary elements and/or literary devices from mentor texts	Compose complex narratives reflecting real or imagined experiences that: ● include plots with a climax and resolution ● including developed characters who overcome conflicts and use dialogue ● use a consistent point of view ● unfold in chronological sequence ● use sentence variety, sensory details, and vivid language to create interest ● model literary elements and/or literary devices from mentor texts
5.3.W.2	Compose simple informative essays that: ● introduce and develop a topic ● include evidence (e.g., specific facts, examples, charts, and graphs) ● maintain an organized structure with simple transitional words and phrases ● use some sentence variety and word choice to create interest ● replicate literary devices from mentor texts	Compose informative essays that: ● introduce and develop a topic ● incorporate evidence (e.g., specific facts, examples, charts, and graphs) ● maintain an organized structure with transitional words and phrases ● use sentence variety and word choice to create interest ● model literary devices from mentor texts	Compose complex informative essays that: ● introduce and develop a topic ● incorporate and explain evidence (e.g., specific facts, examples, charts, and graphs) ● maintain an organized structure with complex transitional words and phrases ● use sentence variety and precise word choice to create interest ● model literary devices from mentor texts
5.3.W.2	Write simple opinion essays that: ● introduce a topic and state an opinion ● include text-based evidence ● use some sentence variety and word choice to create interest ● organize writing in a logical sequence with simple transitional words and phrases	Write opinion essays that: ● introduce a topic and state a clear opinion ● incorporate relevant, text-based evidence to support the opinion ● use sentence variety and word choice to create interest ● organize writing in a logical sequence with transitional words and phrases	Write complex opinion essays that: ● introduce a topic and state a clear opinion ● incorporate relevant, text-based evidence to support the opinion ● use sentence variety and word choice to create interest ● organize writing in a logical sequence with transitional words and phrases
Vocabulary			
5.4.R.1	Identify relationships among words, including synonyms, antonyms, simple analogies, homophones, and homographs.	Identify relationships among words, including synonyms, antonyms, analogies, homophones, and homographs.	Identify relationships among words, including synonyms, antonyms, complex analogies, homophones, and homographs.
5.4.R.2	Use context clues to clarify the meaning of basic words.	Use context clues to clarify the meaning of words.	Use context clues to clarify the meaning of words and identify supporting evidence.
5.4.R.3	Use word parts (e.g., simple affixes, simple Latin roots, stems) to define and determine the meaning of new words.	Use word parts (e.g., affixes, Latin roots, stems) to define and determine the meaning of new words.	Use word parts (e.g., complex affixes, complex Latin roots, stems) to define and determine the meaning of new words.

Objective	Basic	Proficient	Advanced
5.4.R.4	Choose reference materials (e.g., dictionaries, glossaries, thesauruses) to identify the meanings of words in a text.	Consult reference materials (e.g., dictionaries, glossaries, thesauruses) to comprehend the words in a text.	
5.4.R.5		Acquire new grade-level vocabulary, relate new words to prior knowledge, and apply vocabulary in various contexts.	
5.4.W.1		Use grade-level vocabulary in writing to clearly communicate ideas.	
5.4.W.2	Use precise and vivid vocabulary in writing.	Use precise and vivid vocabulary in writing for the intended mode and effect on the audience.	
Language			
5.5.R.1	Recognize simple and compound sentences.	Recognize simple, compound, and complex (i.e., independent and dependent clauses) sentences.	Determine and explain whether sentences are simple, compound, or complex (i.e., independent and dependent clauses) and identify independent and dependent clauses.
5.5.R.2	Recognize parts of speech in simple sentences: ● nouns ● verb tense to identify settings, times, sequences, and conditions ● subject and verb agreement ● adjectives ● prepositional phrases ● intensive pronouns and their antecedents ● coordinating conjunctions ● adverbs ● interjections	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● verb tense to identify settings, times, sequences, and conditions ● subject and verb agreement ● adjectives ● prepositional phrases ● intensive pronouns and their antecedents ● coordinating conjunctions ● adverbs ● interjections	
5.5.W.1		Compose simple, compound, and complex (i.e., independent and dependent clauses) sentences.	
5.5.W.2		Use nouns, verbs, adjectives, prepositions, adverbs, and pronouns to add clarity and variety to their writing.	
5.5.W.3	Recognize the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and inappropriate shifts in pronoun number and person.	Recognize and correct the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and inappropriate shifts in pronoun number and person.	

Objective	Basic	Proficient	Advanced
5.5.W.6		Use the correct forms of it's/its, you're/your, and they're/there/their.	Recognize and revise errors in the incorrect use of it's/its, you're/your, and they're/there/their.
5.5.W.7	Use commas to separate individual words in a series and to indicate dialogue.	Use commas to separate individual words in a series, to indicate dialogue, and to separate the independent and dependent clauses in a complex sentence.	Recognize and revise errors in comma usage to separate individual words in a series, to indicate dialogue, and to separate the independent and dependent clauses in a complex sentence.
5.5.W.8	Identify sentences that correctly use a colon to introduce a list.	Use a colon to introduce a list.	Recognize and revise errors in colon use to introduce a list.
5.5.W.9	Identify sentences that correctly use quotation marks to indicate dialogue, quoted material, and titles of works.	Use quotation marks to indicate dialogue, quoted material, and titles of works.	Recognize and revise errors when using quotation marks to indicate dialogue, quoted material, and titles of works.
5.5.W.10	Identify sentences that correctly use underlining or italics to indicate titles of works.	Use underlining or italics to indicate titles of works.	Recognize and revise errors when using underlining or italics to indicate titles of works.
5.5.W.11	Identify sentences that correctly use a semicolon to punctuate compound sentences.	Use a semicolon to punctuate compound sentences.	Recognize and revise errors when using a semicolon to punctuate compound sentences.
Research			
5.6.R.1	Conduct research to answer questions, including self-generated questions, and to build knowledge, using one source (e.g., visual and text reference sources, electronic resources, and/or interviews).	Conduct research to answer questions, including self-generated questions, and to build knowledge, using multiple sources (e.g., visual and text reference sources, electronic resources, and/or interviews).	Conduct research to answer questions, including self-generated questions, and to evaluate knowledge, using multiple sources (e.g., visual and text reference sources, electronic resources, and/or interviews).
5.6.R.2	Identify and/or use some text features (e.g., graphics, captions, subheadings, italicized words, charts, tables, legends) to comprehend the structure of informational texts.	Identify and use text features (e.g., graphics, captions, headings/subheadings, bold/italicized words, charts, tables, legends) to analyze the structure of informational texts.	Use text features (e.g., graphics, captions, headings/subheadings, bold/italicized words, charts, tables, legends) and explain how they support the structure of informational texts.
5.6.R.3	Determine the relevance of the information gathered.	Determine the relevance and reliability of the information gathered.	Determine and explain the relevance and reliability of the information gathered.
5.6.W.1	Identify a viable research question about a provided topic.	Formulate a viable research question.	Formulate multiple viable research questions.
5.6.W.2	Organize information found during research.	Organize information found during research, following a modified citation style (i.e., author, title, publication date).	

OSTP ELA Grade 6 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:
Reading & Writing Process			
6.2.R.1	Summarize the important events or information in a text.	Summarize alphabetic and/or multimodal texts, including main idea, to demonstrate comprehension.	Summarize complex alphabetic and/or multimodal texts, including main idea, to demonstrate comprehension; evaluate summaries.
6.2.R.2	Identify details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to distinguish genres and provide supporting evidence for analysis.
6.2.R.3	Paraphrase a sentence in their own words to demonstrate comprehension.	Paraphrase a paragraph in their own words to demonstrate comprehension.	
6.2.W.1	Identify a prewriting strategy.	Prewrite (e.g., develop ideas and plan).	Create a prewriting strategy.
6.2.W.2	Develop ideas to compose a first draft.	Organize and develop ideas to compose a first draft.	Organize and develop ideas related to a thesis to compose a first draft.
6.2.W.3	Revise drafts of paragraphs for logical order and effective transitions.	Revise drafts for intended purpose, audience, and organization (e.g., logical order and transitions).	Evaluate and revise drafts for intended purpose, audience, and organization (e.g., logical order and transitions).
6.2.W.4	Edit for correct grammar, usage, and mechanics, using various resources.	Edit for correct grammar, usage, and mechanics, using various resources.	Use various resources to correct grammar, usage, and mechanics for intended purposes.
Critical Reading & Writing			
6.3.R.1	Compare and contrast stated purposes of authors writing on the same topic from a variety of historical, cultural, ethnic, and global perspectives.	Compare and contrast stated or implied purposes of authors writing on the same topic from a variety of historical, cultural, ethnic, and global perspectives.	Compare and contrast stated or implied purposes of authors writing on the same topic from a variety of historical, cultural, ethnic, and global perspectives in complex texts.
6.3.R.2	Identify how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts.	Evaluate how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts.	Evaluate how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts and provide supporting evidence.

Objective	Basic	Proficient	Advanced
6.3.R.3	Identify how literary elements contribute to the meaning of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient)	Analyze how literary elements contribute to the meaning of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient)	Evaluate how literary elements contribute to the meaning of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient)
6.3.R.4	Identify how literary devices contribute to the meaning of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration)	Analyze how literary devices contribute to the meaning of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration)	Evaluate how literary devices contribute to the meaning of a text ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration)
6.3.R.5	Identify literary elements that impact a text's theme.	Identify literary elements and devices that impact a text's theme.	Evaluate literary elements and devices that impact a text's theme.
6.3.R.6	Identify facts included in an argument as for or against an issue.	Categorize facts included in an argument as for or against an issue.	Determine whether facts strengthen or weaken an argument.
6.3.R.7	Determine how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze and explain how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential
6.3.R.8	Identify evidence from a text that supports an inference.	Analyze one or more ideas from a text, providing textual evidence to support their inferences.	
6.3.W.1	Compose simple narratives reflecting real or imagined experiences that: ● include plots involving characters resolving conflicts ● unfold in chronological sequence ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose narratives reflecting real or imagined experiences that: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., foreshadowing) ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose complex narratives reflecting real or imagined experiences that: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., foreshadowing) ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts

Objective	Basic	Proficient	Advanced
6.3.W.2	Compose simple informative essays or reports that: ● introduce and develop a topic ● incorporate evidence (e.g., specific facts and details) ● attempt to maintain an organized structure	Compose informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain an organized structure ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts	Compose complex informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain an organized structure ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts
6.3.W.3	Compose simple argumentative essays that: ● introduce a claim ● attempt to organize claims and evidence in a logical sequence ● attempt to provide relevant evidence to develop arguments, using credible sources	Compose argumentative essays that: ● introduce precise claims ● organize claims and evidence in a logical sequence ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and word choice to create clarity ● establish and maintain a formal style	Compose complex argumentative essays that: ● introduce precise claims ● organize claims and evidence in a logical sequence ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and word choice to create clarity ● establish and maintain a formal style
Vocabulary			
6.4.R.1	Identify synonyms, antonyms, and analogies.	Analyze the relationships among synonyms, antonyms, and analogies.	Evaluate the relationships among synonyms, antonyms, and analogies for intended effect.
6.4.R.2	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among simple multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among complex multiple-meaning words.
6.4.R.3	Use word parts (e.g., affixes, Latin roots, stems) to define and determine the meaning of simple words.	Use word parts (e.g., affixes, Latin roots, stems) to define and determine the meaning of increasingly complex words.	
6.4.R.4		Use a dictionary, glossary, or thesaurus to determine or clarify the meanings, syllabication, pronunciation, synonyms, antonyms, and parts of speech of words.	
6.4.W.1	Use simple vocabulary in writing to clearly communicate ideas.	Use precise, grade-level vocabulary in writing to clearly communicate ideas.	Use precise, complex vocabulary in writing to clearly communicate ideas.
6.4.W.2	Select language in writing to create a specific given effect according to purpose.	Select language in writing to create a specific effect according to purpose.	Select complex language in writing to create a specific effect according to purpose.
Language			
6.5.R.1		Recognize simple, compound, and complex sentences.	

Objective	Basic	Proficient	Advanced
6.5.R.2	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● verb tense to signify various times, sequences, and conditions ● subject and verb agreement ● adjectives ● prepositional phrases ● adverbs ● interjections	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● verb tense to signify various times, sequences, conditions, and states ● subject and verb agreement ● adjectives ● prepositional phrases ● reflexive pronouns and their antecedents ● singular they / them / their ● subordinating conjunctions ● adverbs ● interjections	
6.5.W.1	Compose simple, compound, and complex sentences.	Compose simple, compound, and complex sentences to add clarity and variety in their writing.	
6.5.W.2	Use nouns, verbs, adjectives, prepositions, adverbs, and pronouns.	Add clarity and variety to their writing with nouns, verbs, adjectives, prepositions, adverbs, and pronouns.	
6.5.W.3	Recognize the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and inappropriate shifts in pronoun number and person.	Recognize and correct the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and inappropriate shifts in pronoun number and person.	Evaluate for and correct the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and inappropriate shifts in pronoun number and person.
6.5.W.7	Identify sentences that correctly use commas to separate an introductory element from the rest of the sentence and to indicate direct address (e.g., Where are you, Sam?).	Use commas to separate an introductory element from the rest of the sentence and to indicate direct address (e.g., Where are you, Sam?).	Edit for commas to separate an introductory element from the rest of the sentence and to indicate direct address (e.g., Where are you, Sam?).
6.5.W.8	Identify sentences that correctly use a colon to introduce a quotation from a source (e.g., According to National Geographic, meerkat homes are quite comfortable: "Each burrow is an extensive tunnel-and-room system that remains cool even under the broiling African sun.").	Use a colon to introduce a quotation from a source (e.g., According to National Geographic, meerkat homes are quite comfortable: "Each burrow is an extensive tunnel-and-room system that remains cool even under the broiling African sun.").	Edit for a colon to introduce a quotation from a source (e.g., According to National Geographic, meerkat homes are quite comfortable: "Each burrow is an extensive tunnel-and-room system that remains cool even under the broiling African sun.").
6.5.W.9	Identify sentences that use quotation marks to indicate dialogue, quoted material, and titles of works.	Use quotation marks to indicate dialogue, quoted material, and titles of works.	Edit for quotation marks to indicate dialogue, quoted material, and titles of works.
6.5.W.10	Identify sentences that use underlining or italics to indicate titles of works.	Use underlining or italics to indicate titles of works.	Edit for underlining or italics to indicate titles of works.
6.5.W.11	Identify sentences that use a semicolon to punctuate compound sentences.	Use a semicolon to punctuate compound sentences.	Edit for a semicolon to punctuate compound sentences.
Research			
6.6.R.1	Identify viable research questions to gather information about a topic.	Use their own viable research questions to gather information about a topic.	

Objective	Basic	Proficient	Advanced
6.6.R.2	Record information from various primary and secondary sources.	Record and organize information from various primary and secondary sources.	Record, organize, and analyze information from various primary and secondary sources.
6.6.R.3	Identify the relevance and reliability of the information gathered.	Determine the relevance and reliability of the information gathered.	Evaluate the relevance and reliability of the information gathered.
6.6.W.1	Identify a viable research question.	Formulate and refine a viable research question.	
6.6.W.2	Identify a clear, concise thesis statement.	Develop a clear, concise thesis statement.	Revise a thesis statement to be clear and concise.
6.6.W.3	Quote findings.	Quote findings following a consistent citation style (e.g., MLA, APA) to avoid plagiarism.	

OSTP ELA Grade 7 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:
Reading & Writing Process			
7.2.R.1	Summarize alphabetic and/or multimodal text, including main idea and key details, to demonstrate comprehension of a text.	Summarize alphabetic and/or multimodal texts, including main idea and key details, to demonstrate comprehension within and between texts.	Summarize alphabetic and/or multimodal texts, including main idea and key details, to demonstrate comprehension between texts; evaluate summaries.
7.2.R.2	Identify details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to distinguish genres and provide supporting evidence.
7.2.R.3	Paraphrase a paragraph in their own words to demonstrate comprehension.	Paraphrase a short passage in their own words to demonstrate comprehension.	
7.2.W.1	Identify a prewriting strategy (e.g., develop ideas and plan).	Prewrite (e.g., develop ideas and plan).	Create prewriting strategy.
7.2.W.2	Minimally plan/organize ideas.	Organize and develop ideas to compose a first draft.	Organize and develop ideas related to a thesis to compose a first draft.
7.2.W.3	Revise provided drafts of paragraphs for intended purpose, audience, organization, and coherence (e.g., consistent point of view).	Revise drafts for intended purpose, audience, organization, and coherence (e.g., consistent point of view).	Revise self-created drafts for intended purpose, audience, organization, and coherence (e.g., consistent point of view) and style.
7.2.W.4	Edit for correct grammar, usage, and mechanics, using various resources.	Edit for correct grammar, usage, and mechanics, using various resources.	Use various resources to correct grammar, usage, and mechanics for intended purposes.
Critical Reading & Writing			
7.3.R.1	Read works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and identify the methods the authors use to achieve their purposes.	Read works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and compare the methods the authors use to achieve their purposes.	Read works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and analyze the methods the authors use to achieve their purposes.
7.3.R.2	Identify how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts.	Evaluate how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts.	Evaluate how perspective (e.g., historical, cultural, ethnic, and global) affects a variety of literary and informational texts and provide supporting evidence.

Objective	Basic	Proficient	Advanced
7.3.R.3	Identify literary elements to support an interpretation of a text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient and second person)	Analyze literary elements to support an interpretation of a text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient and second person)	Evaluate literary elements to support an interpretation of a text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient and second person)
7.3.R.4	Identify literary devices to support an interpretation of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal irony	Analyze literary devices to support an interpretation of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal irony	Evaluate literary devices to support an interpretation of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal irony
7.3.R.5	Identify literary elements and devices that impact a text's theme.	Identify literary elements and devices that impact a text's theme and mood.	Explain how literary elements and devices impact a text's theme and mood.
7.3.R.6	Identify factual claims in a text.	Distinguish factual claims from opinions.	Evaluate factual claims.
7.3.R.7	Determine how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze and explain how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential
7.3.R.8	Identify multiple ideas from a text that support an inference.	Analyze multiple ideas from a text, providing textual evidence to support their inferences.	
7.3.W.1	Compose simple narratives reflecting real or imagined experiences that may: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., foreshadowing) ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose narratives reflecting real or imagined experiences that ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g. Foreshadowing) ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose complex narratives reflecting real or imagined experiences that: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., foreshadowing) ● include a narrator, precise language, sensory details, dialogue, and thoughts to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts

Objective	Basic	Proficient	Advanced
7.3.W.2	Compose simple informative essays or reports that: ● introduce and develop topics ● incorporate evidence (e.g., specific facts and details) ● attempt to maintain an organized structure	Compose informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain an organized structure ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts	Compose complex informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain an organized structure ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts
7.3.W.3	Compose simple argumentative essays that: ● introduce a claim ● attempt to organize the claim and evidence in a logical sequence ● provide evidence to develop arguments, using credible sources	Compose argumentative essays that: ● introduce precise claims ● organize claims and evidence in a logical sequence ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and word choice to create clarity ● establish and maintain a formal style	Compose complex argumentative essays that: ● introduce precise claims ● organize claims and evidence in a logical sequence ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and word choice to create clarity ● establish and maintain a formal style
Vocabulary			
7.4.R.1	Identify synonyms, antonyms, and analogies.	Analyze the relationships among synonyms, antonyms, and analogies.	Evaluate the relationships among synonyms, antonyms, and analogies for intended effect.
7.4.R.2	Use context clues and denotation to determine or clarify the meaning of words or distinguish among simple multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among complex multiple-meaning words.
7.4.R.3	Use word parts (e.g., affixes, Greek roots, stems) to define and determine the meaning of new words.	Use word parts (e.g., affixes, Greek roots, stems) to define and determine the meaning of increasingly complex words.	
7.4.R.4		Use a dictionary, glossary, or thesaurus to determine or clarify the meanings, syllabication, pronunciation, synonyms, antonyms, and parts of speech of words.	
7.4.W.1	Use simple vocabulary in writing to clearly communicate ideas.	Use precise, grade-level vocabulary in writing to clearly communicate ideas.	Use precise, complex vocabulary in writing to clearly communicate ideas.
7.4.W.2	Select simple language in writing to create a specific, given effect according to purpose.	Select language in writing to create a specific effect according to purpose.	Select complex language in writing to create a specific effect according to purpose.
Language			
7.5.R.1	Recognize simple, compound, and complex sentences.	Recognize simple, compound, complex, and compound-complex sentences and explain their effects.	Analyze simple, compound, complex, and compound-complex sentences and explain their effects.

Objective	Basic	Proficient	Advanced
7.5.R.2	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● subject and verb agreement ● singular they / them / their ● adverbs ● interjections	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● gerunds ● subject and verb agreement ● cumulative and coordinate adjectives ● demonstrative pronouns ● vague pronouns (i.e., ones with unclear or ambiguous antecedents) ● singular they / them / their ● correlative conjunctions ● adverbs ● interjections	
7.5.W.1	Compose simple, compound, complex sentences.	Compose simple, compound, complex, and compound-complex sentences to add clarity and variety in their writing.	Compose compound-complex sentences to add clarity, variety, and intended effect in their writing.
7.5.W.2	Use nouns, verbs, adjectives, prepositions, adverbs, and pronouns.	Add clarity and variety to their writing with nouns, verbs, adjectives, prepositions, adverbs, and pronouns.	
7.5.W.3	Identify the following: run-ons, errors in subject and verb agreement, and inappropriate shifts in verb tense.	Recognize and correct the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and vague pronouns (i.e., ones with unclear or ambiguous antecedents).	Evaluate for and correct the following: run-ons, errors in subject and verb agreement, inappropriate shifts in verb tense, and vague pronouns (i.e., ones with unclear or ambiguous antecedents).
7.5.W.7	Identify sentences that correctly use commas to separate words or phrases in a series.	Use commas to separate words or phrases in a series.	Edit for commas used to separate words or phrases in a series.
7.5.W.8	Identify sentences that correctly use a colon to introduce a quotation from a source.	Use a colon to introduce a quotation from a source.	Edit for colons used to introduce a quotation from a source.
7.5.W.9	Identify sentences that correctly use quotation marks to indicate dialogue, quoted material, and titles of works.	Use quotation marks to indicate dialogue, quoted material, and titles of works.	Edit for quotation marks used to indicate dialogue, quoted material, and titles of works.
7.5.W.10	Identify sentences that correctly use underlining or italics to indicate titles of works, thoughts in narratives, and words in a foreign language.	Use underlining or italics to indicate titles of works, thoughts in narratives, and words in a foreign language.	Edit for use of underlining or italics to indicate titles of works, thoughts in narratives, and words in a foreign language.
7.5.W.11	Identify sentences that correctly use a semicolon to punctuate compound and compound-complex sentences.	Use a semicolon to punctuate compound and compound-complex sentences.	Edit for a semicolon to punctuate compound and compound-complex sentences.
Research			
7.6.R.1	Find and comprehend information (e.g., claims, evidence) about a topic and identify a viable research question.	Find and comprehend information (e.g., claims, evidence) about a topic, using their own viable research questions.	

Objective	Basic	Proficient	Advanced
7.6.R.2	Record and organize information from a variety of primary and secondary sources.	Find, record, and organize information from a variety of primary and secondary sources, following ethical and legal guidelines.	Find, analyze, and record and organize information from a variety of primary and secondary sources, following ethical and legal guidelines.
7.6.R.3	Determine the relevance and reliability of the information gathered.	Determine the relevance, reliability, and validity of the information gathered.	Evaluate the relevance, reliability, and validity of the information gathered.
7.6.W.1	Identify a clear and concise research question.	Formulate and refine a viable research question.	
7.6.W.2	Identify a clear, concise thesis statement.	Develop a clear, concise thesis statement.	Revise a thesis statement to be clear and concise.
7.6.W.3	Quote and summarize findings.	Quote and summarize findings following a consistent citation style (e.g., MLA, APA) to avoid plagiarism.	

OSTP ELA Grade 8 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:
Reading & Writing Process			
8.2.R.1	Summarize an alphabetic or multimodal text to demonstrate comprehension of a text.	Summarize alphabetic and/or multimodal texts about similar topics to demonstrate comprehension within and between texts.	Summarize alphabetic and/or multimodal texts about similar topics to demonstrate comprehension within and between texts; evaluate summaries.
8.2.R.2	Identify details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to identify characteristics of genres.	Analyze details in fiction, poetry, and nonfiction texts to identify characteristics of genres and provide supporting evidence.
8.2.R.3	Paraphrase a paragraph in their own words to demonstrate comprehension.	Paraphrase a portion of passage in their own words to demonstrate comprehension.	
8.2.W.1	Identify a prewriting strategy (e.g., develop ideas and plan).	Prewrite (e.g., develop ideas and plan).	Create and use a prewriting strategy.
8.2.W.2	Minimally plan/organize ideas.	Organize and develop ideas to compose a first draft.	Organize and develop ideas related to a thesis to compose a first draft.
8.2.W.3	Revise provided drafts of paragraphs for intended purpose, audience, and organization.	Revise drafts for intended purpose, audience, organization, coherence, and style (e.g., word choice and sentence variety).	Revise self-created drafts for intended purpose, audience, organization, coherence, and style (e.g., word choice and sentence variety).
8.2.W.4	Edit a paragraph for correct grammar and mechanics, using various resources.	Edit for correct grammar, usage, and mechanics, using various resources.	Edit for correct grammar, usage, and mechanics, using various resources; edit mechanics for intended effect and purpose.
Critical Reading & Writing			
8.3.R.1	Analyze works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and compare the methods the authors use to achieve their purposes.	Analyze works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and analyze the methods the authors use to achieve their purposes.	Analyze works written on the same topic from a variety of historical, cultural, ethnic, and global perspectives and evaluate the methods the authors use to achieve their purposes.
8.3.R.2	Determine perspectives (e.g., historical, cultural, ethnic, and global) and describe how they affect various literary and informational texts.	Evaluate perspectives (e.g., historical, cultural, ethnic, and global) and describe how they affect various literary and informational texts.	

Objective	Basic	Proficient	Advanced
8.3.R.3	Identify literary elements to support interpretations of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient, second person, and unreliable narrator)	Analyze literary elements to support interpretations of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient, second person, and unreliable narrator)	Evaluate literary elements to support interpretations of a literary text: ● setting ● plot ● characters (i.e., protagonist, antagonist) ● characterization ● conflict (i.e., internal, external) ● point of view (i.e., third person limited and omniscient, second person, and unreliable narrator)
8.3.R.4	Determine literary devices to support interpretations of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal and situational irony	Analyze literary devices to support interpretations of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal and situational irony	Evaluate literary devices to support interpretations of a text: ● figurative language (i.e., simile, metaphor, personification, hyperbole, imagery, symbolism, idiom) ● sound devices (i.e., onomatopoeia, alliteration) ● verbal and situational irony
8.3.R.5	Identify literary elements and devices that impact a text's theme and mood.	Identify literary elements and devices that impact a text's theme, mood, and tone.	Identify literary elements and devices that impact a text's theme, mood, and tone.
8.3.R.6	Identify a claim and describe how evidence supports a claim.	Evaluate textual evidence to determine whether a claim is substantiated or unsubstantiated.	
8.3.R.7	Determine how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze how informational text structures support the author's purpose: ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential	Analyze and evaluate how informational text structures support the author's purpose and explain why one structure was selected over another. ● compare/contrast ● cause/effect ● problem/solution ● description ● sequential
8.3.R.8	Compare or contrast ideas within a text, providing textual evidence to support their inferences.	Compare or contrast two or more texts, providing textual evidence to support their inferences.	Analyze two or more texts, providing textual evidence to support their inferences.
8.3.W.1	Compose simple narratives reflecting real or imagined experiences that may: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., flashback and foreshadowing) ● include a narrator, precise language, sensory details, and dialogue to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose narratives reflecting real or imagined experiences that ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., flashback and foreshadowing) ● include a narrator, precise language, sensory details, and dialogue to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts	Compose complex narratives reflecting real or imagined experiences that: ● include plots involving complex characters resolving conflicts ● unfold in chronological or surprising sequence (e.g., flashback and foreshadowing) ● include a narrator, precise language, sensory details, and dialogue to enhance the narrative ● use sentence variety to create clarity ● emulate literary elements and/or literary devices from mentor texts

Objective	Basic	Proficient	Advanced
8.3.W.2	Compose simple informative essays or reports that: ● introduce and develop topics ● incorporate evidence (e.g., specific facts, details) ● attempt to maintain an organized structure ● attempt to use sentence variety and word choice to create clarity	Compose informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain an organized structure ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts	Compose complex informative essays or reports that: ● objectively introduce and develop topics ● incorporate evidence (e.g., specific facts, details, charts and graphs, data) ● maintain a clear and organized structure using smooth transitions ● use sentence variety and word choice to create clarity ● establish and maintain a formal style ● emulate literary devices from mentor texts
8.3.W.3	Compose simple argumentative essays that: ● introduce claims ● attempt to organize claims and evidence in a logical sequence ● provide evidence to develop arguments, using credible sources ● attempt to use sentence variety and word choice to create clarity	Compose argumentative essays that: ● introduce precise claims ● acknowledge counterclaims ● organize claims, counterclaims, and evidence in a logical sequence ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and word choice to create clarity ● establish and maintain a formal style	Compose complex argumentative essays that: ● clearly introduce precise claims ● acknowledge counterclaims ● effectively organize claims, counterclaims, and evidence in a logical sequence using smooth transitions ● provide relevant evidence to develop arguments, using credible sources ● use sentence variety and precise word choice to create clarity ● establish and maintain a formal style
Vocabulary			
8.4.R.1	Identify synonyms, antonyms, and analogies.	Analyze the relationships among synonyms, antonyms, and analogies.	Evaluate the relationships among synonyms, antonyms, and analogies.
8.4.R.2	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among simple multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among multiple-meaning words.	Use context clues, connotation, and denotation to determine or clarify the meaning of words or distinguish among complex multiple-meaning words.
8.4.R.3	Use word parts (e.g., affixes, Greek roots, stems) to define and determine the meaning of simple words.	Use word parts (e.g., affixes, Greek roots, stems) to define and determine the meaning of increasingly complex words.	
8.4.R.4		Use a dictionary, glossary, or thesaurus to determine or clarify the meanings, syllabication, pronunciation, synonyms, antonyms, and parts of speech of words.	
8.4.W.1	Use precise, simple vocabulary in writing to clearly communicate ideas.	Use precise, grade-level vocabulary in writing to clearly communicate ideas.	Use precise, complex vocabulary in writing to clearly communicate ideas.
8.4.W.2	Select language in writing to create a given effect according to purpose.	Select language in writing to create a specific effect according to purpose.	Select complex language in writing to create a specific effect according to purpose.
Language			
8.5.R.1		Recognize active and passive voice and misplaced and dangling modifiers in sentences.	

Objective	Basic	Proficient	Advanced
8.5.R.2	Recognize parts of speech in sentences: ● nouns ● verbals (i.e., gerunds, participles, infinitives) ● cumulative and coordinate adjectives ● vague pronouns ● singular they/them/their ● coordinating, subordinating, and correlative conjunctions ● adverbs ● interjections	Recognize and explain the impact on meaning of parts of speech in sentences: ● nouns ● verbals (i.e., gerunds, participles, infinitives) ● cumulative and coordinate adjectives ● vague pronouns ● singular they/them/their ● coordinating, subordinating, and correlative conjunctions ● adverbs ● interjections	
8.5.W.1	Compose simple, compound, complex, and compound-complex sentences.	Compose simple, compound, complex, and compound-complex sentences to add clarity and variety to their writing.	Compose simple, compound, complex, and compound-complex sentences to add clarity, variety, and contribute to the intended purpose of their writing.
8.5.W.2	Use nouns, verbs, verbals, adjectives, prepositions, adverbs, pronouns, and conjunctions in their writing.	Create clarity and/or add variety to their writing with nouns, verbs, verbals, adjectives, prepositions, adverbs, pronouns, and conjunctions.	Create clarity and add variety to their writing with nouns, verbs, verbals, adjectives, prepositions, adverbs, pronouns, and conjunctions.
8.5.W.3	Recognize and correct vague pronouns.	Recognize and correct the following: misplaced and dangling modifiers, vague pronouns, and second person point of view in formal writing.	Evaluate for and correct the following: misplaced and dangling modifiers, vague pronouns, and second person point of view in formal writing.
8.5.W.7		Use commas to separate coordinate adjectives (e.g., a fascinating, enjoyable movie).	Evaluate for and use commas to separate coordinate adjectives (e.g., a fascinating, enjoyable movie).
8.5.W.8		Use a colon to introduce a quotation from a source.	Edit for colons used to introduce a quotation from a source.
8.5.W.10	Use underlining or italics to indicate titles of works.	Use underlining or italics to indicate titles of works, thoughts in narratives, and words in a foreign language.	Edit for underlining or italics to indicate titles of works, thoughts in narratives, and words in a foreign language.
8.5.W.11	Use a semicolon to punctuate compound sentences.	Use a semicolon to punctuate compound and compound-complex sentences.	Edit for a semicolon to punctuate compound and compound-complex sentences.
Research			
8.6.R.1	Find and comprehend information (e.g., claims, evidence) about a topic and identify viable research questions.	Find and comprehend information (e.g., claims, evidence) about a topic, using their own viable research questions.	
8.6.R.2	Find and organize information from a variety of primary and secondary sources.	Find, record, and organize information from a variety of primary and secondary sources, following ethical and legal guidelines.	Find, analyze, record, and organize information from a variety of primary and secondary sources, following ethical and legal guidelines.

Objective	Basic	Proficient	Advanced
8.6.R.3	Identify the relevance, reliability, and validity of the information gathered.	Determine the relevance, reliability, and validity of the information gathered.	Evaluate information for relevance, reliability, and validity.
8.6.W.1	Identify a viable research question.	Formulate and refine a viable research question.	
8.6.W.2	Identify a clear, concise thesis statement.	Develop a clear, concise, defensible thesis statement.	Revise a defensible thesis statement based on findings for clarity and concision.
8.6.W.3	Quote and summarize findings.	Quote, paraphrase, and summarize findings following a consistent citation style (e.g., MLA, APA) to avoid plagiarism.	

OSTP Math Grade 3 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations	Represent and describe whole numbers up to 100,000.	Compare and order whole numbers.	Compare and order whole numbers when numbers are given in different forms.	3.N.1.1, 3.N.1.2, 3.N.1.4
	Solve addition and subtraction problems.	Solve multiplication problems. Recognize the relationship between multiplication and division.	Assess the reasonableness of results in addition and subtraction problems.	3.N.1.3, 3.N.2.3, 3.N.2.5, 3.N.2.7, 3.N.2.8
		Round numbers to the nearest thousand, ten thousand, and hundred thousand.	Use rounding to estimate sums and differences.	3.N.1.5, 3.N.2.4
		Represent multiplication and division facts by modeling a variety of approaches.		3.N.2.1, 3.N.2.6
		Demonstrate fluency with multiplication facts.		3.N.2.2
	Read and write fractions. Apply understanding of unit fractions. Represent fractions with models.	Compose and decompose fractions.	Compare and order fractions using models.	3.N.3.1, 3.N.3.2, 3.N.3.3, 3.N.3.4
	Determine the value of a set of coins or a set of bills.			3.N.4.1, 3.N.4.2
Algebraic Reasoning & Algebra	Describe patterns.	Describe the rule for a pattern.	Create and extend patterns.	3.A.1.1, 3.A.1.2, 3.A.1.3

Strand	Basic	Proficient	Advanced	Objective(s)
Algebraic Reasoning & Algebra		Determine unknowns (represented by symbols) in one-step addition, subtraction, and multiplication equations.	Generate real-world situations to represent number sentences.	3.A.2.1
	Identify commutative, identity, and associative properties.	Apply commutative, identity, and associative properties.		3.A.2.2
Geometry & Measurement	Sort three-dimensional figures based on attributes.	Build a three-dimensional figure using unit cubes.	Count cubes to find the number of cubes needed to pack the whole or half of a structure.	3.GM.1.1, 3.GM.1.2, 3.GM.2.3
	Identify right angles.	Classify angles.		3.GM.1.3
		Determine the perimeter of polygons.		3.GM.2.1
		Determine the area of two-dimensional figures.	Analyze why length and width are multiplied to find the area of a rectangle.	3.GM.2.2, 3.GM.2.4
	Choose an appropriate instrument to measure the length of an object.	Measure length.		3.GM.2.5, 3.GM.2.6
		Use an analog thermometer to determine temperature.		3.GM.2.7
	Read and write time from a digital clock.	Read and write time from an analog clock.	Determine elapsed time.	3.GM.3.1, 3.GM.3.2
Data & Probability	Collect data.	Organize a data set using a frequency table, line plot, pictograph, or bar graph with intervals of one.	Organize a data set using a frequency table, line plot, pictograph, or bar graph with intervals other than one.	3.D.1.1
		Solve one-step problems represented with a frequency table, pictograph, or bar graph with scaled intervals.	Solve two-step problems represented with a frequency table, pictograph, or bar graph with scaled intervals.	3.D.1.2

OSTP Math Grade 4 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations	Represent and describe whole numbers up to 1,000,000.	Use place value to compare and order whole numbers.		4.N.1.1, 4.N.1.2, 4.N.1.4
		Apply knowledge of place value to multiply a number by 10, 100, and 1,000.		4.N.1.3
	Demonstrate fluency with multiplication and division facts.	Multiply and estimate 3-digit by 1-digit and 2-digit by 2-digit whole numbers.	Assess the reasonableness of the estimation of 3-digit by 1-digit and 2-digit by 2-digit whole-number products.	4.N.2.1, 4.N.2.2, 4.N.2.3,
		Solve multi-step problems.	Apply and analyze models to solve multi-step problems and assess the reasonableness of results.	4.N.2.4
		Divide a 3-digit dividend by a 1-digit divisor with and without remainder.		4.N.2.5
	Use models to determine equivalent fractions.			4.N.3.1
		Use benchmark fractions to locate additional fractions on a number line.		4.N.3.2
	Use models to compare and order fractions with like denominators.	Use models to compare and order fractions with unlike denominators.		4.N.3.3
	Use models to add and subtract fractions.	Decompose fractions.		4.N.3.4, 4.N.3.5

Strand	Basic	Proficient	Advanced	Objective(s)
Numbers & Operations	Represent tenths and hundredths with models.	Make connections between fractions (tenths and hundredths) and decimals with models.		4.N.3.1, 4.N.3.6
	Read and write decimals up to the hundredths place, including money.	Compare and order benchmark fractions. Compare and order decimals.	Compare and order benchmark fractions to decimals.	4.N.3.7, 4.N.3.8, 4.N.3.9
		Select the fewest number of coins for a given amount of money.		4.N.4.1
	Determine change using whole dollars.	Determine change using coins and dollars.		4.N.4.2
Algebraic Reasoning & Algebra	Create an input/output table.	Determine rules and extend patterns shown in input/output tables.		4.A.1.1, 4.A.1.2
		Define the single operation rule of a pattern involving geometric shapes.	Construct models to show growth patterns involving geometric shapes.	4.A.1.3
	Use the relationships between multiplication and division with the properties of multiplication to solve problems.	Solve for a variable in an equation with addition, subtraction, multiplication, and division of whole numbers.	Analyze models to represent number sentences.	4.A.2.1, 4.A.2.2
		Determine unknown values in equivalent expressions.	Determine unknown values in non-equivalent expressions.	4.A.2.3
Geometry & Measurement	Identify points, endpoints, and angles.	Identify lines, line segments, rays, and parallel and perpendicular lines.		4.GM.1.1
	Describe and recognize quadrilaterals.	Classify quadrilaterals.	Construct quadrilaterals.	4.GM.1.2
	Identify three-dimensional figures.	Compare and contrast the similarities and differences of three-dimensional figures based on their attributes.		4.GM.1.3

Strand	Basic	Proficient	Advanced	Objective(s)
Geometry & Measurement		Measure angles.		4.GM.2.1
		Decompose and determine the area of polygons.		4.GM.2.2
		Develop the concept of volume.	Create models to determine volume.	4.GM.2.3
	Identify appropriate units and tools to measure length. Measure the lengths of objects.	Compare the lengths of objects.	Determine and justify the best use of customary and metric measurements in a variety of situations.	4.GM.2.4, 4.GM.2.5, 4.GM.2.6, 4.GM.2.7
		Convert measurements of time.	Determine elapsed time.	4.GM.3.1, 4.GM.3.2
Data & Probability		Create a frequency table or line plot with whole numbers. Organize data sets to create tables, bar graphs, timelines, and Venn diagrams with whole numbers.	Create a frequency table or line plot with fractions. Organize data sets to create tables, bar graphs, timelines, and Venn diagrams with fractions.	4.D.1.1, 4.D.1.2
		Solve one-step problems by analyzing data in whole-number, decimal, or fraction form in a frequency table and line plot.	Solve two-step problems by analyzing data in whole-number, decimal, or fraction form in a frequency table and line plot.	4.D.1.3

OSTP Math Grade 5 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations	Represent decimal fractions with a model.			5.N.1.1
	Recognize and generate equivalent decimals, fractions, and mixed numbers and represent whole numbers.	Compare and order fractions. Compare and order decimals.	Order a mix of decimals, fractions, mixed numbers, and whole numbers.	5.N.1.2, 5.N.1.3, 5.N.1.4
	Solve division, multiplication, addition, and subtraction problems.	Estimate and solve division problems with the remainder represented as a fraction, decimal, or whole number.	Interpret the remainder of division problems within the context of the problem.	5.N.2.1, 5.N.2.2, 5.N.2.3, 5.N.2.4
	Add and subtract decimals and fractions with like denominators.	Estimate, illustrate, add, and subtract fractions and mixed numbers.	Order a mix of decimals, fractions, mixed numbers, and whole numbers.	5.N.3.1, 5.N.3.2, 5.N.3.3, 5.N.3.4
Algebraic Reasoning & Algebra	Describe patterns of change. Identify the origin and axes in relation to the coordinates.	Graph patterns of change as ordered pairs on a coordinate plane. Use a rule or table to represent ordered pairs.	Make predictions and generalizations about patterns of change.	5.A.1.1, 5.A.1.2
	Generate equivalent numerical expressions.	Evaluate numerical expressions.	Apply the order of operations, commutative property, associative property, and distributive property.	5.A.2.1, 5.A.2.3
	Determine whether an equation involving a variable is true or false for a given value of the variable.	Determine whether an inequality involving a variable is true or false for a given value of the variable.		5.A.2.2

Strand	Basic	Proficient	Advanced	Objective(s)
Geometry & Measurement	Describe and identify triangles.	Classify triangles by their attributes.	Construct triangles.	5.GM.1.1
	Describe, identify, and classify three-dimensional figures when given an image.	Using attributes, describe, identify, and classify three-dimensional figures without a given image.		5.GM.1.2
	Recognize nets for three-dimensional figures.	Construct nets for three-dimensional figures.		5.GM.1.3
		Determine volume of rectangular prisms.	Compare volumes of rectangular prisms.	5.GM.2.1
		Estimate perimeter of polygons and shapes that may include curves.	Justify perimeter of shapes that may include curves.	5.GM.2.2
	Measure angles.	Compare angles.		5.GM.3.1
	Choose an appropriate instrument to measure lengths. Measure the lengths of objects.	Apply the relationship between units to convert and compare objects to solve problems.		5.GM.3.2, 5.GM.3.3, 5.GM.3.4
		Estimate lengths and geometric measurements.		5.GM.3.5
Data & Probability		Calculate the mean, median, mode, and range of a data set.		5.D.1.1
		Create and analyze line and double bar graphs with whole numbers.	Create and analyze line and double bar graphs with fractions or decimals.	5.D.1.2

OSTP Math Grade 6 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations	Represent reflective relationships between integers and their opposites. Explain the meaning of zero.			6.N.1.1
	Read and represent integers or other positive rational numbers.	Order and compare integers or other positive rational numbers.	Explain integers or other positive rational numbers.	6.N.1.2, 6.N.1.3
	Explain that a percent represents parts "out of 100" and ratios "to 100."	Find equivalent fractions, mixed numbers, decimals, and percents.		6.N.1.3, 6.N.1.4
	Illustrate and compute the addition and subtraction of integers.	Estimate addition and subtraction of integers.	Assess the reasonableness of an answer to addition and subtraction of integers.	6.N.2.1, 6.N.2.2, 6.N.2.3
	Evaluate powers with whole-number bases and exponents.	Identify and represent patterns with whole-number exponents and perfect squares.		6.N.2.4
	Factor whole numbers.	Write positive integers as products of prime factors. Determine greatest common factor and least common multiple.	Use greatest common factor and least common multiple to calculate with fractions, find equivalent fractions, and express the sum of two-digit numbers with a common factor using the distributive property.	6.N.2.5, 6.N.2.6

Strand	Basic	Proficient	Advanced	Objective(s)
Numbers & Operations	Identify ratios.	Use ratios to compare and relate quantities. Determine unit rates. Recognize that multiplicative comparison and additive comparison are different.	Apply the relationship between ratios, equivalent fractions, unit rates, and percents to solve problems in various contexts.	6.N.3.1, 6.N.3.2, 6.N.3.3
	Solve problems involving multiplication and division of fractions and decimals.	Illustrate multiplication and division of fractions and decimals. Estimate solutions involving multiplication and division of fractions and decimals.	Use estimates to assess the reasonableness of solutions involving multiplication and division of fractions and decimals in the context of the problem.	6.N.4.1, 6.N.4.2, 6.N.4.3
		Use modeling to interpret problems including money, measurement, geometry, and data.		6.N.4.4
Algebraic Reasoning & Algebra	Graph ordered pairs in all quadrants.	Represent relationships between varying positive quantities with rules, graphs, and tables.		6.A.1.1, 6.A.1.2
	Evaluate the value of a variable in expressions, equations, and inequalities.	Model or generate expressions, equations, and inequalities.		6.A.1.3, 6.A.2.1, 6.A.3.1
	Use number sense and properties of operations to solve and graph one-step equations on a number line.	Interpret the solution of a one-step equation.	Assess the reasonableness of the solution of a one-step equation.	6.A.3.2
Geometry & Measurement	Identify and display the effect of transformations.	Describe, apply, and predict transformations and use transformations to show congruence.		6.GM.1.1, 6.GM.1.2
	Identify lines of symmetry.	Describe lines of symmetry.		6.GM.1.3

Strand	Basic	Proficient	Advanced	Objective(s)
Geometry & Measurement	Determine the area of parallelograms, squares, and triangles.	Determine the area of polygons that can be decomposed into triangles and rectangles.	Develop the formulas for the area of parallelograms, squares, and triangles.	6.GM.2.1, 6.GM.2.2, 6.GM.2.3
	Identify angle relationships by name.	Use relationships between angles and the triangle sum theorem to solve problems.		6.GM.3.1, 6.GM.3.2
		Estimate weights and capacities. Estimate and solve problems requiring conversion of lengths.		6.GM.4.1, 6.GM.4.2
Data & Probability		Interpret the mean, median, and mode for a set of data.	Justify which measure of center would provide the most descriptive information for a set of data.	6.D.1.1, 6.D.1.2
	Represent possible outcomes using a probability continuum. Determine the sample space of simple experiments and identify possible outcomes.	Compare possible outcomes of simple experiments.	Analyze the differences between two outcomes of simple experiments.	6.D.2.1, 6.D.2.2, 6.D.2.3

OSTP Math Grade 7 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations		Compare and order rational numbers.		7.N.1.1
	Recognize equivalent representations of rational numbers.	Generate equivalent representations of rational numbers.		7.N.1.2
	Calculate the absolute value of a rational number.	Explain the absolute value of a rational number as the distance of that number from zero on a number line.	Apply the concept of absolute value to model and solve problems.	7.N.1.3
		Estimate solutions of problems involving rational numbers.	Assess the reasonableness of the solutions of problems with rational numbers.	7.N.2.1
	Multiply and divide integers.	Illustrate multiplication and division of integers using a variety of representations.		7.N.2.2, 7.N.2.3
	Solve problems involving rational numbers and exponents.	Model problems involving rational numbers and exponents.		7.N.2.4, 7.N.2.5
Algebraic Reasoning & Algebra	Identify a proportional relationship.	Identify the constant of proportionality from a graph.		7.A.1.1, 7.A.1.2
		Represent proportional relationships in a variety of ways and determine unit rates.	Translate from one representation of a proportional relationship to another.	7.A.2.1

Strand	Basic	Proficient	Advanced	Objective(s)
Algebraic Reasoning & Algebra		Solve problems involving proportional relationships.	Assess the reasonableness of solutions of problems involving proportional relationships.	7.A.2.2, 7.A.2.3, 7.A.2.4
	Solve equations.	Write equations.	Interpret equations and inequalities involving variables and rational numbers.	7.A.3.1
	Solve and graph inequalities.	Write inequalities.		7.A.3.2
	Evaluate expressions using the order of operations.	Generate and evaluate equivalent expressions.	Justify the steps when evaluating expressions.	7.A.4.1, 7.A.4.2
Geometry & Measurement	Develop the concepts of surface area and volume of rectangular prisms.	Develop the concepts of surface area and volume of rectangular prisms with non-whole number units. Calculate surface area of rectangular prisms.		7.GM.1.1, 7.GM.1.2., GM.1.3
	Calculate perimeter of composite figures.	Calculate area of trapezoids and composite figures.	Develop the formula for area of trapezoids.	7.GM.2.1, 7.GM.2.2
		Solve problems that require conversions of weights and capacities.		7.GM.3.1
	Recognize that pi can be approximated by rational numbers such as 22/7 and 3.14. Calculate the circumference and area of circles.	Demonstrate an understanding of the proportional relationship between the diameter and circumference of a circle.	Make connections between circumference and area to solve problems involving circles.	7.GM.3.2, 7.GM.3.3
	Determine scale factors resulting from dilations.	Use scale factors to solve problems.		7.GM.4.1
		Describe similarity and compare figures for similarity.		7.GM.4.1
	Determine side lengths of similar triangles and rectangles.	Determine areas of similar triangles and rectangles.		7.GM.4.2

Strand	Basic	Proficient	Advanced	Objective(s)
Geometry & Measurement	Describe the effect of dilations, translations, and reflections.	Apply and graph the effect of dilations, translations, and reflections.	Apply and graph rotations. Analyze the effect of dilations and multiple transformations.	7.GM.4.3
Data & Probability			Design simple experiments and use data to draw conclusions and make predictions.	7.D.1.1
	Calculate measures of central tendency and spread.		Use measures of central tendency and spread to draw conclusions about data collected and make predictions.	7.D.1.1
		Display information on circle graphs and histograms.	Interpret information from circle graphs and histograms.	7.D.1.2
		Use box plots to identify relevant data.	Analyze box plots.	7.D.1.3
	Calculate theoretical probability.	Interpret theoretical probability and draw conclusions.	Predict relative frequencies based on theoretical probabilities.	7.D.2.1, 7.D.2.2, 7.D.2.3

OSTP Math Grade 8 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:	**OK Policy PLD Proficient:** Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:	**OK Policy PLD Advanced:** Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:	
Numbers & Operations	Translate between standard form and scientific notation.	Multiply and divide numbers expressed in scientific notation.		PA.N.1.2, PA.N.1.3
	Locate, identify, compare, and order rational numbers on and off a number line.	Locate, identify, compare, and order irrational numbers on and off a number line.		PA.N.1.2, PA.N.1.4
	Identify square roots of perfect squares.	Locate square roots that are irrational numbers between two consecutive positive integers.		PA.N.1.4
		Apply the properties of integer exponents.	Develop the properties of integer exponents.	PA.N.1.1
Algebraic Reasoning & Algebra	Simplify and generate equivalent expressions.	Evaluate equivalent expressions. Evaluate expressions.	Justify equivalent expressions.	PA.A.3.1, PA.A.3.2
	Solve linear equations.	Represent situations using linear equations.	Interpret solutions of linear equations.	PA.A.4.1
		Represent, write, solve, and graph inequalities.		PA.A.4.2
	Identify linear relationships.	Describe linear relationships.	Analyze linear relationships.	PA.A.2.2
		Recognize that a function is a relationship between an independent variable and a dependent variable.		PA.A.1.1

Strand	Basic	Proficient	Advanced	Objective(s)
Algebraic Reasoning & Algebra	Identify linear functions from a graph.	Identify linear functions from an equation.		PA.A.1.3
	Identify linear relationships between two variables.	Describe linear relationships between two variables.	Analyze linear relationships between two variables.	PA.A.1.3
	Describe linear functions with two variables.	Represent and solve linear functions with two variables.	Analyze linear functions with two variables and interpret results.	PA.A.1.2, PA.A.2.1, PA.A.2.3, PA.A.2.5, PA.A.4.1, PA.A.4.2, PA.A.4.3
	Identify slope.	Identify intercepts.		PA.A.2.3
		Predict the effect on the graph of a linear function when the *y*-intercept is changed.	Predict the effect on the graph of a linear function when the slope is changed.	PA.A.2.4
Geometry & Measurement	Calculate the surface area of rectangular prisms.	Calculate the surface area and volume of right cylinders.	Justify the formulas for volume of rectangular prisms and right cylinders.	PA.GM.2.1, PA.GM.2.2, PA.GM.2.3, PA.GM.2.4
		Use and apply the Pythagorean theorem.	Justify the Pythagorean theorem.	PA.GM.1.1, PA.GM.1.2
Data & Probability			Describe the impact that inserting or deleting a data point has on the mean and the median of a data set.	PA.D.1.1
		Explain how outliers affect measures of center and spread.		PA.D.1.2
	Collect and display information on a scatter plot.	Identify the informal line of best fit from a given scatter plot.	Interpret a scatter plot, determine the rate of change, and use a line of best fit to make predictions.	PA.D.1.3
	Identify sample spaces, classify events as independent or dependent.	Calculate experimental probability, determine how samples are chosen, and generalize samples to populations.	Interpret and predict experimental probability.	PA.D.2.1, PA.D.2.2, PA.D.2.3

APPENDIX—B
ORDERED ITEM BOOKLET BLUEPRINTS

Table 1. OSTP ELA Grades 3-8 OIB Blueprint Percentages

Grade	Source	Standard 2	Standard 3	Standard 4	Standard 5	Standard 6
3	Target #	19-21	6-9	11-13	6-9	6-9
	OIB #	15	9	11	6	7
4	Target #	15-17	9-12	11-13	6-9	6-9
	OIB #	15	9	7	6	9
5	Target #	15-17	11-13	9-11	6-9	6-9
	OIB #	15	13	11	7	8
6	Target #	17-19	9-11	9-11	6-9	6-9
	OIB #	17	11	10	6	6
7	Target #	17-19	9-11	7-10	6-9	7-10
	OIB #	17	11	7	7	8
8	Target #	12-15	12-15	7-10	6-9	6-9
	OIB #	10	18	8	7	9

Table 2. OSTP Mathematics Grades 3-8 OIB Blueprint Percentages

Grade	Source	Number & Operations	Algebraic Reasoning & Algebra	Geometry and Measurement	Data & Probability
3	Target %	44-48	12-18	22-26	12-18
	OIB %	48	14	26	12
4	Target %	42-46	12-18	24-28	12-18
	OIB %	42	18	28	12
5	Target %	42-46	14-20	22-26	12-18
	OIB %	46	18	24	12
6	Target %	38-42	20-24	22-26	12-16
	OIB %	40	22	24	14
7	Target %	16-20	26-30	30-36	18-24
	OIB %	18	28	32	22
8	Target %	16-20	44-48	18-22	14-18
	OIB %	16	44	22	18

APPENDIX C
LOGISTIC REGRESSION CALCULATION

The proficient and advanced cut scores for the OSTP ELA and mathematics grades 3-8 tests were computed using the logistic regression method as follows:

$$log\frac{P}{1-P} = \beta_0 + \beta_1\theta$$

which is equivalent to:

$$P = \frac{exp\ (\beta_0 + \beta_1\theta)}{1 + exp\ (\beta_0 + \beta_1\theta)}$$

Where β_0 (intercept) and β_1 (slope) are two regression coefficients that need to be computed, theta (θ) is the RP67 value associated with each OIB page, and *P* is the probability of observing a performance level (level X or above) given theta. After fitting the model with data, the theta cut score is obtained by finding which score corresponds to a probability of 0.5 for being rated above the cut as follows:

$$log\frac{0.5}{1-0.5} = 0 = \beta_0 + \beta_1\theta$$

Solving the equation, the following is obtained:

$$\theta = -\frac{\beta_0}{\beta_1}$$

Additionally, the variance of the theta estimate will be computed as:

$$VAR\ (\theta) = \frac{\mu_{\beta 0}{}^2}{\mu_{\beta 1}{}^2}\left[\frac{\sigma^2_{\beta 0}}{\mu_{\beta 0}{}^2} - 2\frac{Cov(\beta_0,\beta_1)}{\beta_0\beta_1} + \frac{\sigma^2_{\beta 1}}{\mu_{\beta 1}{}^2}\right]$$

Therefore, the standard error of the estimate is given by:

$$SE(\theta) = \sqrt{VAR(\theta)}.$$

APPENDIX—D
STANDARD-SETTING TOOLKIT

This appendix contains sample screenshots of the Cognia Standard Setting Toolkit that panelists used for all standard setting activities during the meeting. Images provided include the (1) login screen, (2) readiness survey screen, (3) ordered item booklet view, and (4) item detail view.

Figure 1. Sample Login Screen

Panelists are provided with usernames and passwords to enable secure access to the toolkit.

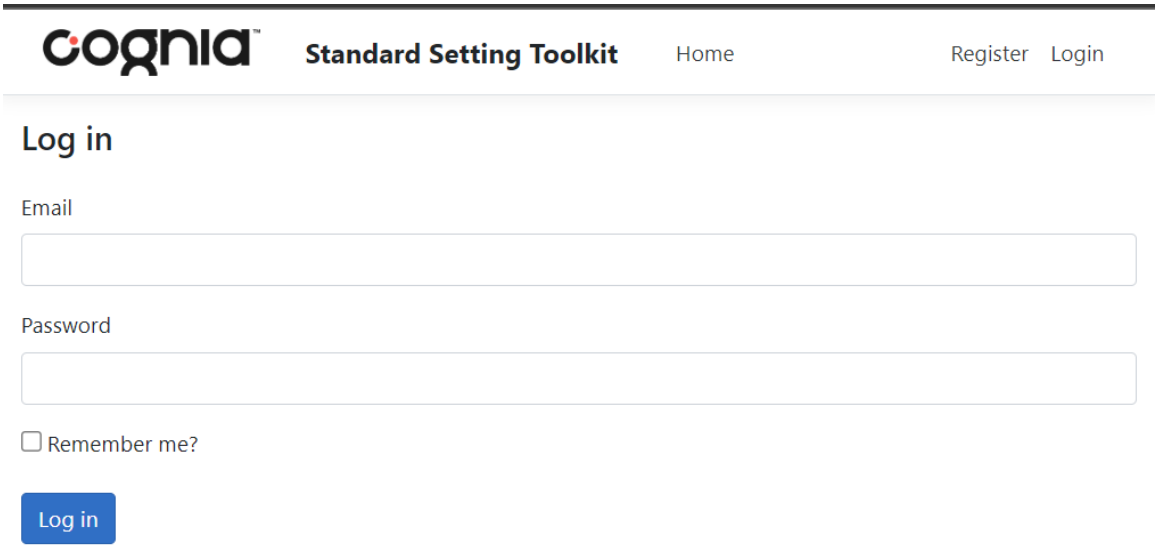


Figure 2. Sample Readiness Survey

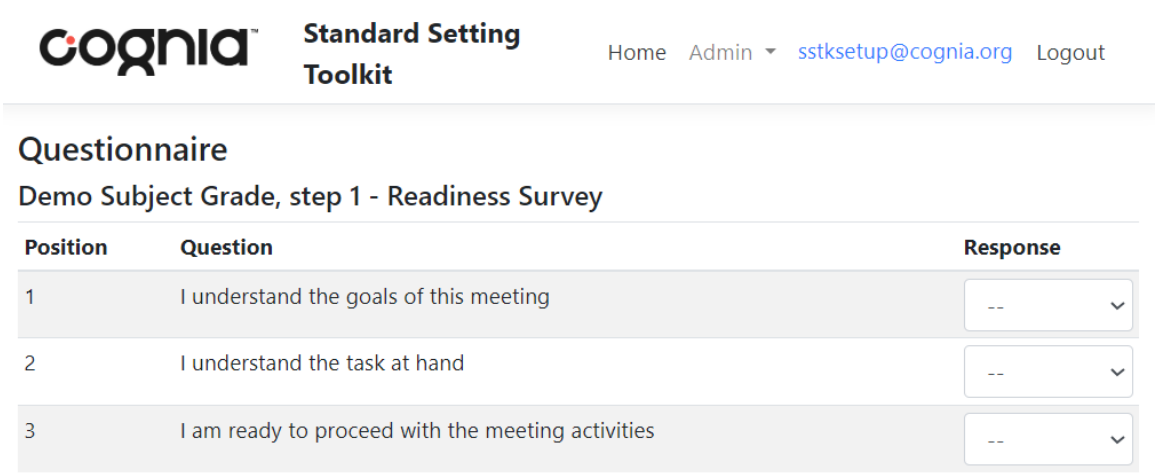


Figure 3. Sample Ordered Item Booklet View

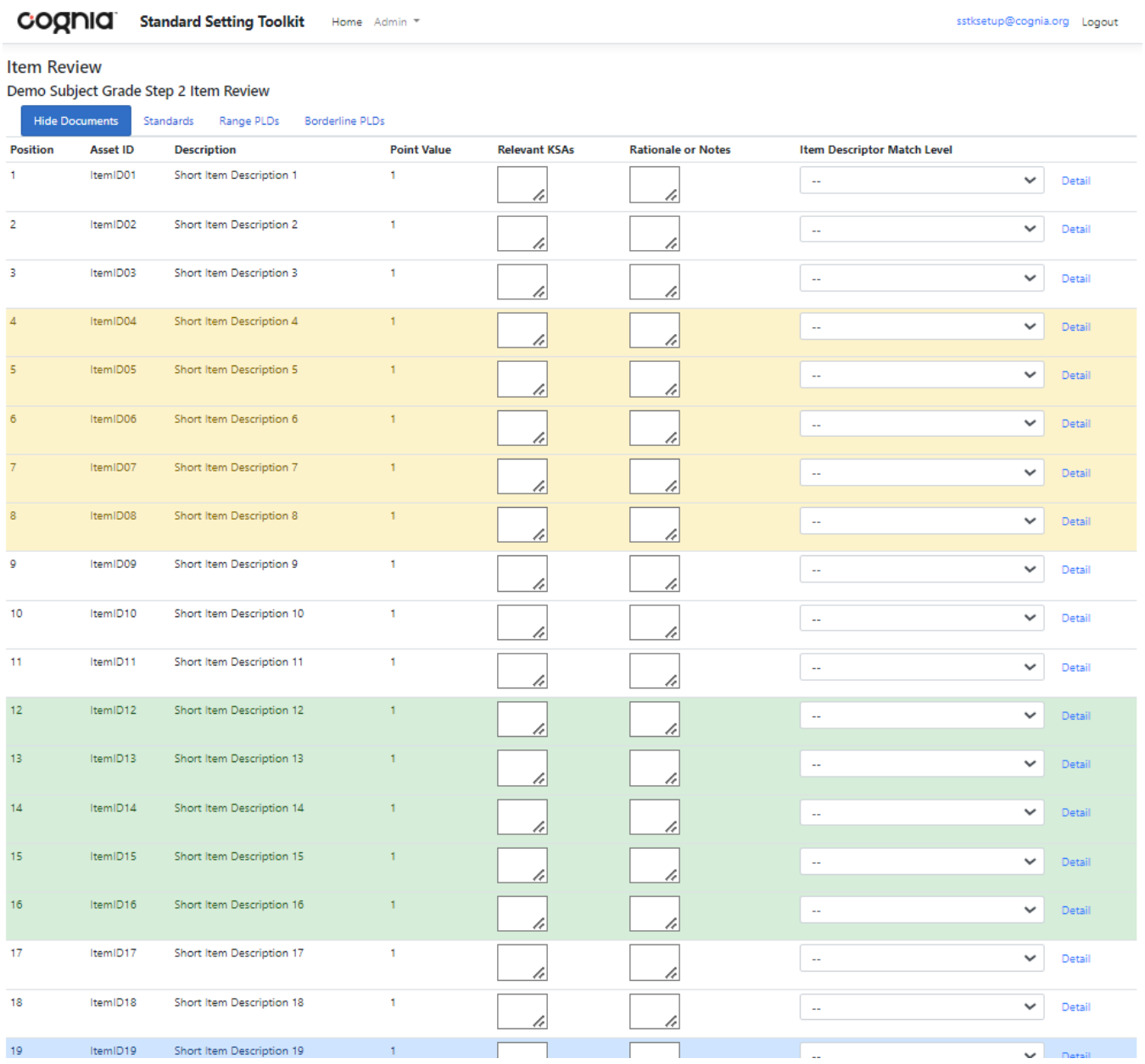
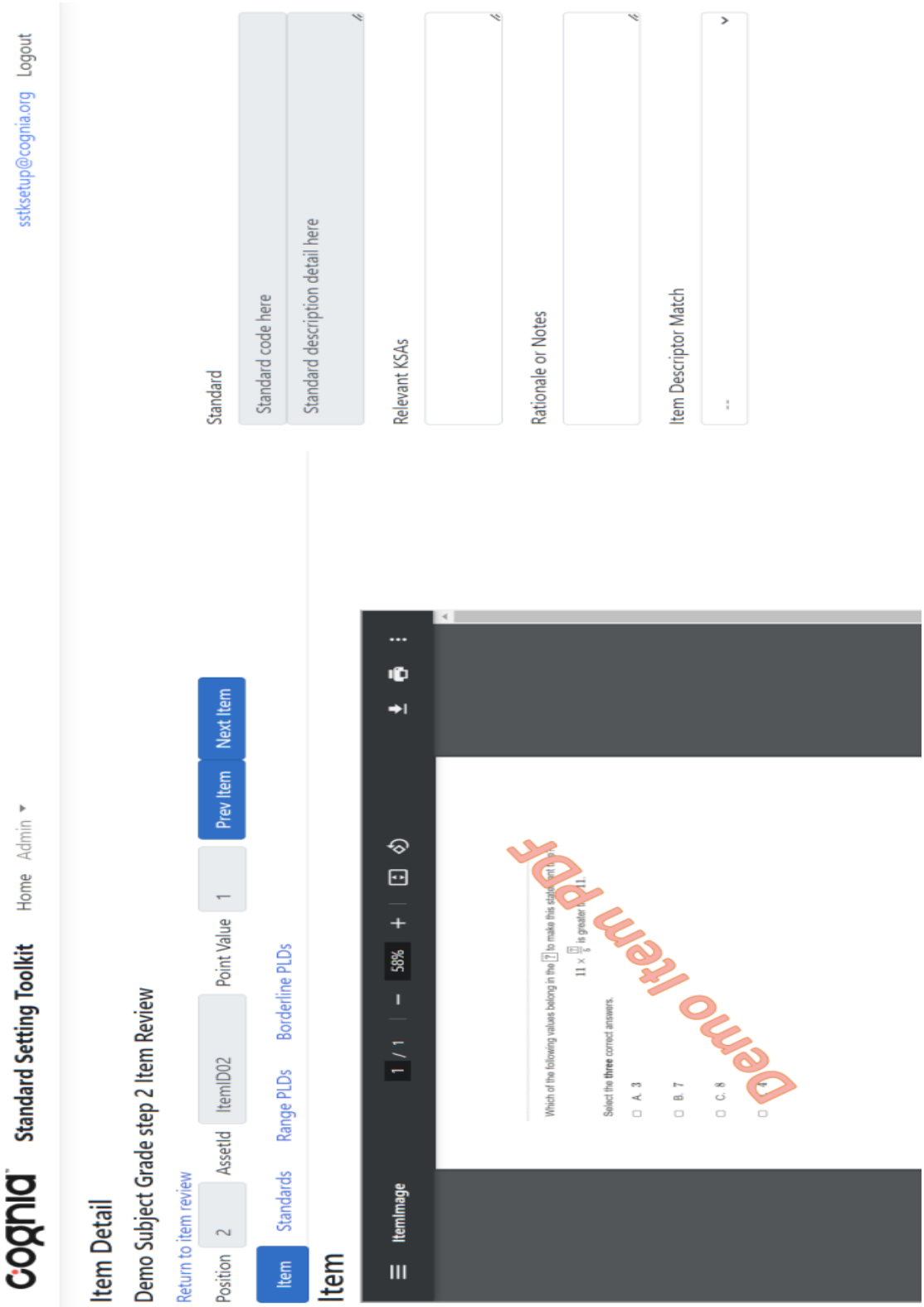


Figure 4. Sample Item Detail View



APPENDIX—E
FACILITATION POWERPOINT PRESENTATION

OSTP Standard Setting – Breakout Session

Content Area

Grades

Facilitator

Panel activities over the next four days

- Welcome and introductions
- Meeting norms and process overview
- Experience the test activity
- Access to the Cognia Standard Setting Toolkit
- Familiarization with content standards and PLDs (higher grade)
- Training on the Item-Descriptor (ID) Matching Method
- Modeling and practice
- Three rounds of standard setting activities (higher grade)
- Familiarization with content standards and PLDs (lower grade)
- Three rounds of standard setting activities (lower grade)
- Final workshop evaluation survey

Welcome & introductions

- Facilitator introduction
  - Name, role at Cognia, role during standard setting
- Panelist introductions
  - Your name, district, what you teach
- Experience on assessment program committees
  - Item Reviews
  - Alignment Studies
  - Standard Setting
  - Others

A Shift in Focus for this Week

OTHER WAYS YOU HAVE CONTRIBUTED

- Item writing, data review, content review and/or item review committees
- Review test items
- Purpose: Evaluate items for use on a test (potential problems with the items; suggest improvements)

THE WORK WE ARE DOING THIS WEEK

- Standard setting: Item-centered method with content-based judgment
- Look at test items
- Purpose: Identify the knowledge, skills, and abilities required to correctly answer the item

Meeting norms

- All conversations are confidential.
- Outside of this meeting, please **DO** talk about the general process we undertake, but **DO** disclose the specifics.
- Please **DO NOT**:
  - Use any personal devices in the room; you may step out at any time if needed.
  - Use the Chromebooks for anything other than the standard setting activities.
  - Take any of your notes or work with you when you leave the room.

Overview: Goals and expectations

- Our shared goals
  - Collect your recommendations on performance standards for the OSTP ELA or Math assessments that provide meaningful and actionable information
- Your goals as panelists
  - Learn concepts and procedures following the Item-Descriptor (ID) Matching Method
  - Follow the procedures to complete the standard setting activities
  - Make content-based judgments about test items
  - Rely on your expertise about the content standards and student learning throughout the process

Breakout session: Schedule for day 1

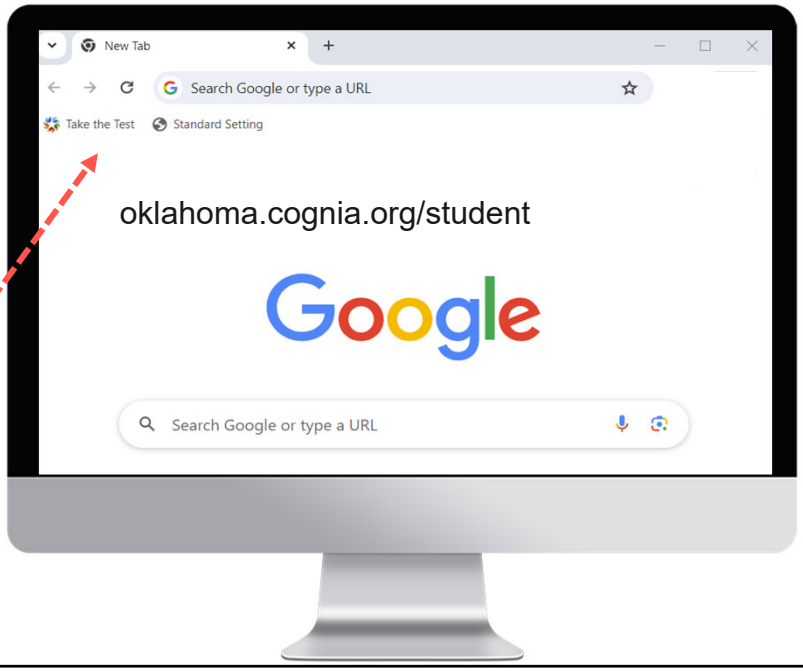
Time	Activities

Experience the test activity

- You will experience the OSTP test in a format similar to the student experience.
- Purpose: Get familiar with the items as they appeared to students.
- Activity notes:
  - This session is scheduled for a duration of **45 mins**
  - Briefly examine the test items in the testing platform
  - Try not to linger on any one item
  - If you see any item sets, keep in mind that these sets will appear together in the testing platform but will not appear together when you work with them during the standard setting (more on this later)

Guidance: Take the test

1. Chromebook: navigate to Google Chrome browser
2. Click on “Take the Test” link - top left.
3. Use the log in credentials provided to access the test.

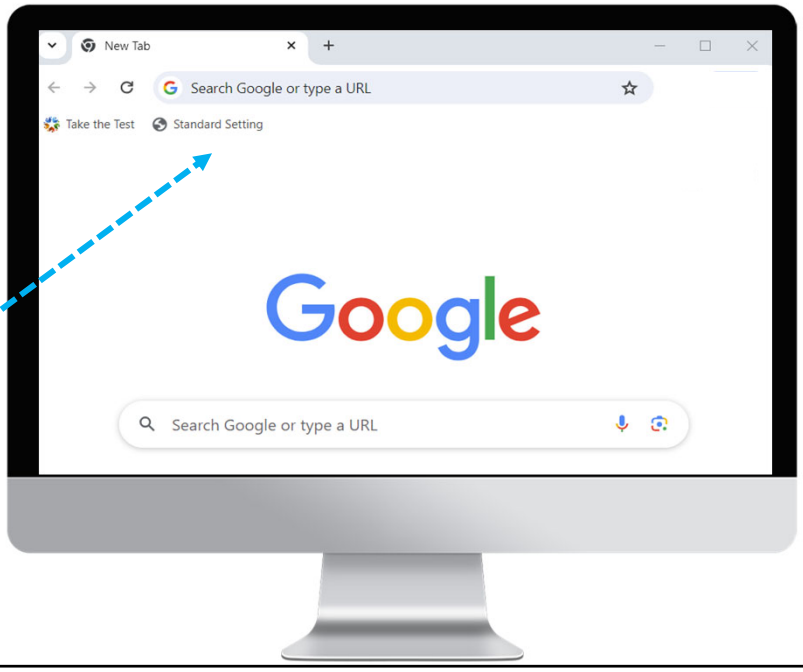


Experience the test - discussion

- Brief discussion
- Share thoughts/observations based on your experience with the test.

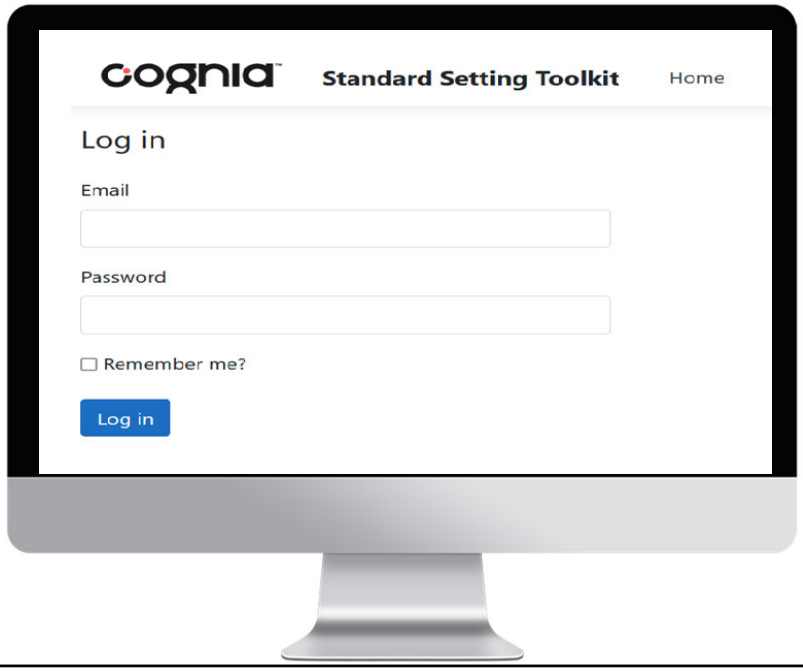
Guidance: Cognia Toolkit

1. Chromebook: Navigate to Google Chrome browser
2. Click on “Standard Setting” link in the top left.



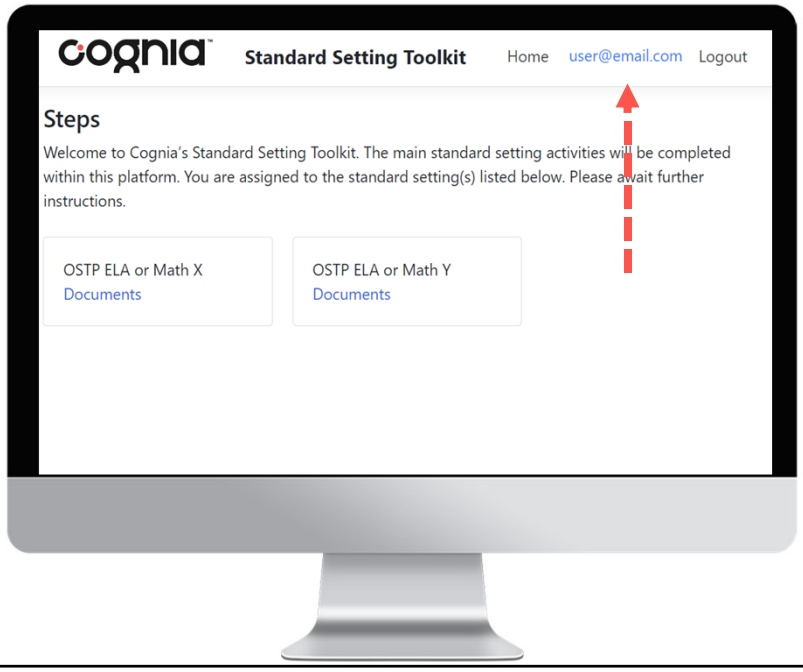
Cognia Toolkit

- Email
  - Registration email
  - All lowercase
- Initial Password
- After initial log in you will change your password



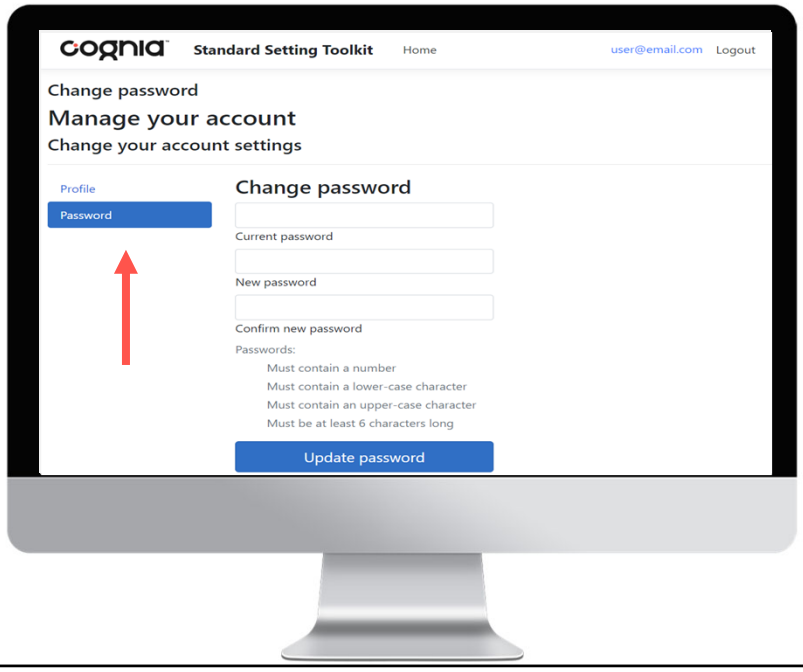
Change your password

- Click on your email - top right corner
- This will bring you to a profile page



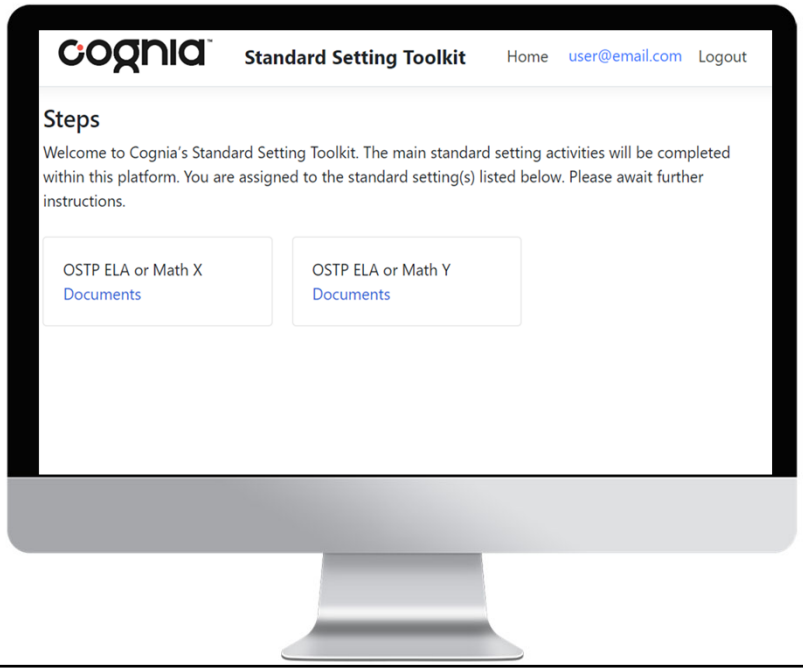
Change your password

- Click “Password” on the left menu
- Enter the initial password
- Enter new password
- Click “Update password”
- Log out
- Log back in with updated password



You should now be back on the following screen

Please confirm that you see the correct content area and two grades that you have been assigned



Review content standards & PLDs

- Review subject-specific content standards
- Obtain an understanding of the performance level descriptors (PLDs) in relation to content standards
  - This activity is critical because you will make judgments based on your understanding of PLDs.
  - The standards and PLD documents will be used throughout the workshop as you engage in the standard setting process.

Reminder: Performance Level Descriptors (PLDs)

- Provide a narrative account of the knowledge, skills, and abilities demonstrated by students in each level of achievement.
- Describe what students know and can do based on the Oklahoma Academic Standards.
- Inform stakeholders of how to interpret student test scores in relation to the Oklahoma Academic Standards.
- Are typically used for standard setting and score reporting.

Performance level descriptors (PLDs)

- Performance Levels
  - Below Basic
  - Basic
  - Proficient
  - Advanced
- Performance Level Descriptors (PLDs) represent intended interpretations of solid student achievement on the assessment for each level.
- Development of the PLDs began with the assumption that the grade-level content standards represent what students should know and be able to do at the end of a given grade level. Prior research on learning, cognition, and development in the subject areas, a variety of resources, and teaching experiences of content experts informed the development of definitions for solid achievement at each level.

Study and discuss performance level descriptors (PLDs)

- In-depth review/discussion of performance level descriptors (PLDs)
- Reach common understanding of what it means to be in each performance level.

Topics: Key concepts and processes

- The Item-Descriptor (ID) Matching method overview
- Ordered Item Booklet (OIB)
- ID Matching process
  - Standard setting judgment task
  - Nature of content-based judgment
  - Iterative 3-round process
- Modeling & Practice
  - Work with sample items
  - Learn how to navigate in the Toolkit

Item-Descriptor (ID) Matching Method for standard setting

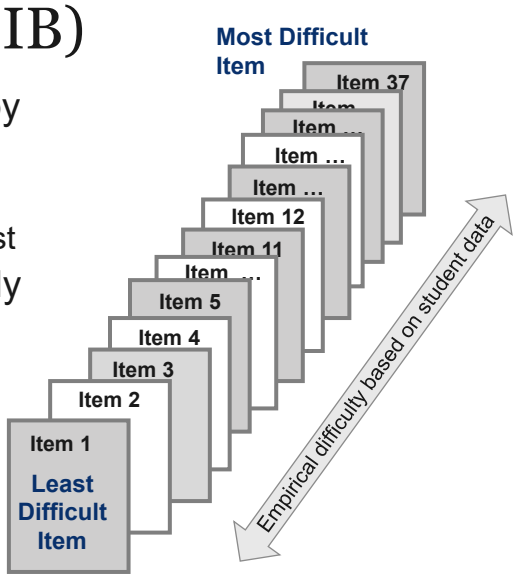
Item-centered method

Content-based judgment

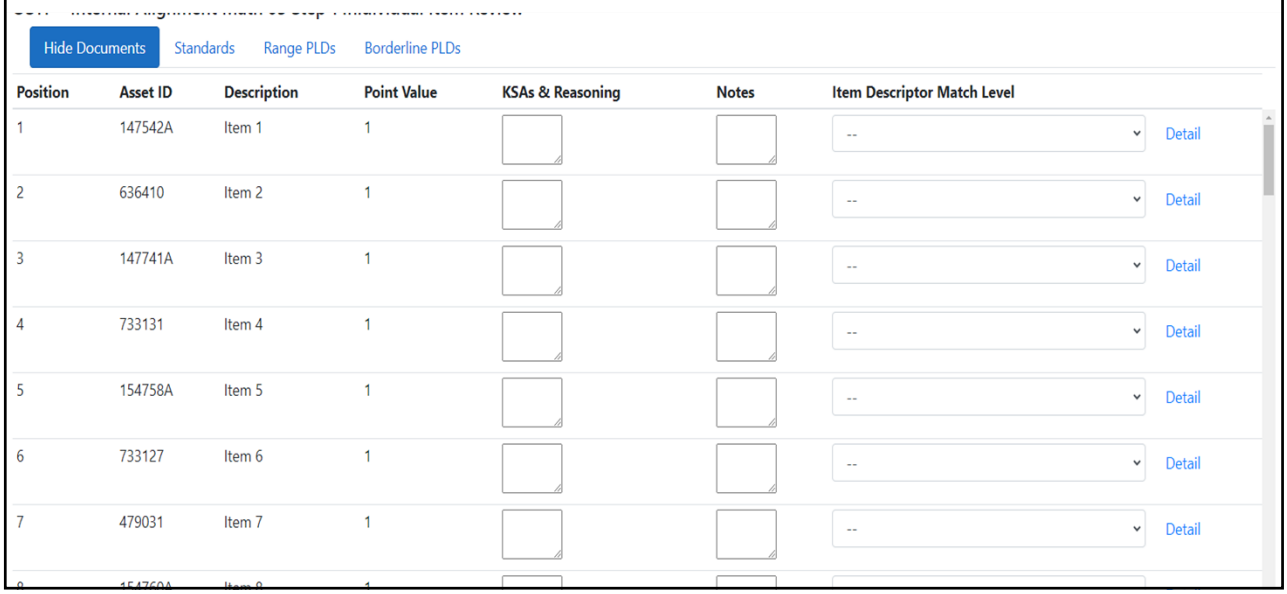
Individual judgments

Ordered item booklet (OIB)

- The OIB contains test items ordered by difficulty.
- Each OIB page represents an item.
  - Easiest item first and the most difficult last
- The difference in difficulty is not exactly the same between each pair of neighboring items.
- Difficulty is based on data from the students who answered the items during prior administrations.



OIB in the Standard Setting Toolkit



ID Matching process

For each item in the OIB:

1. **Review the item and identify the KSAs**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.
2. **Make an item-PLD alignment judgment**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced performance level descriptor (PLD).

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

ID-Matching process considerations

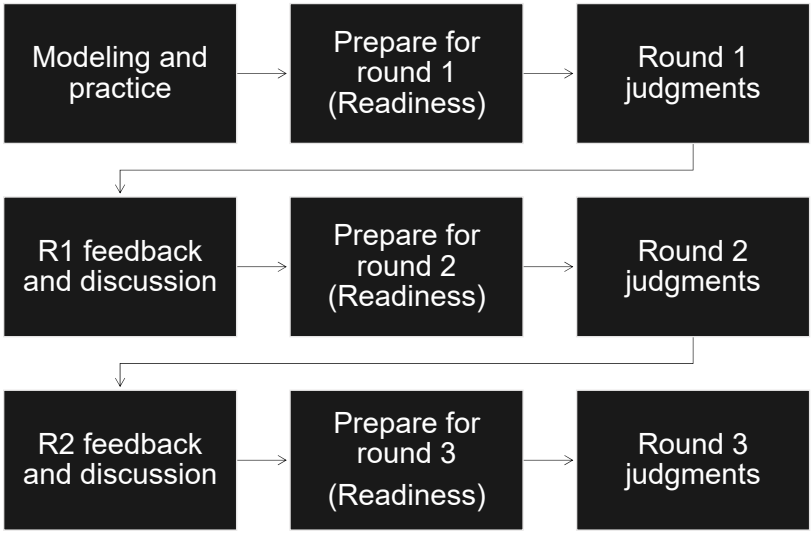
Useful

- Based on Content
- Links items to PLDs
- Refers to specific knowledge, skills, and abilities (KSAs)

Not Useful

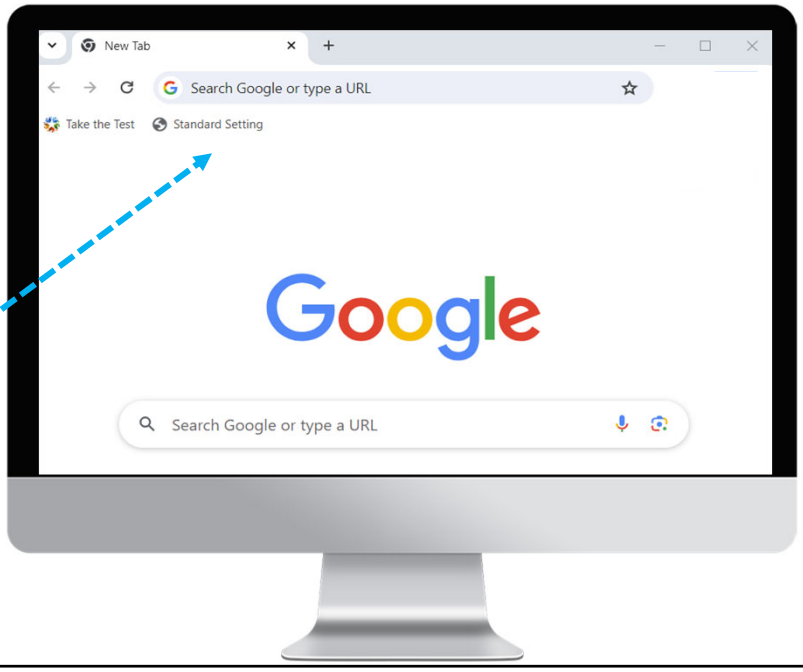
- Based on something other than the content (i.e., item quality)
- Too general
- Based on a specific student or class

Overview: ID-Matching over 3 rounds



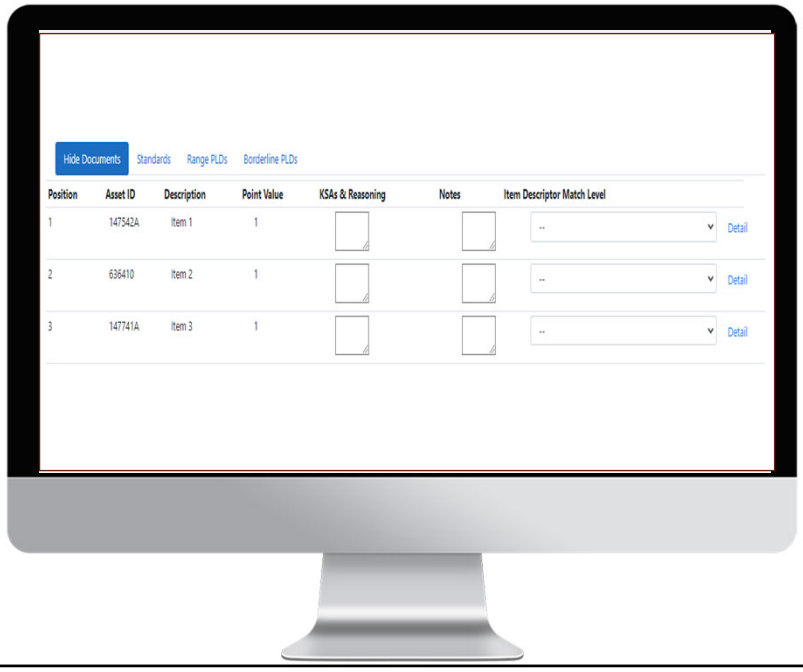
Guidance: Cognia Toolkit

1. Chromebook: Navigate to Google Chrome browser
2. Click on “Standard Setting” link in the top left.



Practice round

- In the Toolkit, you will automatically be redirected to the practice round.
- You will see a list of sample items.
- Please make sure your screen shows the correct content area and grade



Modeling & practice of the ID-Matching judgmental task

We will begin by working with the first (top) item in the sample list.

1. Review the item and identify **KSAs**.
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.

What does a student need to know or be able to do to correctly respond to this item?

Modeling & practice of the ID-Matching judgmental task

Continue working with the first (top) item in the sample list.

2. Match item to a PLD level
   - Match the KSAs required by the item with the expectations described in either the **Basic**, **Proficient**, or **Advanced** performance level descriptor (PLD) for that standard.
   - If not already done, be sure to add a note to the KSAs text box about the reasoning for the match.

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Examples: KSAs & Reasoning

- Useful example:
  - The item requires students to connect fractions or decimals using models. Students are not just representing tenths or hundredths in one form, but moving between two different forms of a number.
- Not useful example:
  - The item matches the Proficient PLD and does not match the Basic PLD.

Reminder: ID-Matching process considerations

Useful

- Based on Content
- Links items to PLDs
- Refers to specific knowledge, skills, and abilities (KSAs)

Not Useful

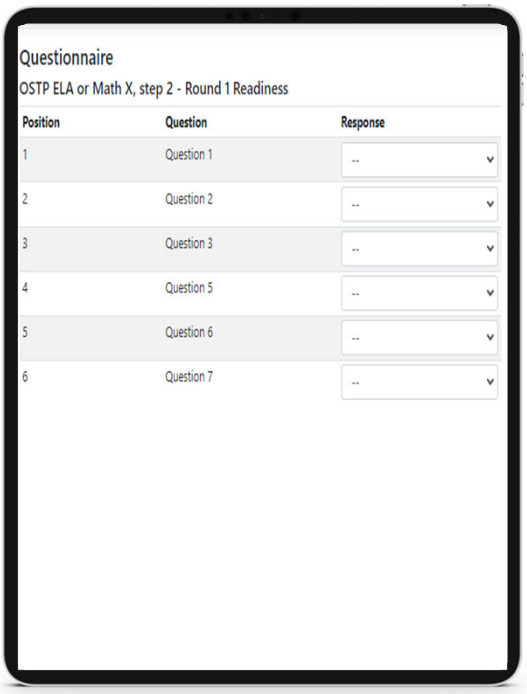
- Based on something other than the content (i.e., item quality)
- Too general
- Based on a specific student or class

Practice round - Review

- Reviewed sample items and for each one:
  1. Identified the knowledge, skills, and abilities (KSAs) required to correctly respond to the item.
  2. Matched the item to either the Basic, Proficient, or Advanced PLD.
     - Included note about reasoning for PLD match in KSAs box where needed.
- Borderline considerations
  - Some items might be in the border between two adjacent PLDs.
  - Select the PLD that most closely matches the item.
  - Make notes for yourself next to these items to inform discussions later.
- Remaining questions or concerns?

Round 1 – Readiness

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.
  - Responses are reviewed in summary only



Round 1 judgments

- You will now be redirected to Round 1
  - In the Toolkit you will see the full list of OIB items.
- Reminder – Your task for each item:
  1. Identify the KSAs
  2. Match the item to one of the PLDs
  - Use the "Notes" box for additional notes (*for example*: when an item seems to be in-between two PLDs)
- Item-PLD alignment is an individual activity. Please **DO NOT** discuss your work with your colleagues at this time.

Round 1 judgments

For each item in the OIB:

1. **Review the item and identify KSAs.**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.

What does a student need to know or be able to do to correctly respond to this item?

2. **Make item-PLD alignment judgment.**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced PLD.

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

- ✓ *Write note about reasoning for your PLD match in the KSAs field*
- ✓ *Work independently*
- ✓ *Trust your expertise*

Breakout session – Agenda (day 2)

- Debrief day 1
- Complete round 1 judgments
- Lunch
- Discussion and preparation for round 2
- Begin round 2 judgments

Breakout session: Schedule for day 2

Time	Activities
08:30 AM – 09:15 AM	Debrief day 1 (Check-in on the process, challenges, etc.)
09:15 AM – 12:00 PM	Complete round 1
12:00 PM – 01:00 PM	Lunch break
01:00 PM – 02:30 PM	Discuss round 1 feedback/results; Introduce benchmarks; Prepare for round 2.
02:30 PM – 05:00 PM	Begin round 2
05:00 PM	Adjourn for the day

Debrief day 1

- Great job training, learning, being on task!
- Individuals are about ¼ to ½ way through the items
- Feedback on Round 1 so far:
  - KSAs can be brief – 10-15 words max – but make sure language lines up
  - Be sure to look at all the PLD descriptors in the row
- Questions or thoughts from yesterday?

Round 1 judgments

For each item in the OIB:

1. **Review the item and identify KSAs.**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.

What does a student need to know or be able to do to correctly respond to this item?

2. **Make item-PLD alignment judgment.**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced PLD.

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

- ✓ *Write note about reasoning for your PLD match in the KSAs field*
- ✓ *Work independently*
- ✓ *Trust your expertise*

Feedback and Discussion

- The goal of the discussion is to hear perspectives from your fellow panelists
  - Additional information for your consideration
  - NOT meant to persuade or influence
- In the Toolkit, you will see your own data from Round 1
  - The only field you can use during this time is the “Notes” field.

Introduction to benchmarks

- Content-based information based on work from the Cognia/SDE content specialists
- Benchmarks serve as additional information for your consideration
- Will be presented as shaded rows in the OIB

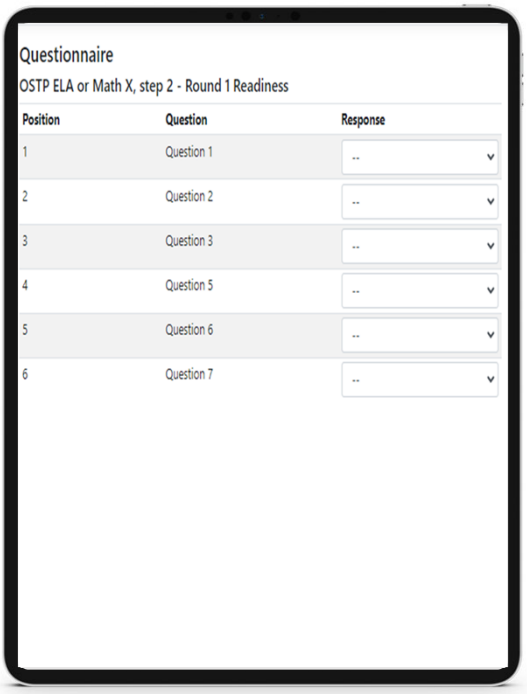
Content-based benchmarks

- The shaded regions are calculated based on judgments from Cognia and SDE content specialists.
- This region represents a transition area where items between two performance levels are beginning to intersect.
- It is vital that we have the input of educators who teach to these standards and the Oklahoma student population.
- To that end, your results may very well differ from theirs.
- The content-based benchmarks provide additional information for your consideration but is not meant to constrain or persuade your judgments.

cognia

Round 2 – Readiness survey

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.



Round 2 judgments

- You will now be redirected to Round 2
  - In the toolkit, you will see the same list of items with your work from round 1 (notes and judgments)
  - You will also see the shaded regions for the content-based benchmarks
- Reminder – Your task:
  - Review items in the benchmark (shaded) regions, items discussed during round 1 feedback discussion, and items you were previously unsure about
  - Consider the KSAs, then decide to keep or change your initial PLD match
- Item-PLD alignment is an individual activity. Please **DO NOT** discuss your work with your colleagues at this time.

cognia

Round 2 judgments

- **Decide to retain/adjust your judgments:**
  - Review items we discussed, items in benchmark regions, and items you were previously unsure about.
  - Consider the KSAs and decide to keep or change your initial PLD match.
- **Reminder:**
  1. Review the item and identify KSAs.
  2. Make item-PLD alignment judgment.

✓ *Write note about reasoning for your PLD match in the KSAs field*

✓ *Work independently*

✓ *Trust your expertise*

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Breakout session – Agenda (day 3)

- Feedback/discussion of round 2 results
- Preparation for round 3
- Complete round 3 judgments
- Review standards and PLDs for the lower grade
- Prepare for and begin round 1 judgments

Debrief day 2

- Great job with following process!
- Focus on PLD interpretations and clarifications as we discuss round 2 results
- Questions or thoughts from yesterday?

Round 2 judgments

- **Decide to retain/adjust your judgments:**
  - Review items we discussed, items in benchmark regions, and items you were previously unsure about.
  - Consider the KSAs and decide to keep or change your initial PLD match.
- **Reminder:**
  1. Review the item and identify KSAs.
  2. Make item-PLD alignment judgment.

✓ *Write note about reasoning for your PLD match in the KSAs field*

✓ *Work independently*

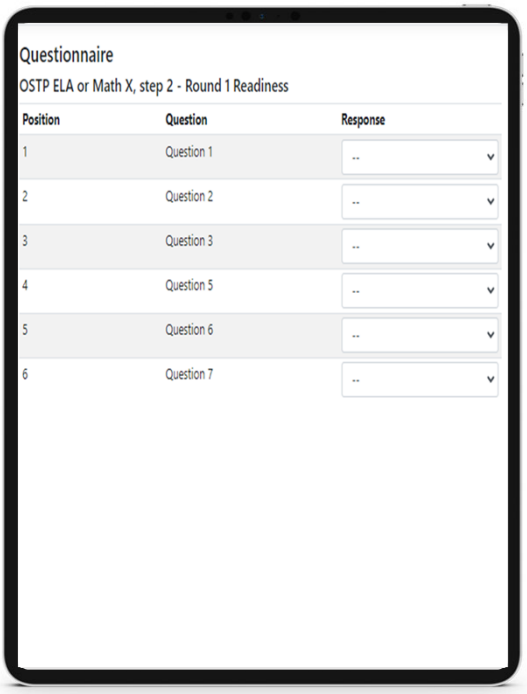
✓ *Trust your expertise*

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Round 3 – Readiness survey

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.



Round 3 judgments

- You will now be redirected to Round 3
  - In the toolkit, you will see the same list of items with your work from round 2 (notes and judgments)
- Reminder – Your task:
  - Review items discussed during round 2 feedback discussion, and items you were previously unsure about
  - Consider the KSAs, then decide to keep or change your initial PLD match
- Item-PLD alignment is an individual activity. Please **DO NOT** discuss your work with your colleagues at this time.

cognia

Round 3 judgments

- **Decide to retain/adjust your judgments:**
  - Review items we discussed, items in benchmark regions, and items you were previously unsure about.
  - Consider the KSAs and decide to keep or change your initial PLD match.
- **Reminder:**
  1. Review the item and identify KSAs.
  2. Make item-PLD alignment judgment.

✓ *Write note about reasoning for your PLD match in the KSAs field*

✓ *Work independently*

✓ *Trust your expertise*

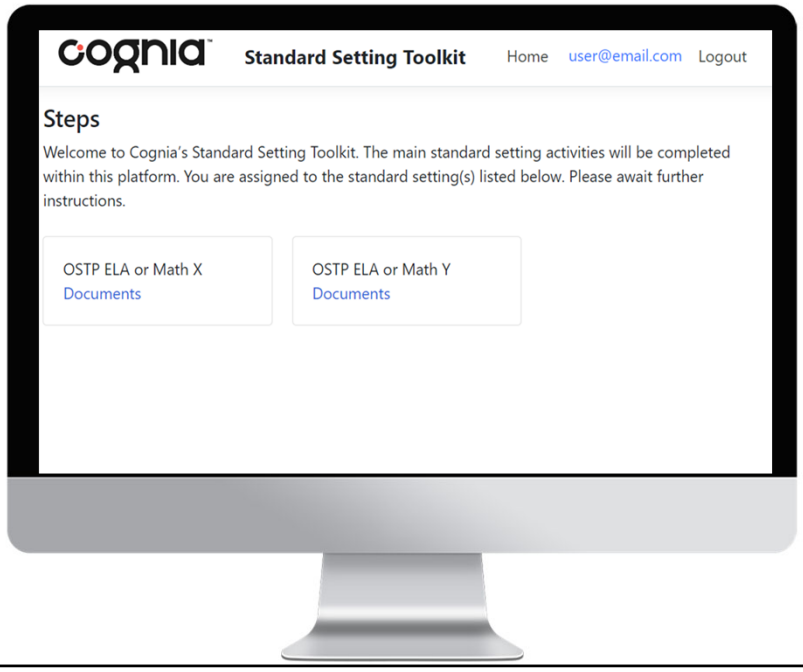
What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Review content standards & PLDs

- Review subject-specific content standards
- Obtain an understanding of the performance level descriptors (PLDs) in relation to content standards
  - This activity is critical because you will make judgments based on your understanding of PLDs.
  - The standards and PLD documents will be used throughout the workshop as you engage in the standard setting process.

Reminder:
Standards and PLDs are linked on the home page



Reminder: Performance Level Descriptors (PLDs)

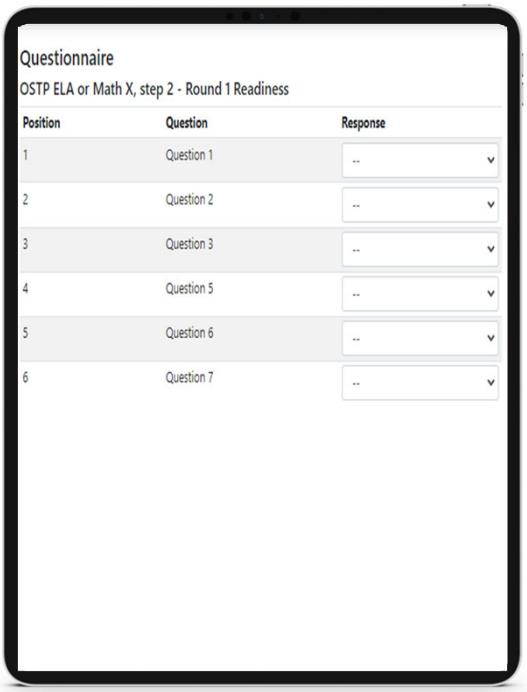
- Performance Levels
  - Below Basic
  - Basic
  - Proficient
  - Advanced
- Performance level descriptors:
  - Describe what students know and can do based on the Oklahoma Academic Standards.
  - Represent intended interpretations of solid student achievement on the assessment for each level.
  - Inform stakeholders of how to interpret student test scores in relation to the Oklahoma Academic Standards.

Study and discuss performance level descriptors (PLDs)

- In-depth review/discussion of performance level descriptors (PLDs)
- Reach common understanding of what it means to be in each performance level.

Round 1 – Readiness survey

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.



Round 1 judgments

- You will now be redirected to Round 1
  - In the Toolkit you will see the full list of OIB items.
- Reminder – Your task for each item:
  1. Identify the KSAs
  2. Match the item to one of the PLDs
  - Use the “Notes” box for additional notes (*for example*: when an item seems to be in-between two PLDs)
- Item-PLD alignment is an individual activity. Please **DO NOT** discuss your work with your colleagues at this time.

Round 1 judgments

For each item in the OIB:

1. **Review the item and identify KSAs.**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.

What does a student need to know or be able to do to correctly respond to this item?

2. **Make item-PLD alignment judgment.**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced PLD.

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

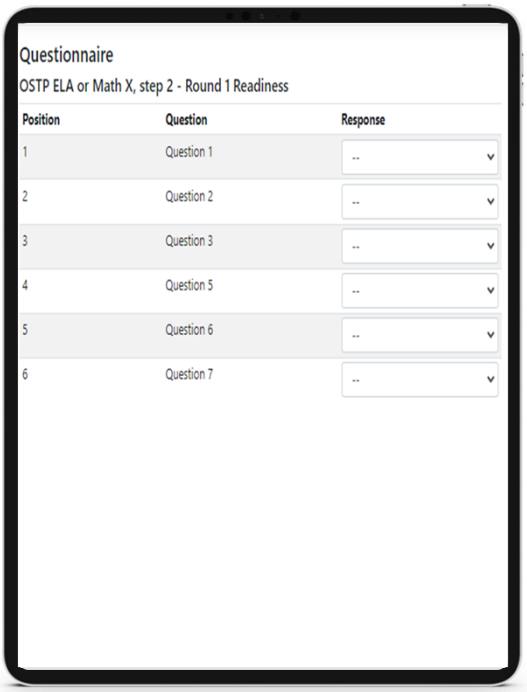
- ✓ *Write note about reasoning for your PLD match in the KSAs field*
- ✓ *Work independently*
- ✓ *Trust your expertise*

Content-based benchmarks

- The shaded regions are calculated based on judgments from other Cognia/SDE content specialists.
- This region represents a transition area where items between two performance levels are beginning to intersect.
- It is vital that we have the input of educators who teach to these standards and the OK student population.
- To that end, your results may very well differ from theirs.
- The content-based benchmarks provide additional information for your consideration but is not meant to constrain or persuade your judgments.

Round 2 – Readiness survey

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.



Round 2 judgments

- You will now be redirected to Round 2
  - In the toolkit, you will see the same list of items with your work from round 1 (notes and judgments)
  - You will also see the shaded regions for the content-based benchmarks
- Reminder – Your task:
  - Review items in the benchmark (shaded) regions, items discussed during round 1 feedback discussion, and items you were previously unsure about
  - Consider the KSAs, then decide to keep or change your initial PLD match
- Item-PLD alignment is an individual activity. Please **DO NOT** discuss your work with your colleagues at this time.

Round 2 judgments

- **Decide to retain/adjust your judgments:**
  - Review items we discussed, items in benchmark regions, and items you were previously unsure about.
  - Consider the KSAs and decide to keep or change your initial PLD match.
- **Reminder:**
  1. Review the item and identify KSAs.
  2. Make item-PLD alignment judgment.

✓ *Write note about reasoning for your PLD match in the KSAs field*

✓ *Work independently*

✓ *Trust your expertise*

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Breakout session – Agenda (day 4)

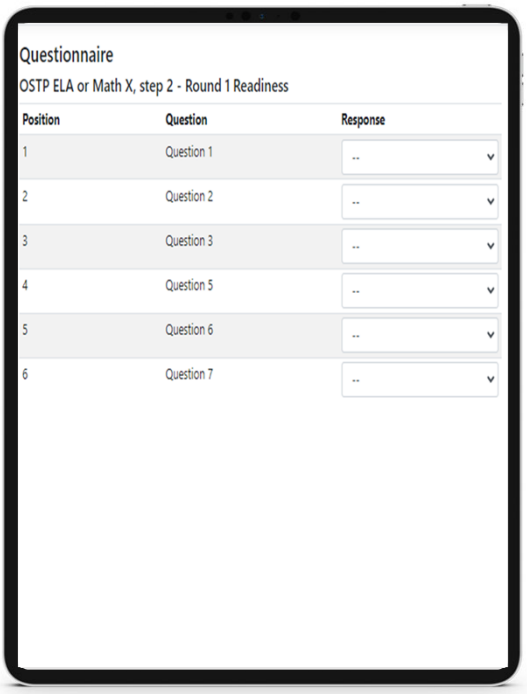
- Debrief day 3
- Round 2 feedback
- Discussion and preparation for round 3
- Complete round 3 judgments
- Wrap – final data
- Evaluation survey

Debrief day 3

- All panelists finished R2 judgments
- Focus on listening and considering analyses for R3 judgments – would expect some convergence of interpretations and judgments
- If on the fence between levels being used, can consider where in OIB the item is – “skills being used”
- Questions or thoughts from yesterday?

Round 3 – Readiness survey

- In a moment, you will be redirected in the Toolkit to a short survey.
- Goal: Determine if everyone understands the task at hand and is ready to proceed.
- Read and answer each question.
- Once everyone has completed the survey, we will review responses and proceed accordingly.



Round 3 judgments

- **Decide to retain/adjust your judgments:**
  - Review items we discussed, items in benchmark regions, and items you were previously unsure about.
  - Consider the KSAs and decide to keep or change your initial PLD match.
- **Reminder:**
  1. Review the item and identify KSAs.
  2. Make item-PLD alignment judgment.

✓ *Write note about reasoning for your PLD match in the KSAs field*

✓ *Work independently*

✓ *Trust your expertise*

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

Final Workshop Evaluation Survey

- In a moment, you will be redirected in the Toolkit to the final workshop evaluation survey.
- Your responses serve as additional data for us to consider.
- Please do not leave until you have completed the survey.
- Note for those participating in articulation: You will reconvene tomorrow morning after breakfast.

APPENDIX—F
PANELIST INFORMATION

Table 1. OK OSTP ELA Grades 3-4 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Taylor	3	--	--
2	Glencoe Public Schools	2	44% Male, 55% Female	0.05% Hispanic, 11% AI, 0% Asian, 0.01% AA, 0% PI, 64% White, 17% Multiracial
3	Cleora	3	48% Male, 52% Female	0.07% Hispanic, 46% AI, 0.01% Asian, 0.01% AA, 0.01% PI, 45% White, 0.01% Multiracial
4	Mason	2	45% Male, 55% Female	0.02% Hispanic, 23% AI, 0% Asian, 0% AA, 0% PI, 46% White, 28% Multiracial
5	Geary	7	47% Male, 53% Female	14% Hispanic, 29% AI, 0% Asian, 0.02% AA, 0% PI, 45% White, .1% Multiracial
6	Deer Creek Public Schools	8	52% Male, 48% Female	13% Hispanic, 0.03% AI, .1% Asian, 0.08% AA, 0% PI, 57% White, 0.09% Multiracial
7	Collinsville School District	13	53% Male, 47% Female	.1% Hispanic, 12% AI, 0.05% Asian, 0.01% AA, 0% PI, .5% White, 21% Multiracial
8	Shawnee Public Schools	1	52% Male, 48% Female	14% Hispanic, 12% AI, 0% Asian, 0.05% AA, 0% PI, 44% White, 25% Multiracial
9	Keystone	5	54% Male, 46% Female	0.04% Hispanic, 12% AI, 0% Asian, 0% AA, 0% PI, 66% White, 18% Multiracial
10	Inola Public Schools	2	55% Male, 44% Female	0.06% Hispanic, 25% AI, 0.05% Asian, 0.01% AA, 0% PI, 48% White, 16% Multiracial
11	Glenpool Public Schools	3	51% Male, 49% Female	11% Hispanic, 16% AI, .1% Asian, 0.03% AA, 0% PI, 41% White, 19% Multiracial

Table 2. OK OSTP ELA Grades 5-6 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Santa Fe South Public Charter	3	--	--
2	Vian	3	53% Male, 47% Female	0.04% Hispanic, 45% AI, 0.01% Asian, 0.03% AA, 0% PI, 32% White, 15% Multiracial
3	Pryor Public Schools	2.5	.5% Male, .5% Female	0.07% Hispanic, 26% AI, 0.01% Asian, 0% AA, 0% PI, 42% White, 24% Multiracial
4	Deer Creek	15	52% Male, 48% Female	13% Hispanic, 0.03% AI, .1% Asian, 0.08% AA, 0% PI, 57% White, 0.09% Multiracial
5	Guthrie public schools	26	52% Male, 48% Female	19% Hispanic, 0.03% AI, 0% Asian, 0.06% AA, 0% PI, 58% White, 12% Multiracial
6	Paden	5+	56% Male, 44% Female	0.06% Hispanic, .2% AI, 0.02% Asian, 0.04% AA, 0% PI, 51% White, 16% Multiracial
7	Tulsa Public Schools	15	51% Male, 49% Female	38% Hispanic, 0.04% AI, 0.02% Asian, 22% AA, 0.01% PI, 21% White, 11% Multiracial
8	Edmond Schools	1	52% Male, 48% Female	13% Hispanic, 0.02% AI, 0.05% Asian, 11% AA, 0% PI, 57% White, 12% Multiracial
9	Hilldale Public Schools	19	51% Male, 49% Female	.1% Hispanic, .3% AI, 0.01% Asian, 0.02% AA, 0% PI, 39% White, 17% Multiracial
10	Putnam City Schools	3	51% Male, 49% Female	39% Hispanic, 0.02% AI, 0.04% Asian, 24% AA, 0% PI, 21% White, 11% Multiracial

Table 3. OK OSTP ELA Grades 7-8 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Oklahoma City Public Schools	8	51% Male, 49% Female	57% Hispanic, 0.02% AI, 0.02% Asian, .2% AA, 0% PI, 11% White, 0.08% Multiracial
2	Santa Fe South Schools	3	--	--
3	Oklahoma City	2	51% Male, 49% Female	57% Hispanic, 0.02% AI, 0.02% Asian, .2% AA, 0% PI, 11% White, 0.08% Multiracial
4	Santa Fe South Schools	9	--	--
5	Bristow Public Schools	9	52% Male, 48% Female	0.04% Hispanic, .2% AI, 0.01% Asian, 0.06% AA, 0% PI, 56% White, 14% Multiracial
6	Dove Schools	16	52% Male, 48% Female	63% Hispanic, 0.02% AI, 0.02% Asian, 12% AA, 0% PI, 14% White, 0.06% Multiracial
7	Broken Arrow Public Schools	4	51% Male, 49% Female	19% Hispanic, 0.07% AI, 0.04% Asian, 0.07% AA, 0% PI, 49% White, 14% Multiracial
8	Okeene Public Schools	30+	56% Male, 44% Female	.2% Hispanic, 0.05% AI, 0% Asian, 0.01% AA, 0% PI, 74% White, 0.01% Multiracial
9	John Rex Charter School	5	.5% Male, .5% Female	29% Hispanic, 0.02% AI, 0.04% Asian, 17% AA, 0% PI, 35% White, 14% Multiracial
10	Elk City	4	51% Male, 49% Female	24% Hispanic, 0.03% AI, 0.01% Asian, 0.04% AA, 0% PI, .6% White, 0.08% Multiracial

Table 4. OK OSTP Mathematics Grades 3-4 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Lawton	12	51% Male, 49% Female	24% Hispanic, 0.05% AI, 0.01% Asian, .2% AA, 0.01% PI, 32% White, 17% Multiracial
2	Deer Creek School District	16	52% Male, 48% Female	13% Hispanic, 0.03% AI, .1% Asian, 0.08% AA, 0% PI, 57% White, 0.09% Multiracial
3	Coweta Public Schools	25	52% Male, 48% Female	0.08% Hispanic, 23% AI, 0.01% Asian, 0.04% AA, 0% PI, 55% White, 0.07% Multiracial
4	Glencoe Public Schools	6	44% Male, 55% Female	0.05% Hispanic, 11% AI, 0% Asian, 0.01% AA, 0% PI, 64% White, 17% Multiracial
5	Putnam City Schools	1	51% Male, 49% Female	39% Hispanic, 0.02% AI, 0.04% Asian, 24% AA, 0% PI, 21% White, 11% Multiracial
6	Bartlesville Public Schools	1	52% Male, 48% Female	13% Hispanic, .1% AI, 0.02% Asian, 0.03% AA, 0% PI, 52% White, .2% Multiracial
7	Bartlesville public schools	1	52% Male, 48% Female	13% Hispanic, .1% AI, 0.02% Asian, 0.03% AA, 0% PI, 52% White, .2% Multiracial
8	Bridge Creek	24	52% Male, 48% Female	14% Hispanic, 0.05% AI, 0% Asian, 0.01% AA, 0% PI, 66% White, 14% Multiracial
9	Keystone	6	54% Male, 46% Female	0.04% Hispanic, 12% AI, 0% Asian, 0% AA, 0% PI, 66% White, 18% Multiracial
10	Moore Public Schools	15	51% Male, 49% Female	23% Hispanic, 0.04% AI, 0.05% Asian, 0.08% AA, 0% PI, 43% White, 17% Multiracial
11	Bartlesville Public Schools	3	52% Male, 48% Female	13% Hispanic, .1% AI, 0.02% Asian, 0.03% AA, 0% PI, 52% White, .2% Multiracial

Table 5. OK OSTP Mathematics Grades 5-6 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Hilldale Public Schools	33	51% Male, 49% Female	.1% Hispanic, .3% AI, 0.01% Asian, 0.02% AA, 0% PI, 39% White, 17% Multiracial
2	Union Public school	4	.5% Male, .5% Female	41% Hispanic, 0.04% AI, 0.07% Asian, 15% AA, 0% PI, 23% White, .1% Multiracial
3	Moore Public Schools	20	51% Male, 49% Female	23% Hispanic, 0.04% AI, 0.05% Asian, 0.08% AA, 0% PI, 43% White, 17% Multiracial
4	Chelsea	20	53% Male, 47% Female	0.06% Hispanic, 34% AI, 0.02% Asian, 0.01% AA, 0% PI, 34% White, 23% Multiracial
5	Walters	1	51% Male, 49% Female	11% Hispanic, 0.09% AI, 0.01% Asian, 0.01% AA, 0% PI, .6% White, 18% Multiracial
6	Stillwater	3	52% Male, 48% Female	13% Hispanic, 0.05% AI, 0.04% Asian, 0.06% AA, 0% PI, 58% White, 13% Multiracial
7	Washington Public School	2	52% Male, 48% Female	0.06% Hispanic, 11% AI, 0% Asian, 0.01% AA, 0% PI, 79% White, 0.02% Multiracial
8	Weatherford Public Schools	30	53% Male, 47% Female	23% Hispanic, 0.06% AI, 0.01% Asian, 0% AA, 0% PI, 59% White, 11% Multiracial
9	Shawnee Public Schools	16	52% Male, 48% Female	14% Hispanic, 12% AI, 0% Asian, 0.05% AA, 0% PI, 44% White, 25% Multiracial
10	Owasso	20	52% Male, 48% Female	15% Hispanic, 0.07% AI, 0.06% Asian, 0.04% AA, 0% PI, 53% White, 16% Multiracial
11	Oklahoma City Public Schools	22	51% Male, 49% Female	57% Hispanic, 0.02% AI, 0.02% Asian, .2% AA, 0% PI, 11% White, 0.08% Multiracial

Table 6. OK OSTP Mathematics Grades 7-8 Standard Setting Panel Participant List

Panelist #	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Putnam City Schools	6	51% Male, 49% Female	39% Hispanic, 0.02% AI, 0.04% Asian, 24% AA, 0% PI, 21% White, 11% Multiracial
2	Central High	11	49% Male, 51% Female	11% Hispanic, 0.05% AI, 0% Asian, 0.01% AA, 0% PI, 74% White, 0.09% Multiracial
3	Tulsa Public Schools	2	51% Male, 49% Female	38% Hispanic, 0.04% AI, 0.02% Asian, 22% AA, 0.01% PI, 21% White, 11% Multiracial
4	Epic Charter School	16	49% Male, 51% Female	15% Hispanic, 0.06% AI, 0.01% Asian, 0.07% AA, 0% PI, 51% White, 21% Multiracial
5	Ada	7	51% Male, 49% Female	15% Hispanic, 21% AI, 0.01% Asian, 0.02% AA, 0% PI, 37% White, 24% Multiracial
6	Mustang	8	51% Male, 49% Female	19% Hispanic, 0.03% AI, 0.04% Asian, 0.06% AA, 0% PI, 54% White, 13% Multiracial
7	Vinita Public Schools	22	51% Male, 49% Female	0.05% Hispanic, 26% AI, 0.04% Asian, 0% AA, 0% PI, 41% White, 23% Multiracial
8	Stigler	23	54% Male, 46% Female	0.08% Hispanic, 36% AI, 0.01% Asian, 0% AA, 0% PI, .5% White, 0.05% Multiracial
9	Stilwell	33	51% Male, 49% Female	18% Hispanic, 47% AI, 0.02% Asian, 0% AA, 0% PI, 18% White, 16% Multiracial
10	Broken Arrow Public Schools	5	51% Male, 49% Female	19% Hispanic, 0.07% AI, 0.04% Asian, 0.07% AA, 0% PI, 49% White, 14% Multiracial
11	Ada City School	8	51% Male, 49% Female	15% Hispanic, 21% AI, 0.01% Asian, 0.02% AA, 0% PI, 37% White, 24% Multiracial
12	Stillwater	13	52% Male, 48% Female	13% Hispanic, 0.05% AI, 0.04% Asian, 0.06% AA, 0% PI, 58% White, 13% Multiracial

Table 7. OK OSTP ELA Articulation Panel Participant List

Panelist #	Standard Setting Panel	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	ELA 3-4	Keystone	5	54% Male, 46% Female	0.04% Hispanic, 12% AI, 0% Asian, 0% AA, 0% PI, 66% White, 18% Multiracial
2	ELA 3-4	Inola Public Schools	2	55% Male, 44% Female	0.06% Hispanic, 25% AI, 0.05% Asian, 0.01% AA, 0% PI, 48% White, 16% Multiracial
3	ELA 3-4	Glenpool Public Schools	3	51% Male, 49% Female	11% Hispanic, 16% AI, .1% Asian, 0.03% AA, 0% PI, 41% White, 19% Multiracial
4	ELA 5-6	Paden	5+	56% Male, 44% Female	0.06% Hispanic, .2% AI, 0.02% Asian, 0.04% AA, 0% PI, 51% White, 16% Multiracial
5	ELA 5-6	Tulsa Public Schools	15	51% Male, 49% Female	38% Hispanic, 0.04% AI, 0.02% Asian, 22% AA, 0.01% PI, 21% White, 11% Multiracial
6	ELA 5-6	Edmond Schools	1	52% Male, 48% Female	13% Hispanic, 0.02% AI, 0.05% Asian, 11% AA, 0% PI, 57% White, 12% Multiracial
7	ELA 5-6	Hilldale Public Schools	19	51% Male, 49% Female	.1% Hispanic, .3% AI, 0.01% Asian, 0.02% AA, 0% PI, 39% White, 17% Multiracial
8	ELA 5-6	Putnam City Schools	3	51% Male, 49% Female	39% Hispanic, 0.02% AI, 0.04% Asian, 24% AA, 0% PI, 21% White, 11% Multiracial
9	ELA 7-8	John Rex Charter School	5	.5% Male, .5% Female	29% Hispanic, 0.02% AI, 0.04% Asian, 17% AA, 0% PI, 35% White, 14% Multiracial
10	ELA 7-8	Elk City	4	51% Male, 49% Female	24% Hispanic, 0.03% AI, 0.01% Asian, 0.04% AA, 0% PI, .6% White, 0.08% Multiracial

Table 8. OK OSTP Mathematics Articulation Panel Participant List

Panelist #	Standard Setting Panel	District	Years Teaching Experience	District Gender Breakdown	District Ethnicity Breakdown
1	Mathematics 3-4	Bridge Creek	24	52% Male, 48% Female	14% Hispanic, 0.05% AI, 0% Asian, 0.01% AA, 0% PI, 66% White, 14% Multiracial
2	Mathematics 3-4	Keystone	6	54% Male, 46% Female	0.04% Hispanic, 12% AI, 0% Asian, 0% AA, 0% PI, 66% White, 18% Multiracial
3	Mathematics 3-4	Moore Public Schools	15	51% Male, 49% Female	23% Hispanic, 0.04% AI, 0.05% Asian, 0.08% AA, 0% PI, 43% White, 17% Multiracial
4	Mathematics 3-4	Bartlesville Public Schools	3	52% Male, 48% Female	13% Hispanic, .1% AI, 0.02% Asian, 0.03% AA, 0% PI, 52% White, .2% Multiracial
5	Mathematics 5-6	Weatherford Public Schools	30	53% Male, 47% Female	23% Hispanic, 0.06% AI, 0.01% Asian, 0% AA, 0% PI, 59% White, 11% Multiracial
6	Mathematics 5-6	Shawnee Public Schools	16	52% Male, 48% Female	14% Hispanic, 12% AI, 0% Asian, 0.05% AA, 0% PI, 44% White, 25% Multiracial
7	Mathematics 5-6	Owasso	20	52% Male, 48% Female	15% Hispanic, 0.07% AI, 0.06% Asian, 0.04% AA, 0% PI, 53% White, 16% Multiracial
8	Mathematics 5-6	Oklahoma City Public Schools	22	51% Male, 49% Female	57% Hispanic, 0.02% AI, 0.02% Asian, .2% AA, 0% PI, 11% White, 0.08% Multiracial
9	Mathematics 7-8	Stilwell	33	51% Male, 49% Female	18% Hispanic, 47% AI, 0.02% Asian, 0% AA, 0% PI, 18% White, 16% Multiracial
10	Mathematics 7-8	Broken Arrow Public Schools	5	51% Male, 49% Female	19% Hispanic, 0.07% AI, 0.04% Asian, 0.07% AA, 0% PI, 49% White, 14% Multiracial
11	Mathematics 7-8	Ada City School	8	51% Male, 49% Female	15% Hispanic, 21% AI, 0.01% Asian, 0.02% AA, 0% PI, 37% White, 24% Multiracial
12	Mathematics 7-8	Stillwater	13	52% Male, 48% Female	13% Hispanic, 0.05% AI, 0.04% Asian, 0.06% AA, 0% PI, 58% White, 13% Multiracial

APPENDIX—G
MEETING AGENDA

Oklahoma OSTP Standard Setting

Meeting Agenda | June 17–21, 2024 | ELA/Mathematics Grades 3–8

Day 1: Monday, June 17

Time	Agenda Item	Activities
07:30 – 08:30	Breakfast	Registration & Check In
08:30 – 10:00	Orientation Session: Welcome & Overview	OSDE & Cognia introductions; Overview of meeting goals, OSTP ELA/Mathematics assessments, standard setting, and the ID Matching method.
10:00 – 10:15	Break & transition to breakout rooms	
10:15 – 12:00	Breakout sessions: Welcome & Overview	Facilitator and panelist introductions, meeting norms, and experience the test
12:00 – 01:00	Lunch	
01:00 – 02:30	Familiarization with OSTP assessment for grades 4, 6, or 8 as assigned.	Review & discuss standards and Performance Level Descriptors (PLDs)
02:30 – 03:15	Key concepts/processes, training & practice	Training on ID Matching method and the ordered item booklet (OIB)
03:15 – 03:30	Break	
03:30 – 04:15	Key concepts/processes, training & practice	Practice: Facilitator models ID-Matching judgmental task; Panelists practice and discussion; Prepare for Round 1
04:15 – 05:00	Round 1 Judgements	Begin round 1 (grades 4, 6, or 8 as assigned).
05:00	Adjourn for the day	

Day 2: Tuesday, June 18

Time	Agenda Item	Activities
07:30 – 08:30	Breakfast	After breakfast, convene in breakout rooms
08:30 – 09:15	Debrief Day 1	Check-in on the process, challenges, etc.
09:15 – 12:00	Complete Round 1	Complete round 1 (grades 4, 6, 8 as assigned).
***10:00**	Break*	*Panelists take breaks as needed while working
12:00 – 01:00	Lunch	
01:00 – 02:30	Discussion and preparation for Round 2	Discuss round 1 feedback/results; Introduce benchmarks; Prepare for round 2.
02:30 – 05:00	Begin Round 2	Begin round 2 (grades 4, 6, or 8 as assigned).
03:15*	Break*	*Panelists take breaks as needed while working
05:00	Adjourn for the day	

Day 3: Wednesday, June 19

Time	Agenda Item	Activities
07:30 – 08:30	Breakfast	After breakfast, convene in breakout rooms
08:30 – 09:00	Debrief Day 2	Check-in on the process, challenges, etc.
09:00 – 10:00	Complete Round 2	Complete round 2 (grades 4, 6, or 8 as assigned). Panelists take breaks as needed.
10:00 – 10:15	Break	
10:15 – 11:00	Discussion & preparation for Round 3	Discuss round 2 feedback/results; Prepare for round 3.
11:00 – 12:00	Complete Round 3	Complete round 3 (grades 4, 6, or 8 as assigned).
12:00 – 01:00	Lunch	
01:00 – 02:30	Familiarization with OSTP assessment for grades 3, 5, or 7 as assigned.	Review & discuss standards and Performance Level Descriptors (PLDs)
02:30 – 05:00	Round 1 Judgements	Begin round 1 (grades 3, 5, or 7 as assigned).
03:15*	Break*	*Panelists take breaks as needed while working
05:00	Adjourn for the day	

Day 4: Thursday, June 20

Time	Agenda Item	Activities
07:30 – 08:30	Breakfast	After breakfast, convene in breakout rooms
08:30 – 09:00	Debrief Day 3	Check-in on the process, challenges, etc.
09:00 – 10:45	Round 1 Judgements (continuation)	Complete round 1 (grades 3, 5, or 7 as assigned).
10:00*	Break*	*Panelists take breaks as needed while working
10:45 – 12:00	Discussion & Preparation for Round 2	Discuss round 1 feedback/results; Introduce benchmarks; Prepare for round 2.
12:00 – 01:00	Lunch	
01:00 – 02:30	Round 2 Judgements	Complete round 2 (grades 3, 5, or 7 as assigned).
02:30 – 03:30	Discussion & preparation for Round 3	Discuss round 2 feedback/results; Prepare for round 3.
03:15*	Break*	*Panelists take breaks as needed while working
03:30 – 04:30	Round 3 Judgements	Complete round 3 (grades 3, 5, or 7 as assigned).
04:30 – 05:00	Wrap up and evaluation Survey	Review results for both grades, and complete final evaluation survey
05:00	*Adjourn	

**Adjourn for standard setting panelists. Panelists selected to stay for the Articulation meeting will reconvene in the morning.*

Vertical Articulation Meeting

Day 5: Friday, June 21

Time	Agenda Item	Activities
07:30 – 08:30	Breakfast	
08:30 – 10:00	Vertical Articulation	Key concepts/processes and training; complete readiness survey; start articulation process
10:00 – 10:15	Break	
10:15 – 12:00	Vertical articulation	Continuation
12:00 – 12:30	Wrap up and Evaluation Survey	
12:30	Adjourn	To go lunch

Terminology Reference

During the standard-setting meeting, acronyms or terms will be introduced and defined as it becomes relevant. A list of the most used acronyms and terms, along with brief descriptions, is presented below for quick reference.

Acronym / Term	Brief Description
Cut Score	The minimum test score a student must earn to be considered at a specific performance level. Three cut scores result in four levels of performance.
ID Matching	Item-Descriptor Matching: An item-centered, content-based method for standard setting
KSAs	Knowledge, Skills, and Abilities.
OAS	Oklahoma Academic Standards
OIB	Ordered Item Booklet: A set of test items ordered by item difficulty (content and grade specific).
OSDE	Oklahoma State Department of Education
OSTP	Oklahoma School Testing Program
Performance Levels	Reflect the specific knowledge and skills that a student should be able to demonstrate based on their performance on the test. OSTP has four performance levels: Below basic, basic, proficient, and advanced.
PLDs	Performance Level Descriptors: A narrative account of the knowledge, skills, and abilities demonstrated by students in each level of performance. Describe what students know and can do based on the Oklahoma Academic Standards. (Content and grade specific)

APPENDIX—H
NON-DISCLOSURE AGREEMENT

Nondisclosure Agreement

Oklahoma State Testing Program

Standard Setting

June 17-21, 2024

The undersigned is an employee, contractor, assessment committee member, or person otherwise authorized to view secure state assessment materials. The undersigned hereby agrees to be bound by the terms of this agreement restricting the disclosure of said materials.

It is essential to the integrity of this item development project and testing program that all test items remain secure. To maintain this security, only authorized persons are permitted to view the test questions. With the exception of materials released by the Oklahoma State Department of Education for informational purposes, all test questions (draft or final) in hardcopy or electronic format and associated materials must be regarded as secure documents. As a result, such materials may not be reproduced, electronically transmitted, discussed, used in classroom instruction, or in any way released or distributed to unauthorized persons. All materials including items and item drafts must be returned at the end of the meeting.

I understand that I am responsible for test materials security. By breaching test materials security as described here, I am breaching professional testing ethics and may be subject to additional penalties under law.

Name: _____

Signature: _____

Date: _____

APPENDIX—I
ORIENTATION POWERPOINT PRESENTATION

OSTP ELA/Math Grades 3-8

Standard Setting Orientation

June 17 – 21, 2024

1

Orientation Session - Agenda

- Introduction of the Standard Setting Team
- OSDE: Welcome
- Standard Setting Goals and Outcomes
- Overview of the OSTP ELA/Math Assessments
  - Test Design
  - Performance Level Descriptors
- Overview of Key Concepts and Procedures
- Transition to Breakout Rooms

2

Standard Setting Team

Oklahoma SDE Members

- Catherine Boomer, Program Director, State Assessments
- Samantha Sheppard, Project Manager, Science
- Caroline Misner, Project Manager, OAAP
- Alyssa Tyra, Project Manager, ELA Assessments
- Corinne Beasler, Project Manager, Math Assessments
- Sharon Morgan, Program Director, Standards & Learning
- Jason Stephenson- Project Manager, Secondary ELA
- Deann Jones- Project Director, RSA
- Rori Hodges, Specialist, Early Childhood

3

Standard Setting Team - Cognia

Program Management

- Elizabeth Garcia
- Sharman Lyons (Events team)

Psychometricians

- Sandra Sweeney
- Frank Padellaro
- Qi Qin

Content Specialists

- Breanne Moore — Math
- Mary Kate Clauson — ELA

Facilitation Team

- Karen Whisler — Math 3-4
- Katie Schmidt — Math 5-6
- Jill Stepanek — Math 7-8
- Jessica Keymer — ELA 3-4
- Lisa Jones Kennedy — ELA 5-6
- Rebecca Young — ELA 7-8

4

Standard Setting Team – Outside Observers

- Erika Landl, Center for Assessment, OSTP Technical Advisory Committee Member
- Maria Elena Oliveri, Purdue University, OSTP Technical Advisory Committee Member
- Eric Jones, Administrative Programs Manager, Office of Educational Quality & Accountability

5

Housekeeping

- Reimbursement form:
  - Fill out completely
  - For those staying overnight provide itemized receipts for dinner
- W9 form:
  - Anyone receiving a stipend of $600 or more must fill out a W9 form. If you do fill out and return, your reimbursement will not be processed.
  - Please complete the W9 form today and give to your facilitator to turn in at the end of the day. This will speed up the process of your reimbursement.

6

Assessment History

- In 2016, the Oklahoma Legislature directed the State Board of Education to evaluate Oklahoma's current state assessment system and make recommendations for its future.
- As a result, the Oklahoma State Department of Education
  - Held regional meetings across the state to determine stakeholder concerns
  - Convened the Oklahoma Assessment & Accountability Task Force to develop recommendations
  - Followed federal requirements and rules as described in ESSA.

OKLAHOMA Education

Goal for Oklahoma Schools

- Focus on college- and career-readiness:
  - *College and career ready means that students graduate from high school prepared to enter and succeed in postsecondary opportunities whether college or career.*
- One measurement of college- and career readiness is the Oklahoma School Testing Program.

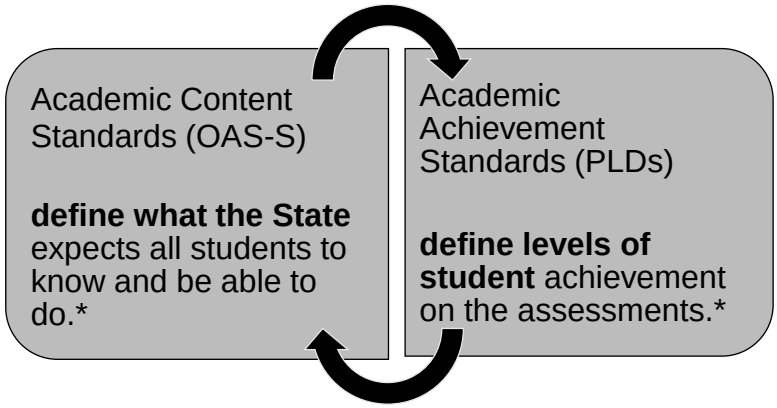
OKLAHOMA Education

Oklahoma Statute on Performance Levels

- OSTP Performance is divided into performance levels.
- The Performance levels shall be set by a method that indicates students are ready for the next grade, course, or level of education, as applicable.
- The Commission for Educational Quality and Accountability (CEQA) shall determine and adopt a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act.
- §70-1210.541

9

Content Standards and PLDs



**U.S. Department of Education Peer Review of State Assessment Systems Non-Regulatory Guidance for States, September 25, 2015*

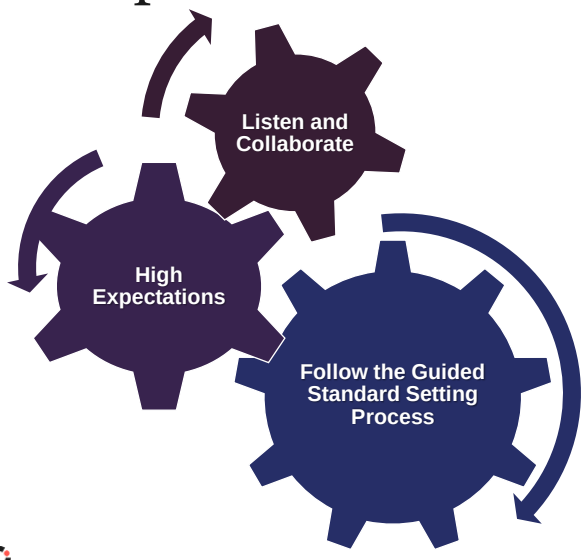
10

Standard Setting Goals

- Our shared goals
  - Use your judgments to help provide performance standards recommendations for the OSTP ELA/Math assessments that provide meaningful and actionable information
- Your goals as panelists
  - Learn concepts and procedures following the Item-Descriptor (ID) Matching standard setting method
  - Follow the procedures to complete the standard setting activities
  - Rely on your expertise about the content standards, student learning, and students throughout the process

11

Expectations of all Panelists



- Security is of the utmost importance
  - You can discuss the process in general terms
- You may NOT
  - Share details about the items or specific details about the process (e.g., cuts that were recommended)
  - Use your phones or personal devices while in the room
  - Use the Chromebooks for anything other than standard setting activities

12

A Shift in Focus for this Week

OTHER WAYS YOU HAVE CONTRIBUTED

- Item writing, data review, content review and/or item review committees
- Review test items
- Purpose: Evaluate items for use on a test (potential problems with the items; suggest improvements)

THE WORK WE ARE DOING THIS WEEK

- Standard setting: Item-centered method with content-based judgement
- Look at test items
- Purpose: Identify the knowledge, skills, and abilities required to correctly answer the item

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Purpose of Standard Setting

- Allows Oklahoma State Department of Education (OSDE) to have educator expertise inform *performance standards* for the OSTP ELA/Math assessments:
- Opportunity for educator input on *cut scores* used to define *performance levels*
- To ensure recommendations are consistent with expectations stated in the *Performance Level Descriptors*

14

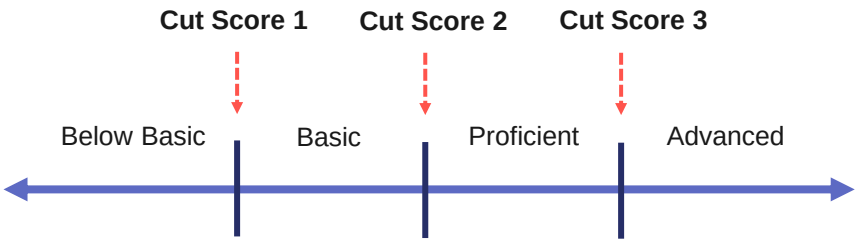
Performance Levels

- Performance Levels reflect the specific knowledge and skills that a student should be able to demonstrate based on their performance on the test.
- The Oklahoma School Testing Program (OSTP) has four performance levels.

15

Cut Scores

- A cut score is the minimum test score a student must earn to be considered at a specific performance level.
- Three cut scores result in four levels of performance.



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Cut Score Considerations

- We don't rely on percentages.
  - They are arbitrary and don't consider the content.
- We use content-based judgment.
  - Content links assessment items, performance level descriptors (PLDs), and the Oklahoma Academic Standards (OAS).

17

Math Test Design

- Each math test has 50 Operational items and 10 Field Test items.
- The 50 operational items must match the blueprint which is broken down by the four math strands, which correspond to the four math reporting categories.

Grade	Number & Operations	Algebraic Reasoning & Algebra	Geometry & Measurement	Data & Probability
3	44 – 48%	12 – 18%	22 – 26%	12 – 18%
4	42 – 46%	12 – 18%	24 – 28%	12 – 18%
5	42 – 46%	14 – 20%	22 – 26%	12 – 18%
6	38 – 42%	20 – 24%	22 – 26%	12 – 16%
7	16 – 20%	26 – 30%	30 – 36%	18 – 24%
8	16 – 20%	44 – 48%	18 – 22%	14 – 18%

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Math Depth of Knowledge (DOK)

SUBJECT	SUMMARY DEFINITIONS OF DEPTH OF KNOWLEDGE (WEBB'S DOK™)			
	WEBB'S DOK LEVEL 1	WEBB'S DOK LEVEL 2	WEBB'S DOK LEVEL 3	WEBB'S DOK LEVEL 4
Mathematics	Requires students to recall or observe facts, definitions, and terms. Includes simple one-step procedures. Includes computing simple algorithms (e.g., sum, quotient). ***Examples:*** • Recall or recognize a fact, term, or property. • Represent in words, pictures, or symbols a math object or relationship • Perform a routine procedure, such as measuring • At higher grades, solve a quadratic equation or a system of two linear equations with two unknowns	Requires students to make decisions on how to approach a problem. Requires students to compare, classify, organize, estimate, or order data. Often involves procedures with two or more steps. ***Examples:*** • Specify and explain relationships between facts, terms, properties, or operations • Select procedure according to criteria and perform it • Use concepts to solve routine multiple-step problems.	Requires reasoning, planning, or use of evidence to solve a problem or algorithm. May involve an activity with more than one possible answer. Requires conjecture or restructuring of problems. Involves drawing conclusions from observations, citing evidence and developing logical arguments for concepts. Uses concepts to solve non-routine problems. ***Examples:*** • Formulate original problem, given situation • Formulate mathematical model for complex situation • Produce a sound and valid mathematical argument • Devise an original proof • Critique a mathematical argument	Requires complexity at least at the level of DOK 3 but also an extended time to complete the task. A project that requires extended time but repetitive or lower-DOK tasks is not at Level 4. Requires complex reasoning, planning, developing, and thinking. May require students to make several connections and apply one approach among many to solve the problem. May involve complex restructuring of data, establishing and evaluating criteria to solve problems. ***Examples:*** • Apply a mathematical model to illuminate a problem, situation • Conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results • Design a mathematical model to inform and solve a practical or abstract situation

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Math DOK Blueprint

- The 50 operational items must match the blueprint which is broken down by the three DOK levels.

Grade	DOK 1	DOK 2	DOK 3
3	40 – 50%	45 – 55%	5 – 10%
4	20 – 30%	65 – 75%	5 – 15%
5	20 – 30%	65 – 75%	5 – 15%
6	15 – 25%	65 – 75%	10 – 20%
7	15 – 25%	65 – 75%	10 – 20%
8	10 – 20%	65 – 75%	15 – 25%

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ELA Test Design

- Each ELA test has 50 Operational items and 10 Field Test items.
- The 50 operational items must match the blueprint which is broken down by the five assessed ELA standards, which correspond to the five ELA reporting categories.

Grade	Reading & Writing Process	Critical Reading & Writing	Vocabulary	Language	Research
3	38 – 42 %	12 – 18 %	22 – 26 %	12 – 18 %	12 – 18 %
4	30 – 34 %	18 – 22 %	22 – 26 %	12 – 18 %	12 – 18 %
5	30 – 34 %	22 – 26 %*	18 – 22 %	12 – 18 %	12 – 18 %
6	34 – 38 %	18 – 22 %	18 – 22 %	12 – 18 %	12 – 18 %
7	34 – 38 %	18 – 22 %	14 – 20 %	12 – 18 %	14 – 20 %
8	24 – 30 %	24 – 30 %*	14 – 20 %	12 – 18 %	12 – 18 %

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ELA Stimulus

- Stimuli consist of authentic literature or are commissioned specifically for OAS.
- They represent topics and genres appropriate for each grade.
- Qualitative and quantitative measures

Grade	Word Count*	Authentic Literary Selections	Expository Selections
3	200 - 600	3 – 6	3 – 5
4	200 – 600	4 – 6	3 – 5
5	300 – 700	4 – 6	4 – 6
6	300 – 700	4 – 6	4 – 6
7	500 – 900	4 – 6	4 – 6
8	500 – 900	4 – 6	4 – 6

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ELA Depth of Knowledge (DOK)

SUBJECT	SUMMARY DEFINITIONS OF DEPTH OF KNOWLEDGE (DOK)			
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
English Language Arts	Requires students to recall, observe, question, or represent facts, simple skills, or abilities. Requires only surface understanding of text, often verbatim recall. *Examples:* • Support ideas by reference to verbatim (or only slightly paraphrased) details in text • Use a dictionary to find meanings of words • Recognize figurative language in a passage • Identify correct spelling or meaning of words	Requires processing beyond recall and observation. Requires both comprehension and subsequent processing of text or portions of text. Involves ordering, classifying text as well as identifying patterns, relationships, and main points. *Examples:* • Use context to identify unfamiliar words • Predict a logical outcome • Identify and summarize main points • Apply knowledge of conventions of standard American English • Compose accurate summaries of the major events in a narrative	Requires students to go beyond text. Requires students to explain, generalize, and connect ideas. Involves deep inferencing, prediction, elaboration, and summary. Requires students to support positions using prior knowledge and evidence and to manipulate themes across passages. *Examples:* • Determine effect of author's purpose on text elements • Summarize information from multiple sources • Critically analyze literature • Compose focused, organized, coherent, purposeful prose • Evaluate the internal logic or credibility of a message	Requires complexity at least at the level of DOK 3 but also an extended time to complete the task, such as conducting a research project over many weeks. A project that requires extended time but repetitive or lower-DOK tasks is not at Level 4. May require generating hypotheses and performing complex analyses and connections among texts. *Examples:* • Analyze and synthesize information from multiple sources • Examine and explain alternative perspectives across sources • Describe and illustrate common themes across a variety of texts • Create compositions that synthesize, analyze, and evaluate

Revised 2014

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ELA➲Depth of Knowledge (DOK)

- The 50 operational items must match the blueprint which is broken down by the three DOK levels.

Grade	DOK 1	DOK 2	DOK 3
3	15-30%	65-80%	5-10%
4	10-20%	65-75%	5-15%
5	5-15%	70-85%	5-20%
6	5-15%	70-85%	10-20%
7	5-15%	70-85%	10-20%
8	5-10%	60-75%	20-30%

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Math and ELA Item Types

Math Item Types

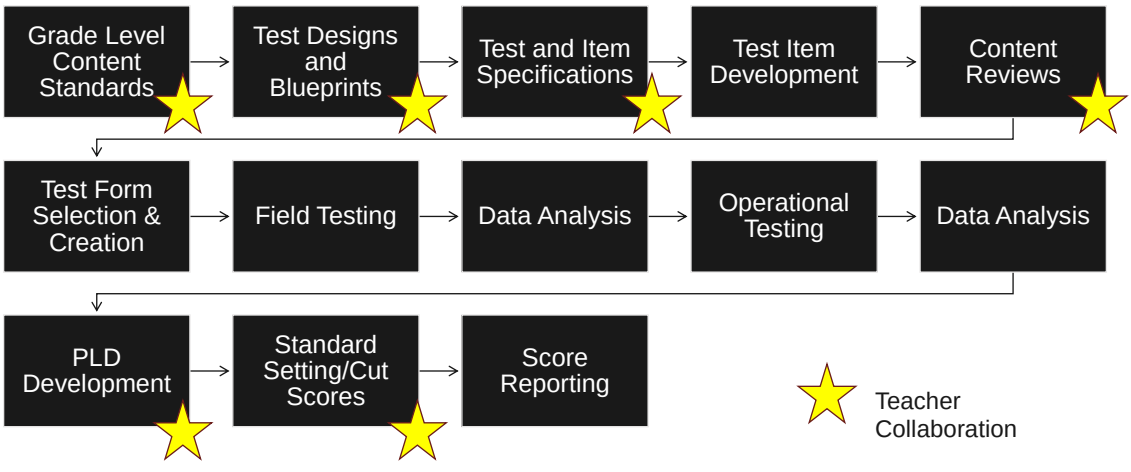
- Multiple Choice
- Cluster Multiple Choice Items with a Shared Stimulus
- Technology Enhanced Items (TEIs)
- Paper Equivalent Items for TEIs

ELA Item Types

- Multiple Choice
- Cluster Multiple Choice Items with a Shared Stimulus
- Technology Enhanced Items (TEIs)
- Paper Equivalent Items for TEIs
- Constructed Response
- Writing Prompt

25

OK Test Development Cycle



26

Reminder: Performance Levels

- Performance Levels reflect the specific knowledge and skills that a student should be able to demonstrate based on their performance on the test.
- The Oklahoma School Testing Program (OSTP) has four performance levels.

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What are Performance Level Descriptors?

- Performance Level Descriptors or PLDs:
  - Provide a narrative account of the knowledge, skills, and abilities demonstrated by students in each level of achievement.
  - Describe what students know and can do based on the Oklahoma Academic Standards.
  - Inform stakeholders of how to interpret student test scores in relation to the Oklahoma Academic Standards.
  - Are typically used for standard setting and score reporting.

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Background on PLD development

- New standards were adopted by OSDE. As a result, the PLDs needed to be updated so that they accurately reflect what students know and can do at each performance level.
- OSDE and Cognia staff collaborated on the development of new PLDs using the updated standards as a foundation.

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Background on the PLD Development

- Teacher committees reviewed and discussed draft PLDs. After this discussion, OSDE finalized the PLDs.
- This week, the new PLDs will be used to complete the standard setting activities that will result in cut score recommendations for the OSTP ELA and Math assessments.

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Language for Math & ELA Policy PLDs

Below Basic	Basic	Proficient	Advanced
Students have not performed at least at the **Basic** level.	Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the **Basic** level typically:	Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the **Proficient** level typically:	Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the **Proficient** level, students scoring at the **Advanced** level typically:

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Math PLD Organization

- Math PLDs are arranged by:
  - Grade level
  - Strand (Numbers and Operations, Algebraic Reasoning & Algebra, Geometry & Measurement, and Data & Probability)
  - PLD Level (Basic, Proficient, and Advanced)
  - Objective

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Math PLDs for Grade 5

OSTP Math Grade 5 - Range Performance Level Descriptors (Range PLDs)

Strand	Basic	Proficient	Advanced	Objective(s)
	OK Policy PLD Basic: *Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:*	***OK Policy PLD Proficient:*** *Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:*	***OK Policy PLD Advanced:*** *Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level. Students scoring at the Advanced level typically:*	
Numbers & Operations	Represent decimal fractions with a model.			5.N.1.1
	Recognize and generate equivalent decimals, fractions, and mixed numbers and represent whole numbers.	Compare and order fractions. Compare and order decimals.	Order a mix of decimals, fractions, mixed numbers, and whole numbers.	5.N.1.2, 5.N.1.3, 5.N.1.4
	Solve division, multiplication, addition, and subtraction problems.	Estimate and solve division problems with the remainder represented as a fraction, decimal, or whole number.	Interpret the remainder of division problems within the context of the problem.	5.N.2.1, 5.N.2.2, 5.N.2.3, 5.N.2.4
	Add and subtract decimals and fractions with like denominators.	Estimate, illustrate, add, and subtract fractions and mixed numbers.	Order a mix of decimals, fractions, mixed numbers, and whole numbers.	5.N.3.1, 5.N.3.2, 5.N.3.3, 5.N.3.4
Algebraic Reasoning & Algebra	Describe patterns of change. Identify the origin and axes in relation to the coordinates.	Graph patterns of change as ordered pairs on a coordinate plane. Use a rule or table to represent ordered pairs.	Make predictions and generalizations about patterns of change.	5.A.1.1, 5.A.1.2

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ELA PLD Organization

- ELA PLDs are arranged by:
  - Grade level
  - Standard (Reading & Writing Process, Critical Reading & Writing, Vocabulary, Language and Research)
  - PLD Level (Basic, Proficient, and Advanced)
  - Objectives

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ELA PLDs for Grade 8

OSTP ELA Grade 8 - Range Performance Level Descriptors (Range PLDs)

Objective	Basic	Proficient	Advanced
	OK Policy PLD Basic: *Students demonstrate partial mastery of the essential knowledge and skills appropriate to their grade level. Students scoring at the Basic level typically:*	***OK Policy PLD Proficient:*** *Students demonstrate mastery over appropriate grade-level subject matter and readiness for the next grade level. Students scoring at the Proficient level typically:*	***OK Policy PLD Advanced:*** *Students demonstrate superior performance on challenging subject matter. In addition to demonstrating a broad and in-depth understanding and application of all skills at the Proficient level, students scoring at the Advanced level typically:*
Reading & Writing Process			
8.2.R.1	Summarize an alphabetic or multimodal text to demonstrate comprehension of a text.	Summarize alphabetic and/or multimodal texts about similar topics to demonstrate comprehension within and between texts.	Summarize alphabetic and/or multimodal texts about similar topics to demonstrate comprehension within and between texts; evaluate summaries.
8.2.R.2	Identify details in fiction, poetry, and nonfiction texts to distinguish genres.	Analyze details in fiction, poetry, and nonfiction texts to identify characteristics of genres.	Analyze details in fiction, poetry, and nonfiction texts to identify characteristics of genres and provide supporting evidence.
8.2.R.3	Paraphrase a paragraph in their own words to demonstrate comprehension.	Paraphrase a portion of passage in their own words to demonstrate comprehension.	
8.2.W.1	Identify a prewriting strategy (e.g., develop ideas and plan).	Prewrite (e.g., develop ideas and plan).	Create and use a prewriting strategy.
	Minimally plan/organize ideas.	Organize and develop ideas to compose a first draft.	Organize and develop ideas related to a thesis to

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Overview of Item-Descriptor (ID) Matching Method

- Item-centered Method
- Content-based Judgment
- Iterative Process

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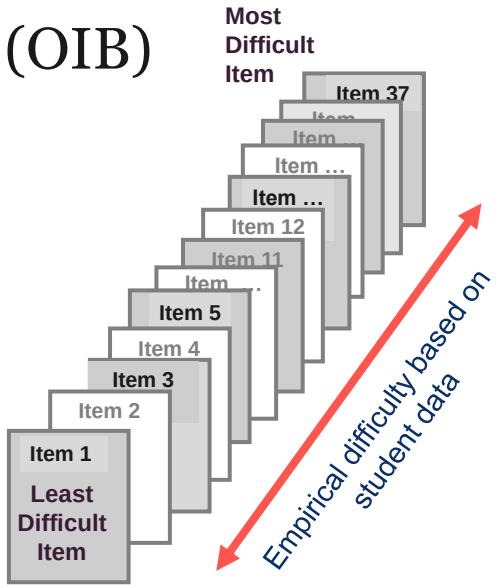
Ordered Item Booklet* (OIB)

- A set of test items
- One item per 'page'
- Items ascend by difficulty
  - Easiest item appears first
  - Most difficult item appears last
- Order is based on empirical item difficulties
  - Not the order in which they appear for students during the test



37

Overview of ID Matching Method

- Panelists review each item in the OIB.
  - Identify the knowledge, skills, and abilities (KSAs) required to answer the item correctly.
- For each item, make the following judgment:
  - Match the knowledge, skills, and abilities (KSAs) required by the item with the expectations described in either the Basic, Proficient, or Advanced performance level descriptor (PLD).
- Judgments are made independently
- Iterative process
  - Across three rounds (for each grade)

Shift in Focus and Thinking

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Content-based Judgments

Useful

- Based on Content
- Links items to PLDs
- Refers to specific knowledge, skills, and abilities (KSAs)

Not Useful

- Based on something other than the content
- Too general
- Based on a specific student or class

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Content-Based Benchmarks - Overview

- Benchmarks based on Cognia and OSDE content team judgments
  - Benchmarks will be presented to you at the beginning of Round 2.
- Benchmarks serve as additional information for you to consider as you engage in the 2nd and 3rd rounds of the standard setting process.

→ More detailed information/training to come later today

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APPENDIX—J
READINESS SURVEYS & ROUND BY ROUND RESULTS

Standard Setting Readiness Surveys

The following three tables show the survey questions and associated response options administered to panelists prior to each judgment round, which panelists used to indicate their readiness to proceed with the judgment tasks for the upcoming round.

Readiness Survey—Round 1

Question	Response Options
I understand the goals of the standard setting meeting.	Yes | No
I understand the procedures we are using to set standards.	Yes | No
I understand the differences between the performance levels.	Yes | No
I understand how to make item-PLD alignment judgements.	Yes | No
The quality of the item is important to consider when making item-PLD alignment judgments.	Agree | Unsure | Disagree
How important is it to consider a typical student's ability while engaging in the standard setting activities?	Not important | Unsure | Very important
I understand how to use the Cognia Standard Setting Toolkit.	Yes | No
I am ready to proceed with the standard setting process.	Yes | No

Readiness Survey—Round 2

Question	Yes	No
I understand the round 1 feedback.		
I understand that I should use the round 1 feedback as information, not persuasion, for me to consider as I make my judgements in round 2.		
I understand what the content-based benchmarks represent.		
I understand that I can use the content-based benchmarks as additional information, not persuasion, for me to consider as I make my judgements in round 2.		
I understand that I should consider the insights of my colleagues as information, but not persuasion, as I make my own independent judgments in round 2.		
I am ready to proceed with Round 2 of the standard setting process.		

Readiness Survey—Round 3

Question	Yes	No
I understand the round 2 feedback.		
I understand that I should use the round 2 feedback as information, not persuasion, for me to consider as I make my judgements in round 3.		
I understand that I should consider the insights of my colleagues as information, but not persuasion, as I make my own independent judgments in round 3.		
I am ready to proceed with Round 3 of the standard setting process		

Standard Setting Round by Round Results

The following series of figures represent the results presented to panelists after each judgment round and were used to facilitate discussions. These results were presented as frequency graphs with the ordered item booklet (OIB) page numbers on the x-axis and the number of panelists on the y-axis. The stacked bars represented the number pf panelists that selected the basic (yellow), proficient (green), or advanced (blue) performance level for each item in the OIB. Since these results were calculated and presented after each judgment round, there were three figures (corresponding to rounds 1, 2, and 3, respectively) for each grade within each content area.

Figure 1. ELA Grade 3 Round 1 - Frequency of Panelist Judgments by Performance Level

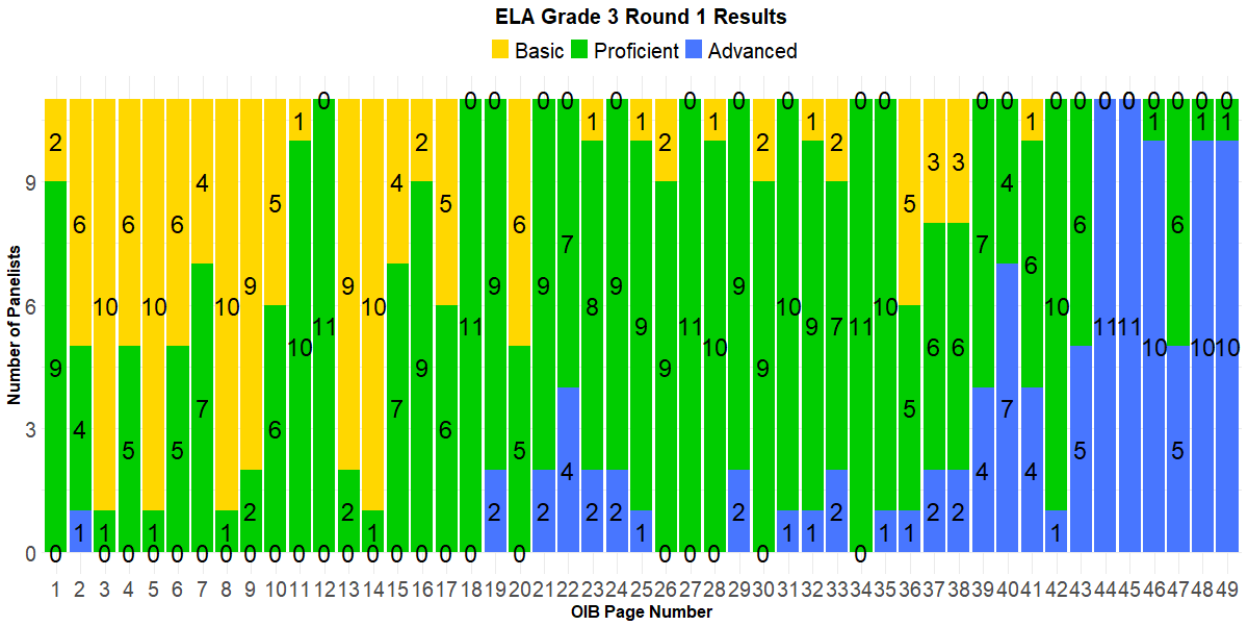


Figure 2. ELA Grade 3 Round 2 - Frequency of Panelist Judgments by Performance Level

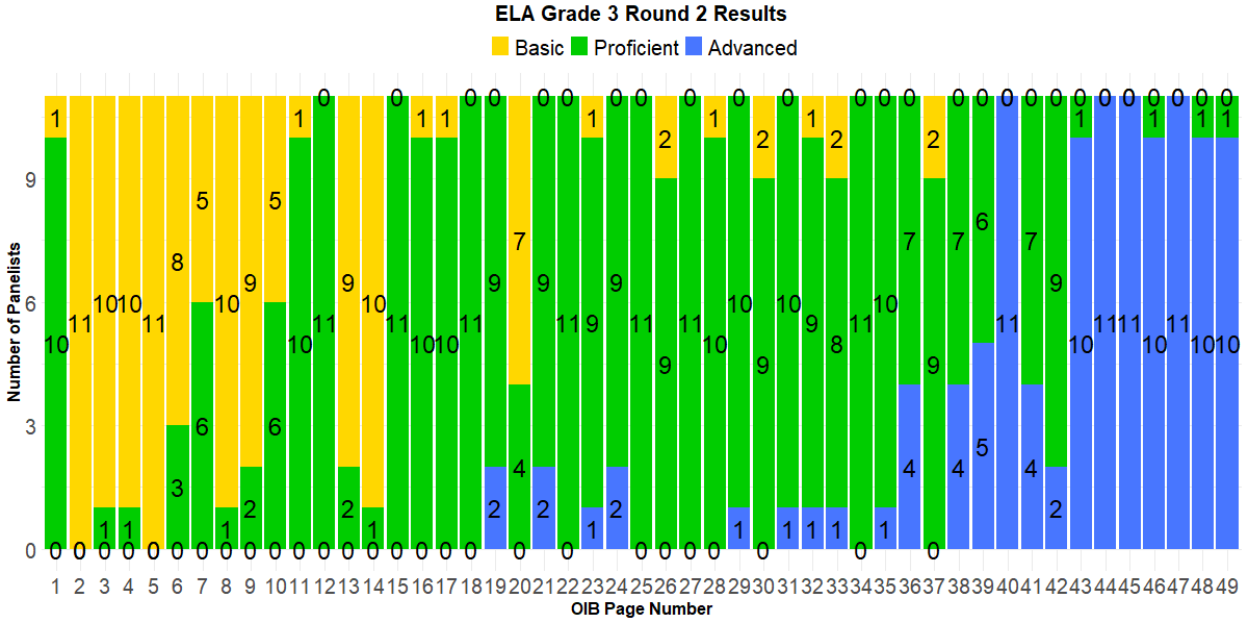


Figure 3. ELA Grade 3 Round 3 - Frequency of Panelist Judgments by Performance Level

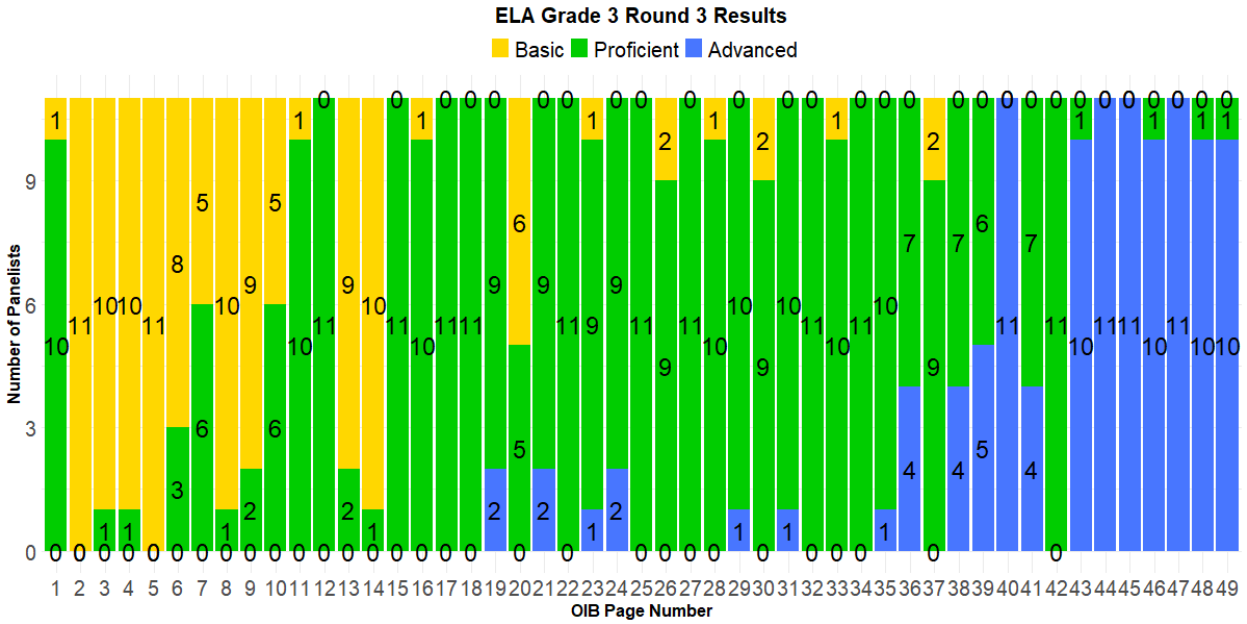


Figure 4. ELA Grade 4 Round 1 - Frequency of Panelist Judgments by Performance Level

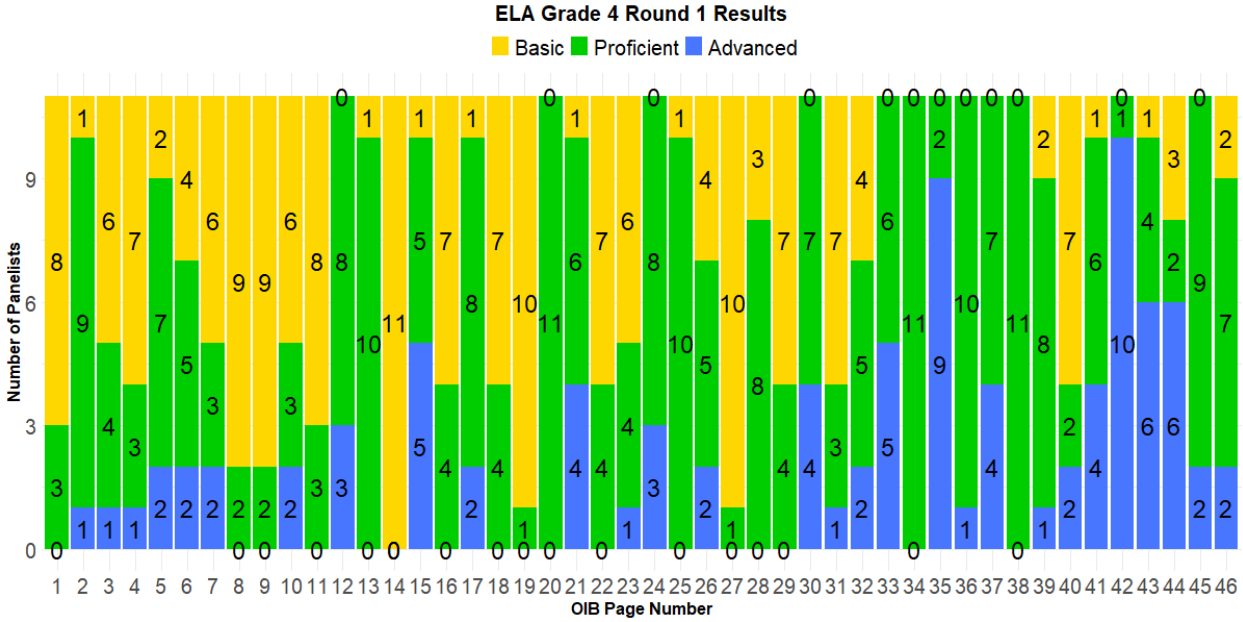


Figure 5. ELA Grade 4 Round 2 - Frequency of Panelist Judgments by Performance Level

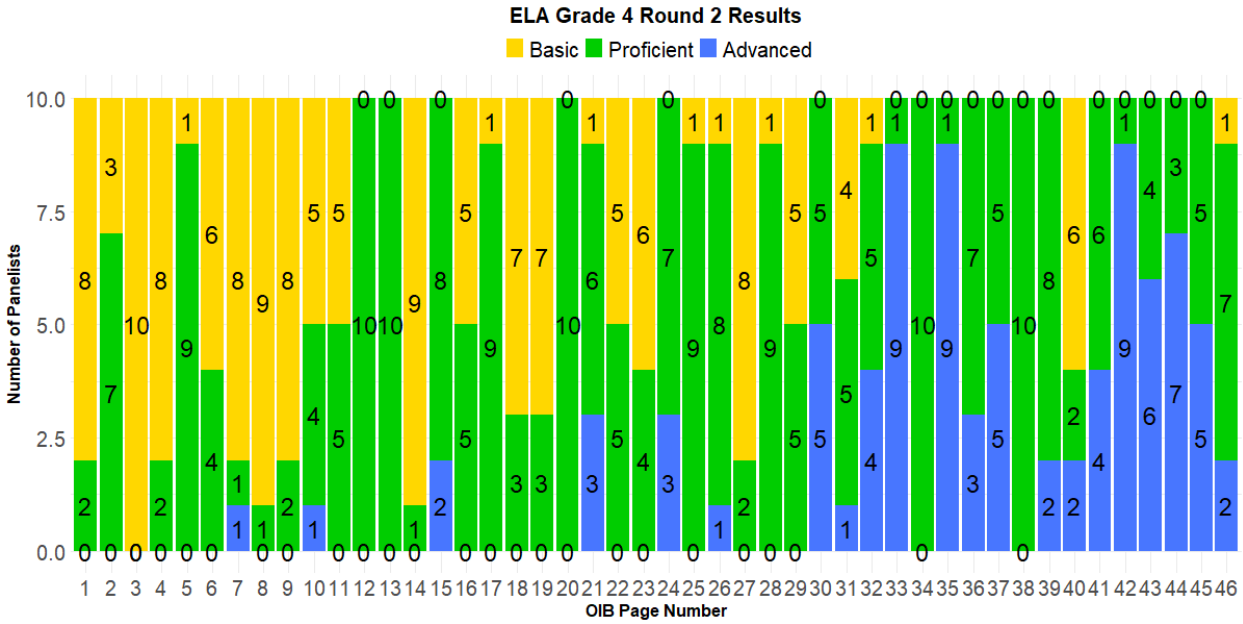


Figure 6. ELA Grade 4 Round 3 - Frequency of Panelist Judgments by Performance Level

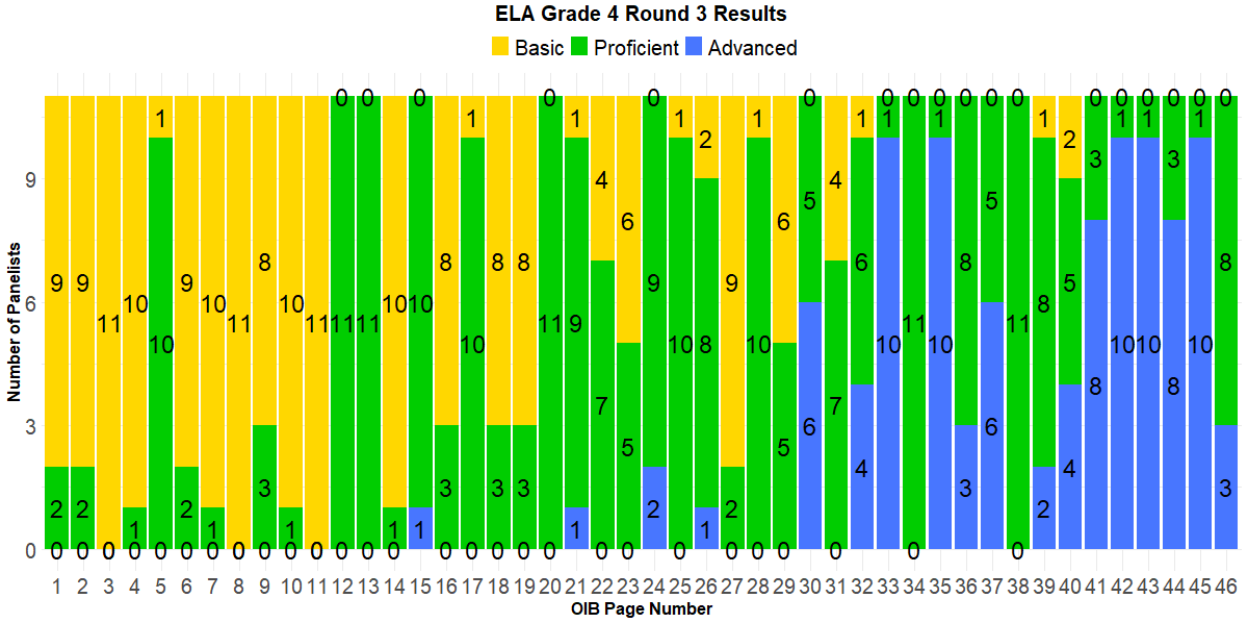


Figure 7. ELA Grade 5 Round 1 - Frequency of Panelist Judgments by Performance Level

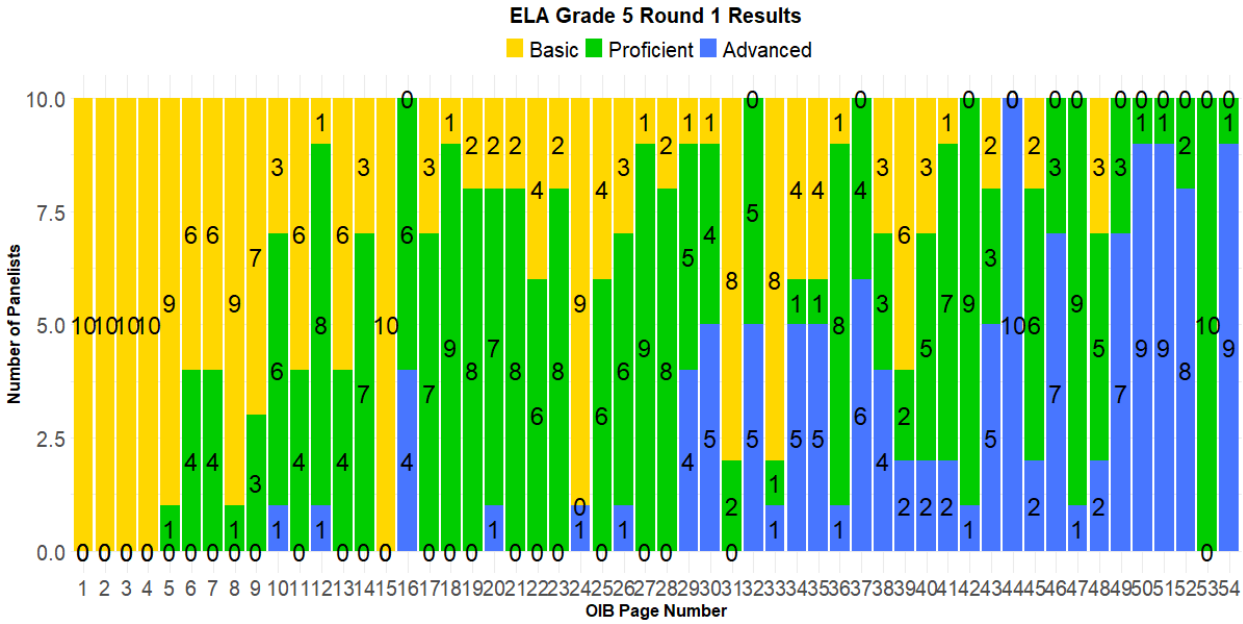


Figure 8. ELA Grade 5 Round 2 - Frequency of Panelist Judgments by Performance Level

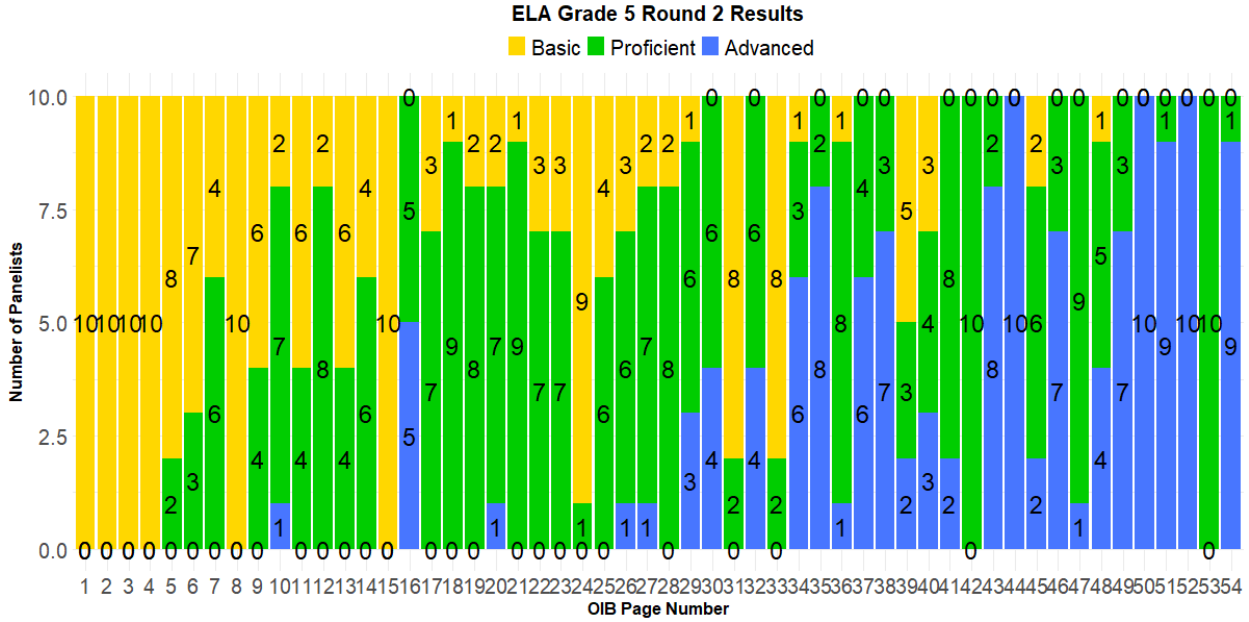


Figure 9. ELA Grade 5 Round 3 - Frequency of Panelist Judgments by Performance Level

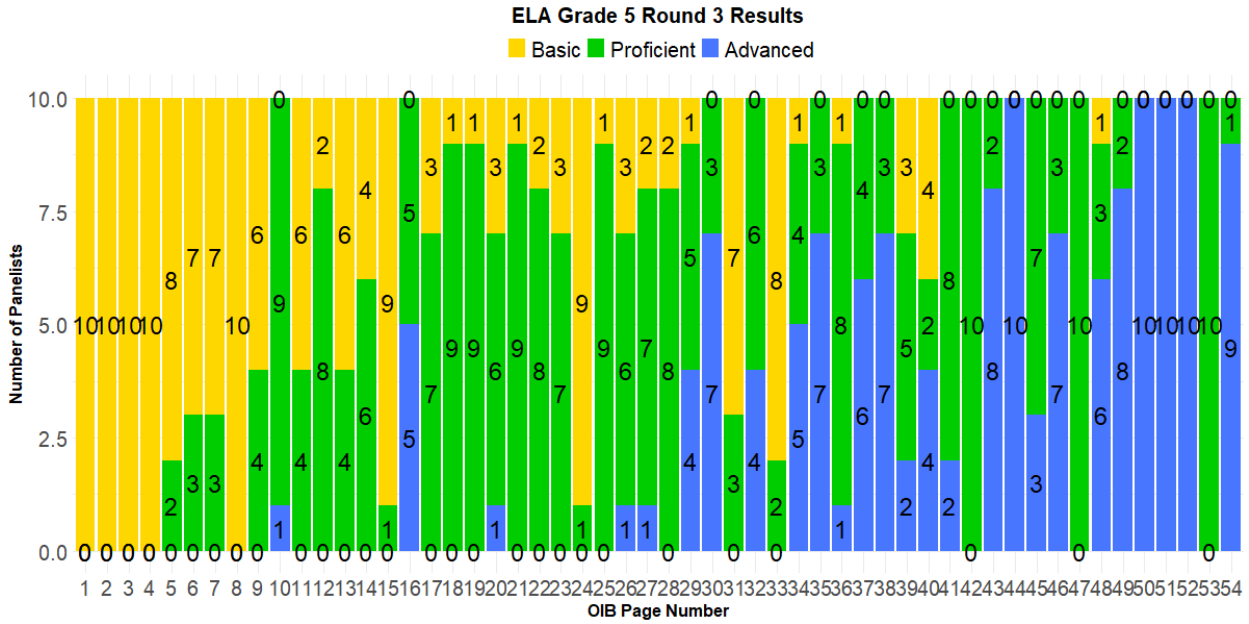


Figure 10. ELA Grade 6 Round 1 - Frequency of Panelist Judgments by Performance Level

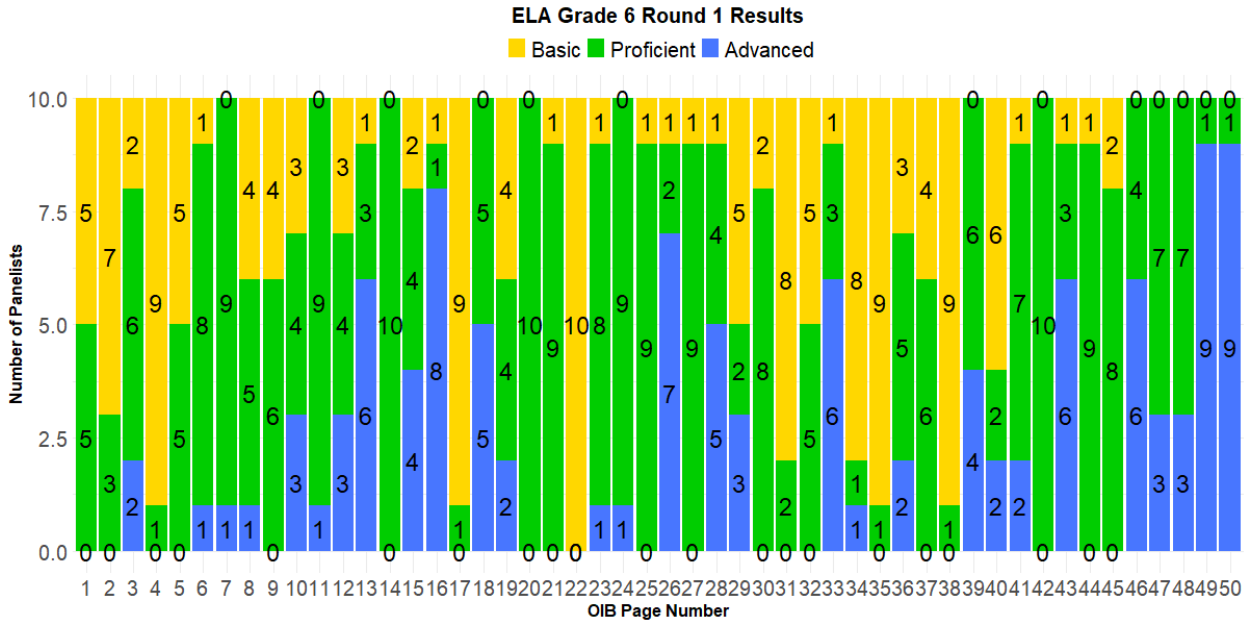


Figure 11. ELA Grade 6 Round 2 - Frequency of Panelist Judgments by Performance Level

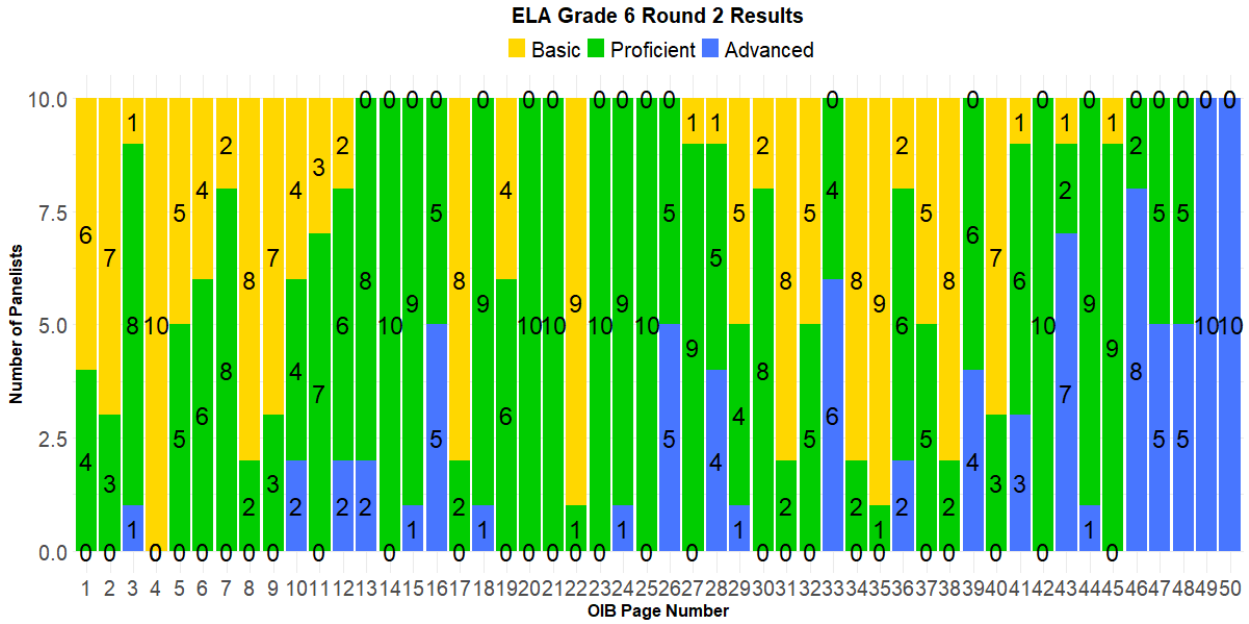


Figure 12. ELA Grade 6 Round 3 - Frequency of Panelist Judgments by Performance Level

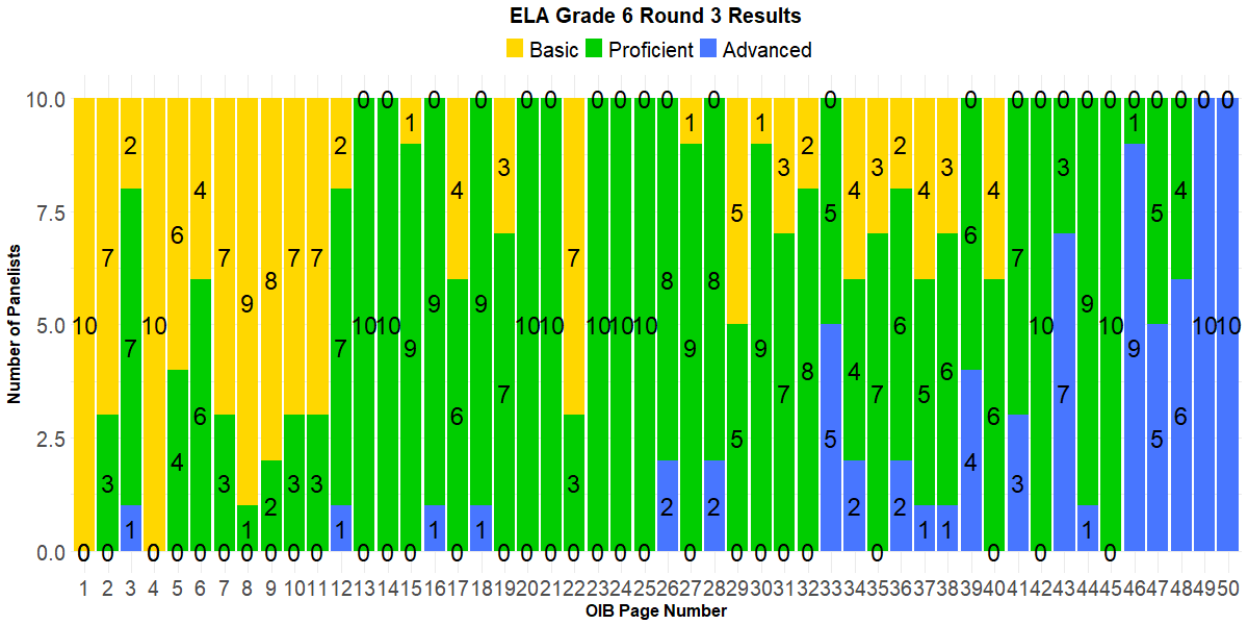


Figure 13. ELA Grade 7 Round 1 - Frequency of Panelist Judgments by Performance Level

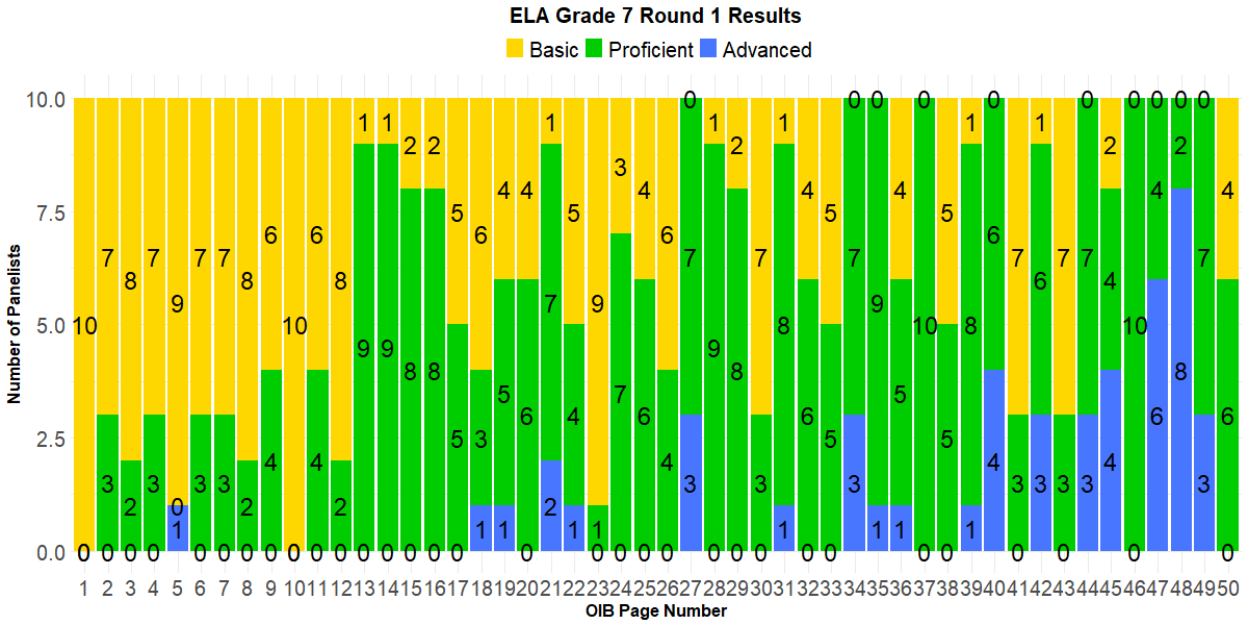


Figure 14. ELA Grade 7 Round 2 - Frequency of Panelist Judgments by Performance Level

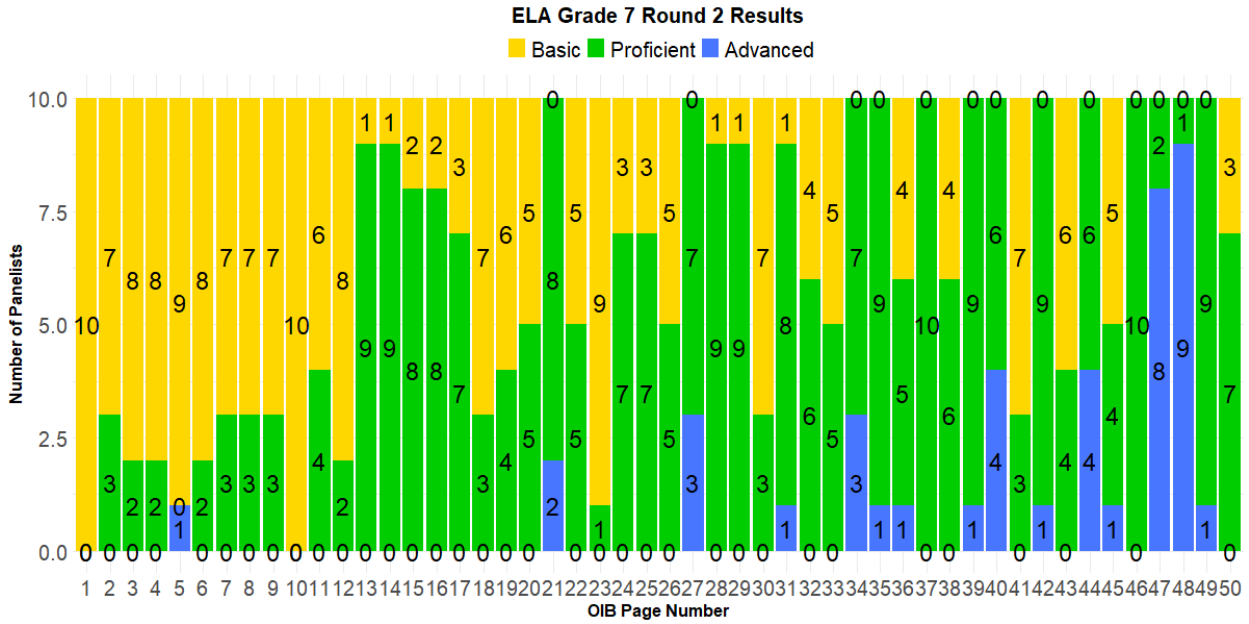


Figure 15. ELA Grade 7 Round 3 - Frequency of Panelist Judgments by Performance Level

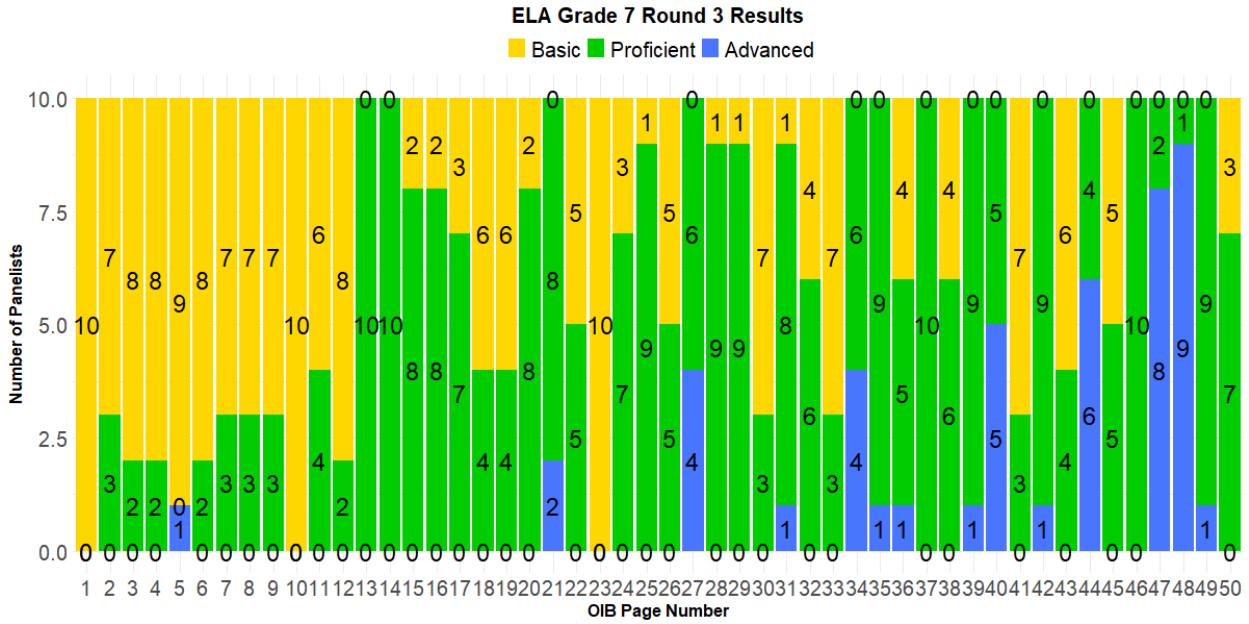


Figure 16. ELA Grade 8 Round 1 - Frequency of Panelist Judgments by Performance Level

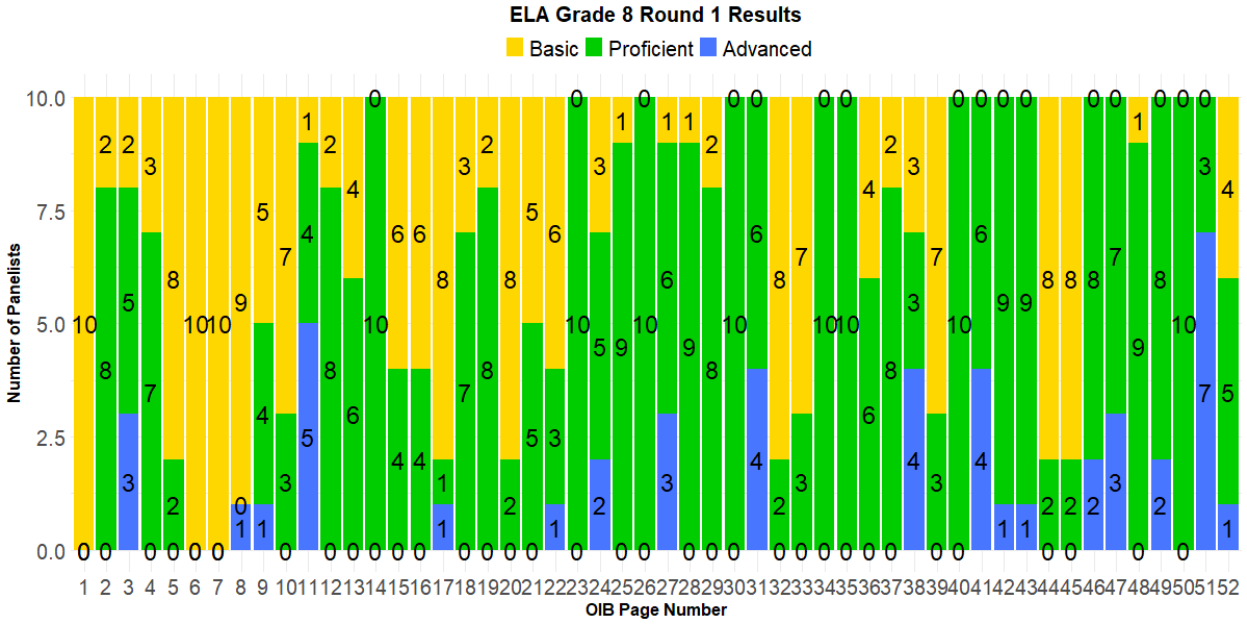


Figure 17. ELA Grade 8 Round 2 - Frequency of Panelist Judgments by Performance Level

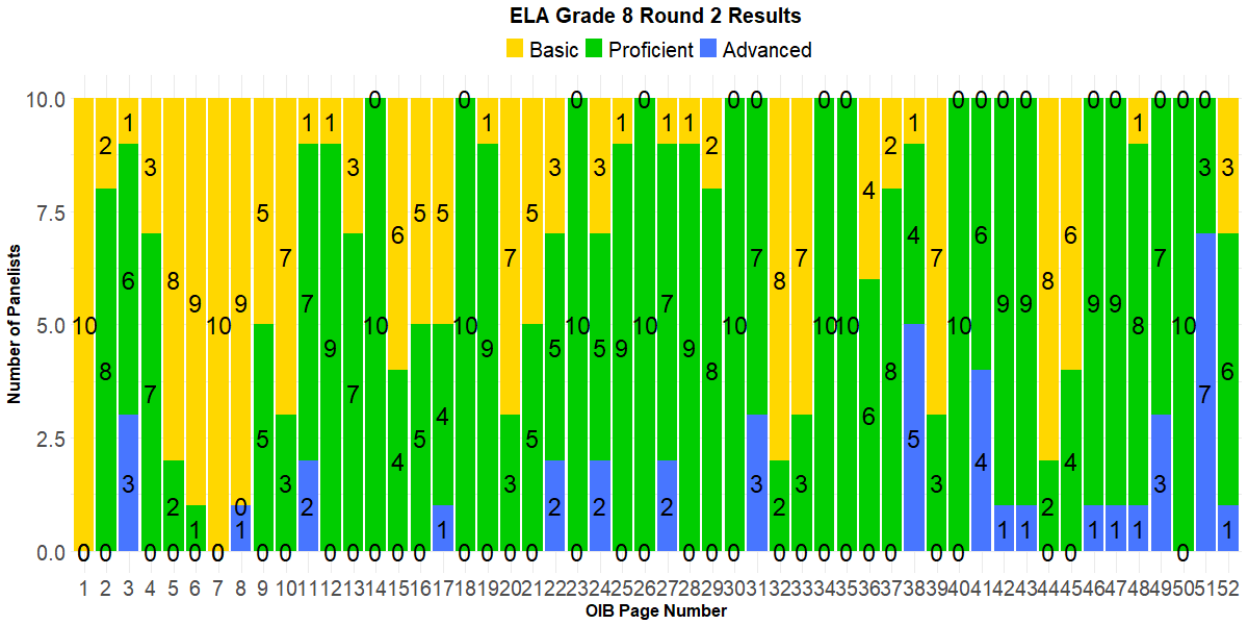


Figure 18. ELA Grade 8 Round 3 - Frequency of Panelist Judgments by Performance Level

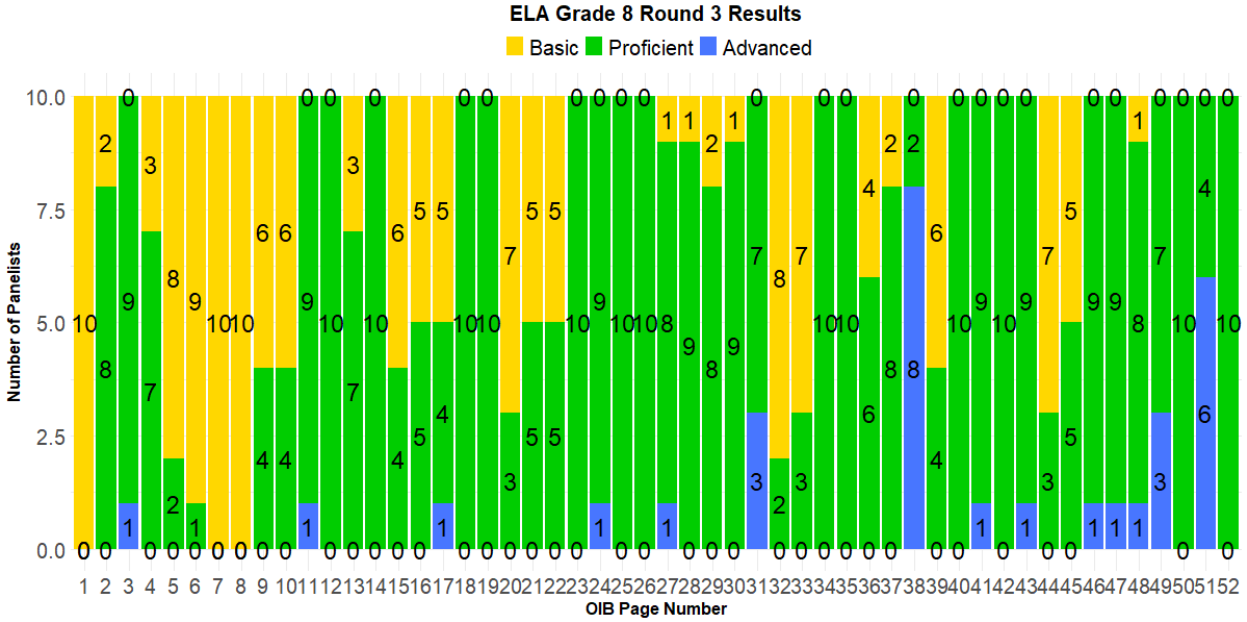


Figure 19. Mathematics Grade 3 Round 1 - Frequency of Panelist Judgments by Performance Level

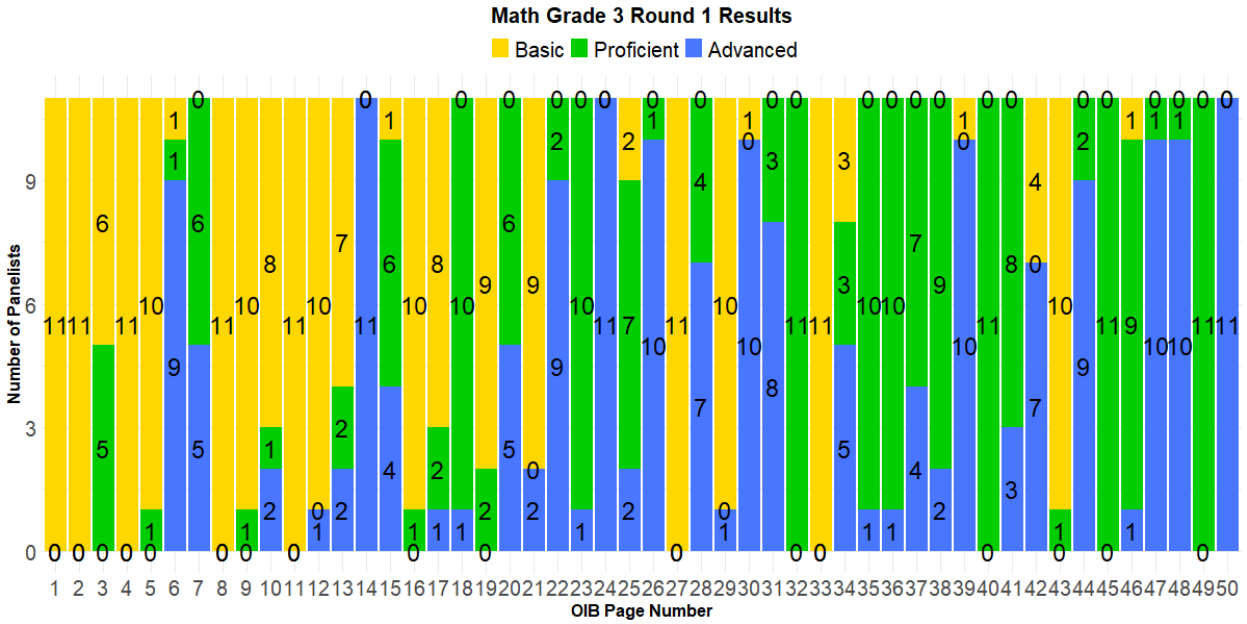


Figure 20. Mathematics Grade 3 Round 2 - Frequency of Panelist Judgments by Performance Level

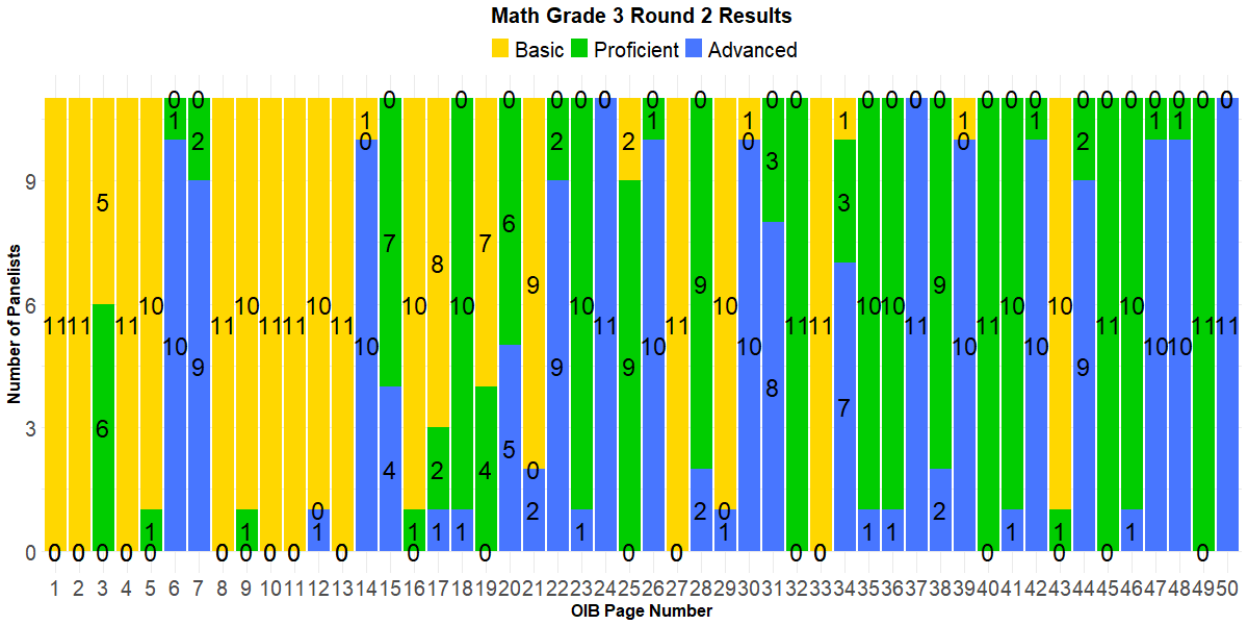


Figure 21. Mathematics Grade 3 Round 3 - Frequency of Panelist Judgments by Performance Level

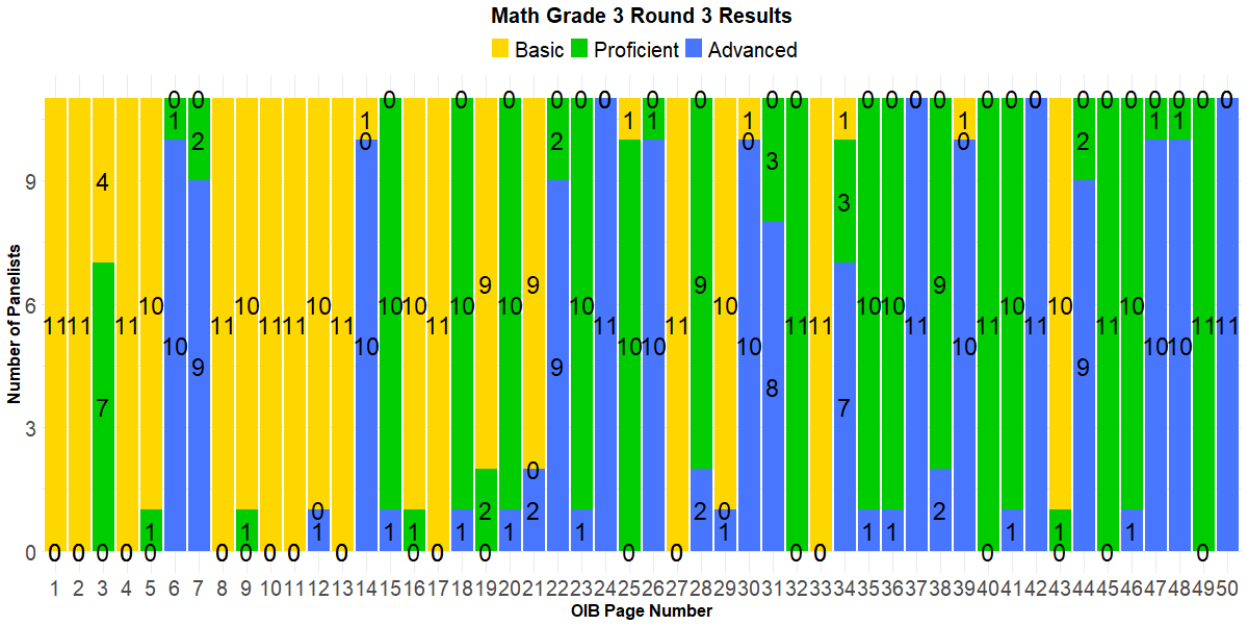


Figure 22. Mathematics Grade 4 Round 1 - Frequency of Panelist Judgments by Performance Level

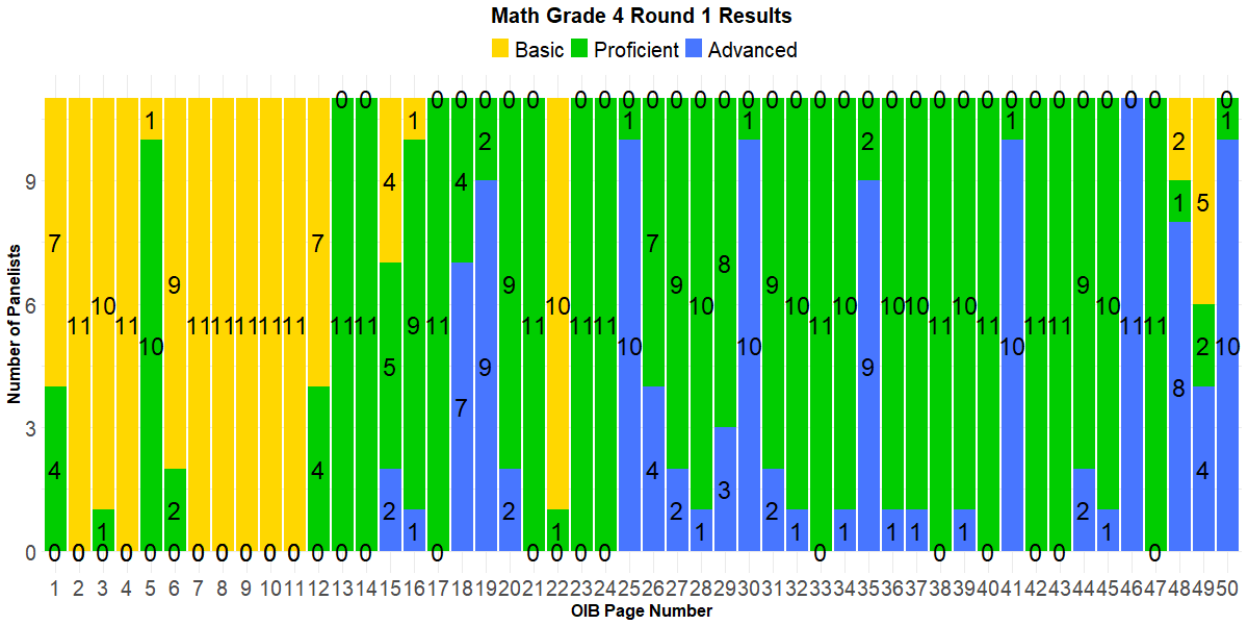


Figure 23. Mathematics Grade 4 Round 2 - Frequency of Panelist Judgments by Performance Level

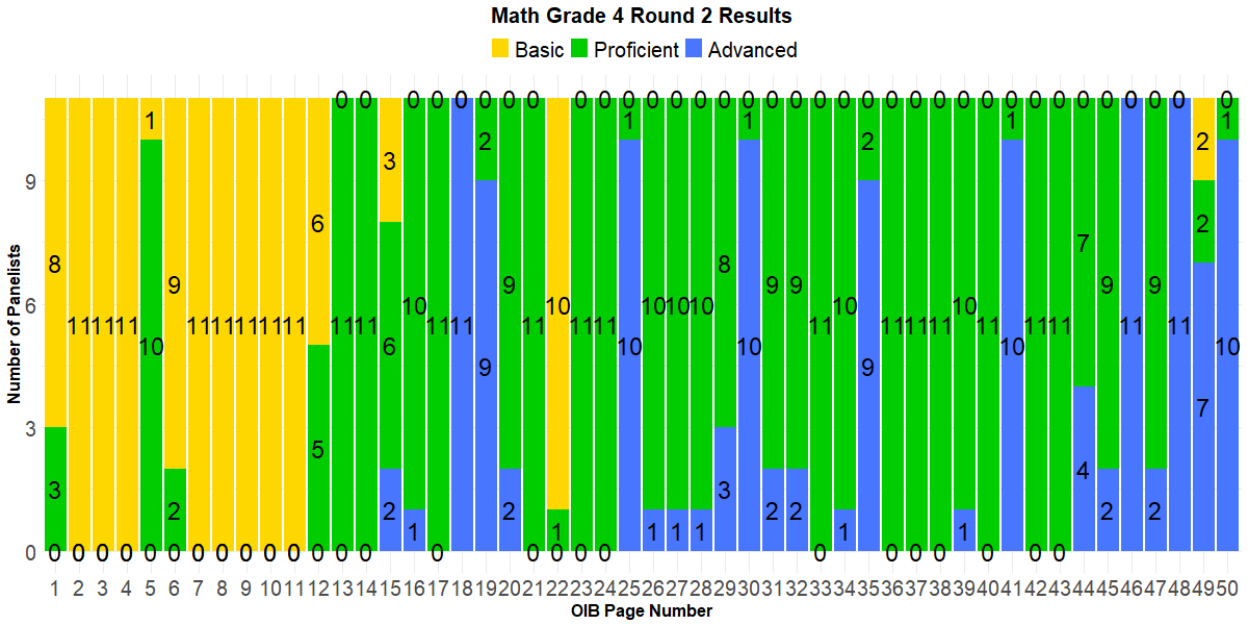


Figure 24. Mathematics Grade 4 Round 3 - Frequency of Panelist Judgments by Performance Level

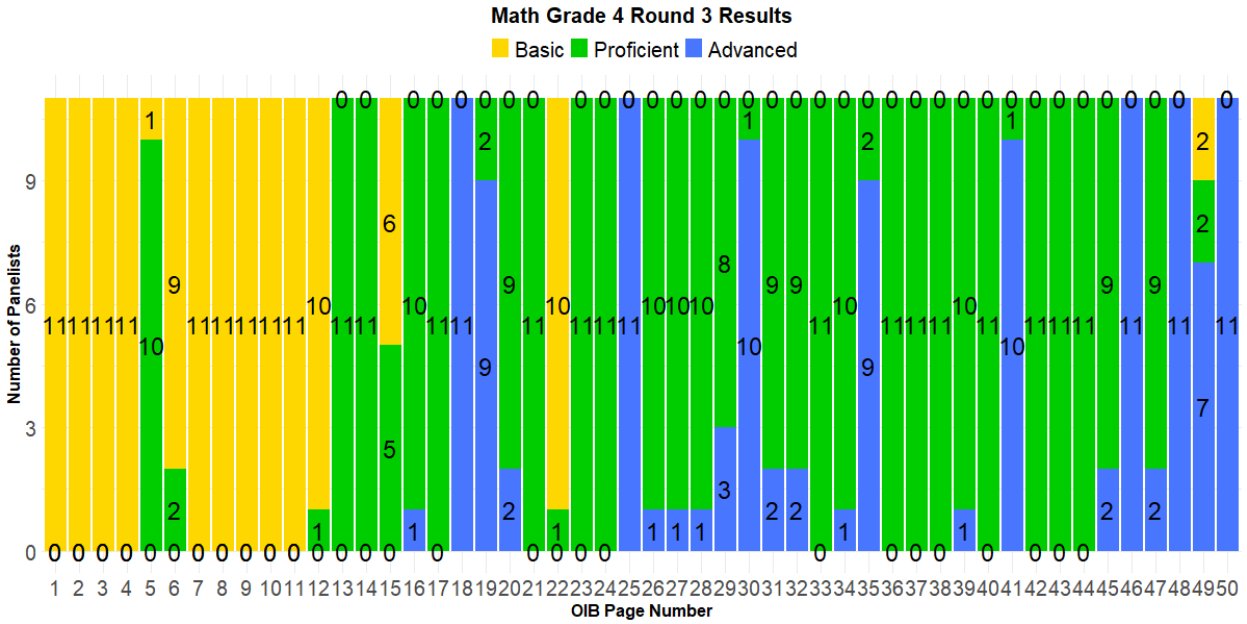


Figure 25. Mathematics Grade 5 Round 1 - Frequency of Panelist Judgments by Performance Level

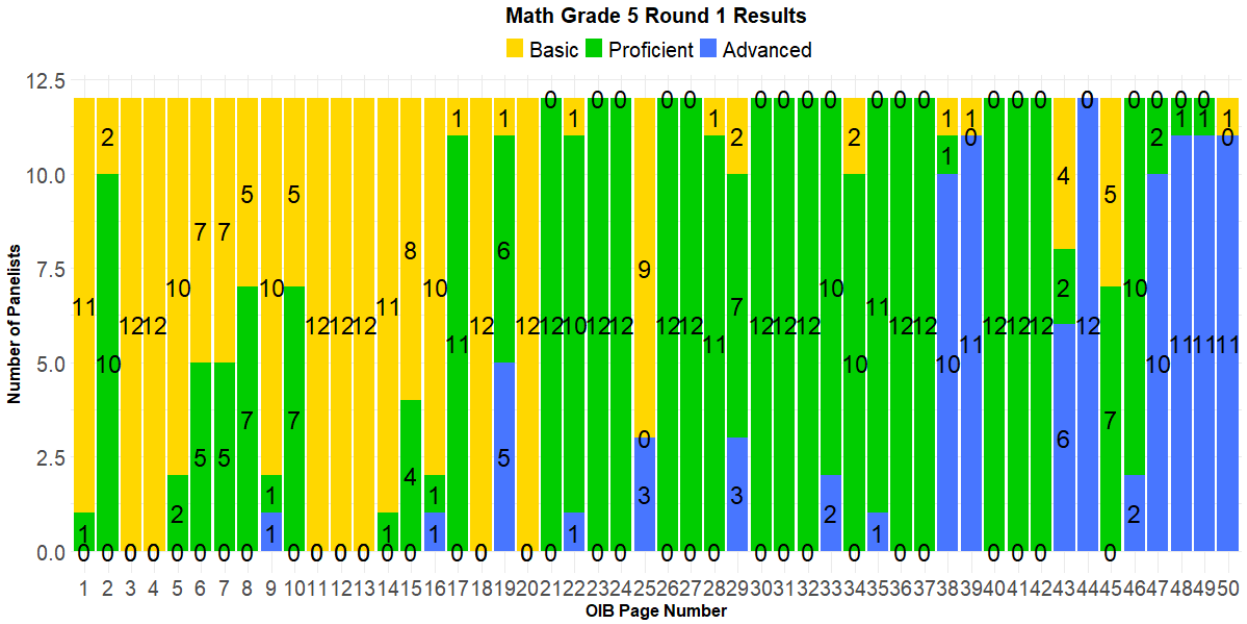


Figure 26. Mathematics Grade 5 Round 2 - Frequency of Panelist Judgments by Performance Level

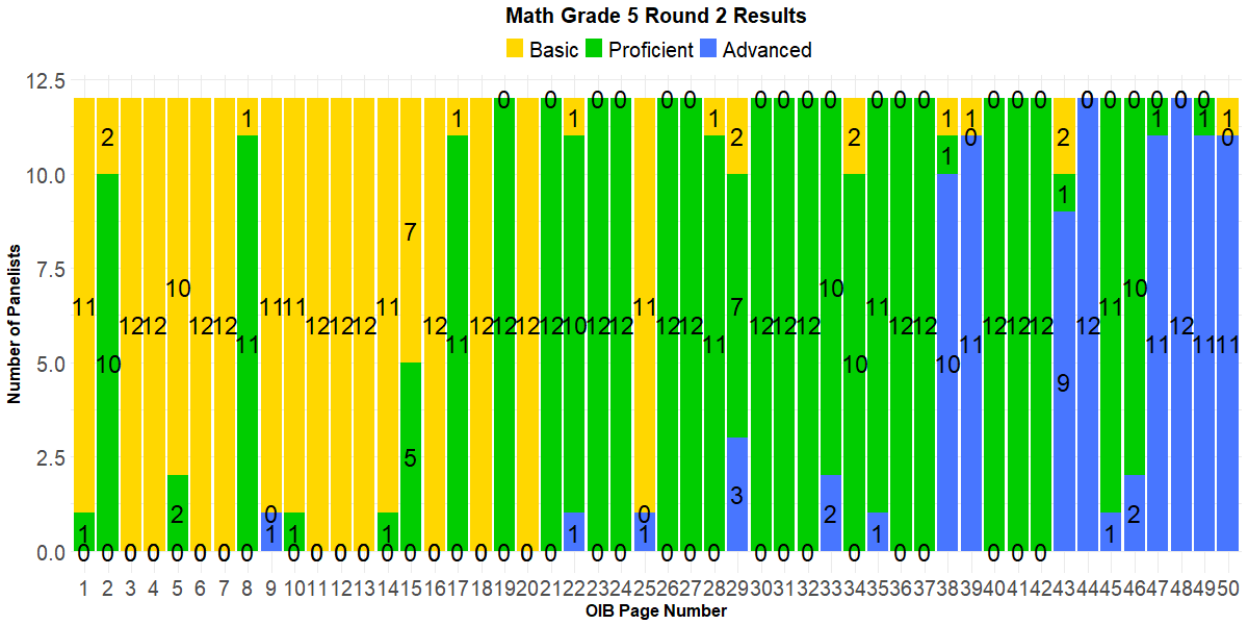


Figure 27. Mathematics Grade 5 Round 3 - Frequency of Panelist Judgments by Performance Level

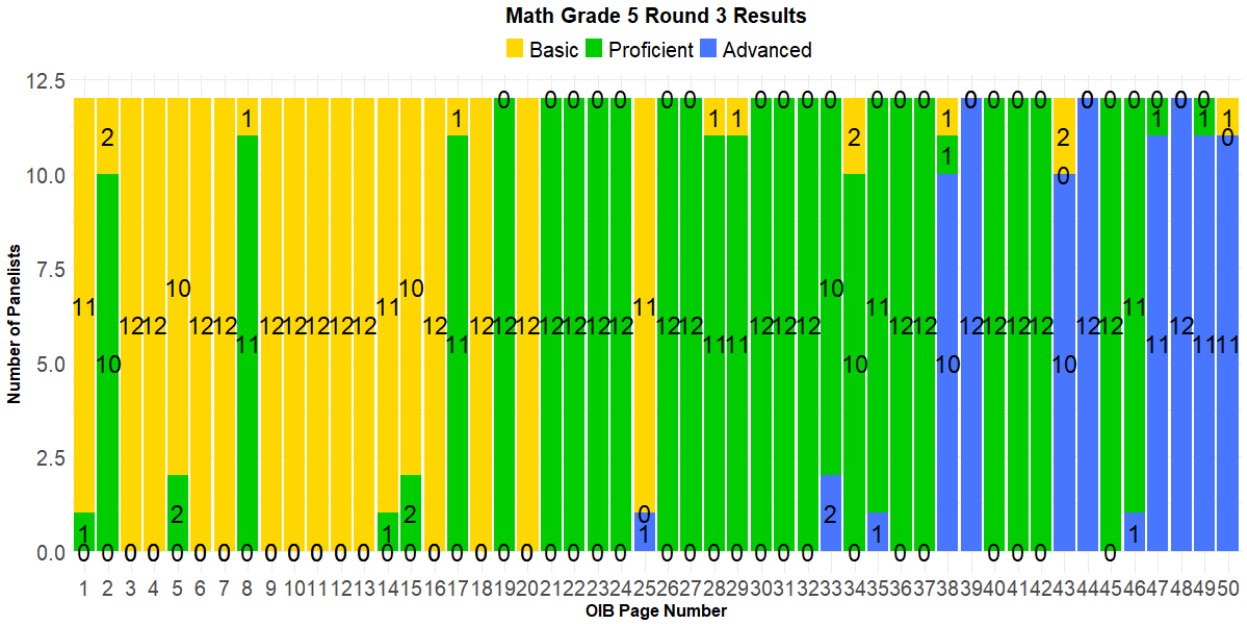


Figure 28. Mathematics Grade 6 Round 1 - Frequency of Panelist Judgments by Performance Level

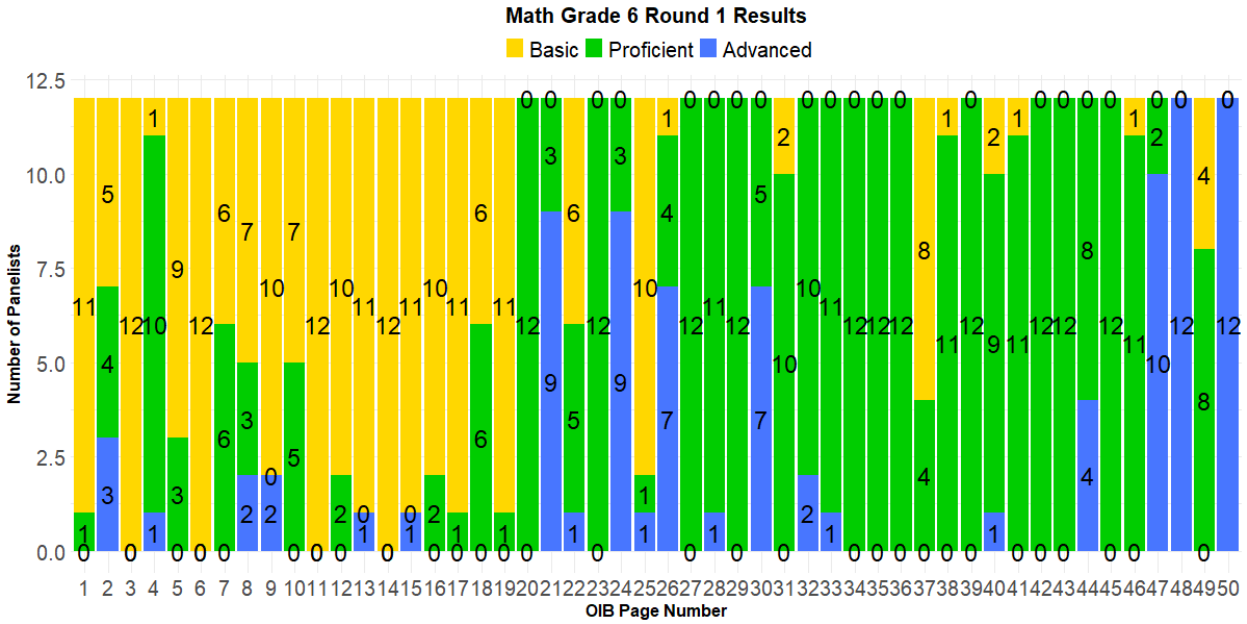


Figure 29. Mathematics Grade 6 Round 2 - Frequency of Panelist Judgments by Performance Level

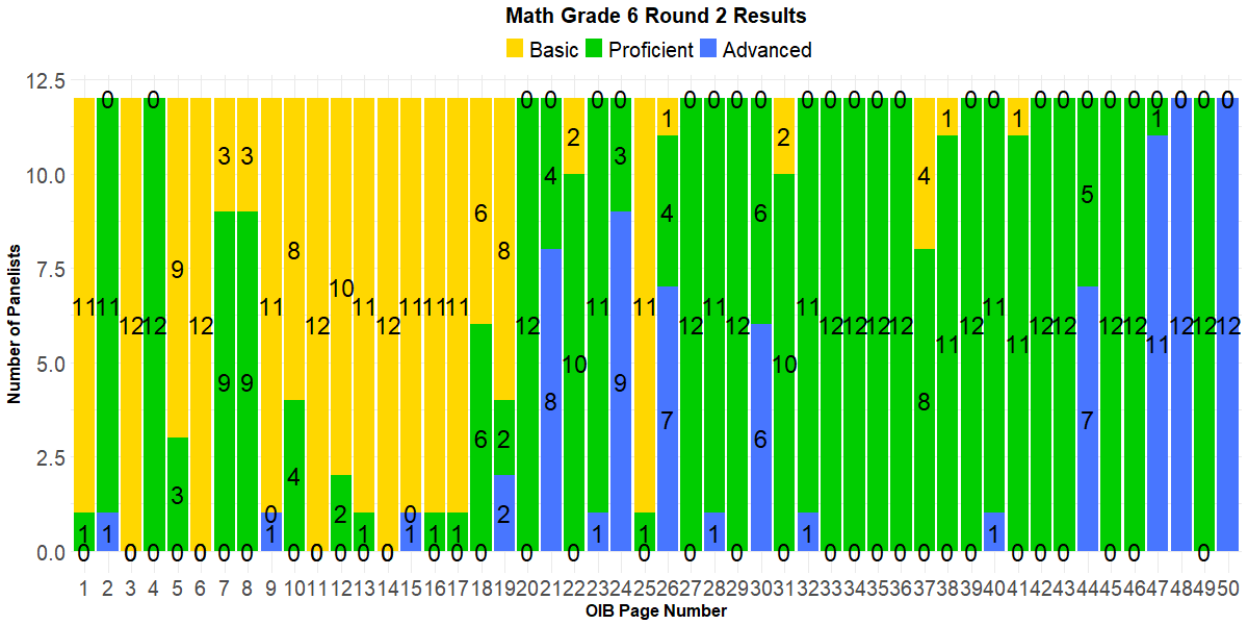


Figure 30. Mathematics Grade 6 Round 3 - Frequency of Panelist Judgments by Performance Level

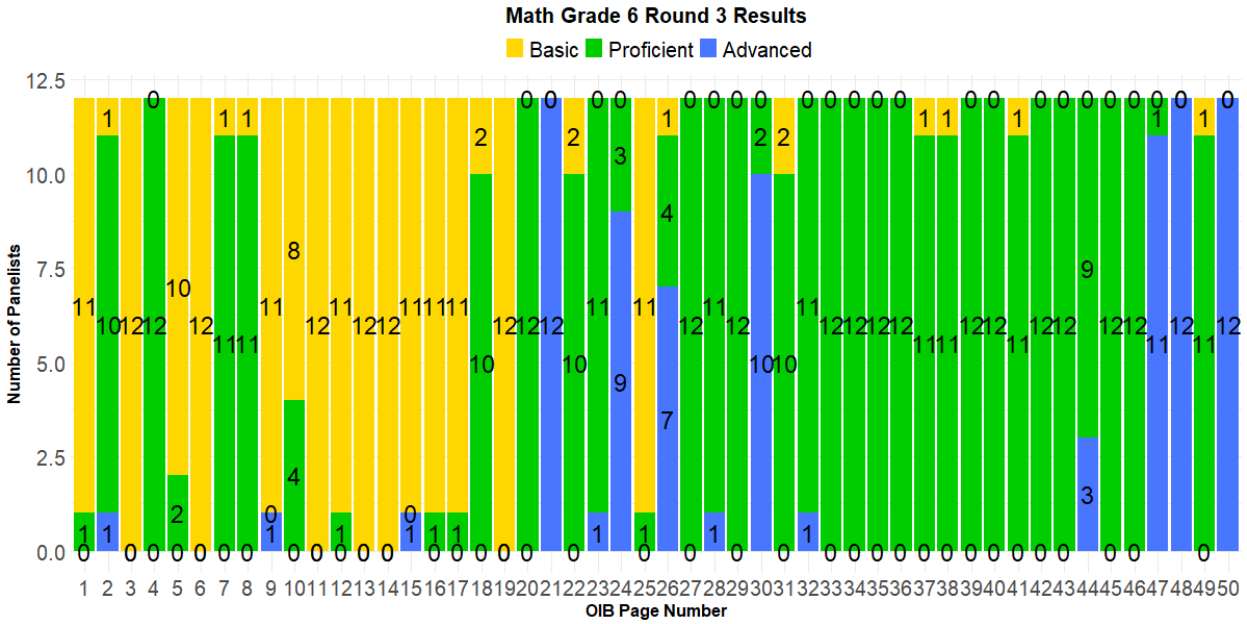


Figure 31. Mathematics Grade 7 Round 1 - Frequency of Panelist Judgments by Performance Level

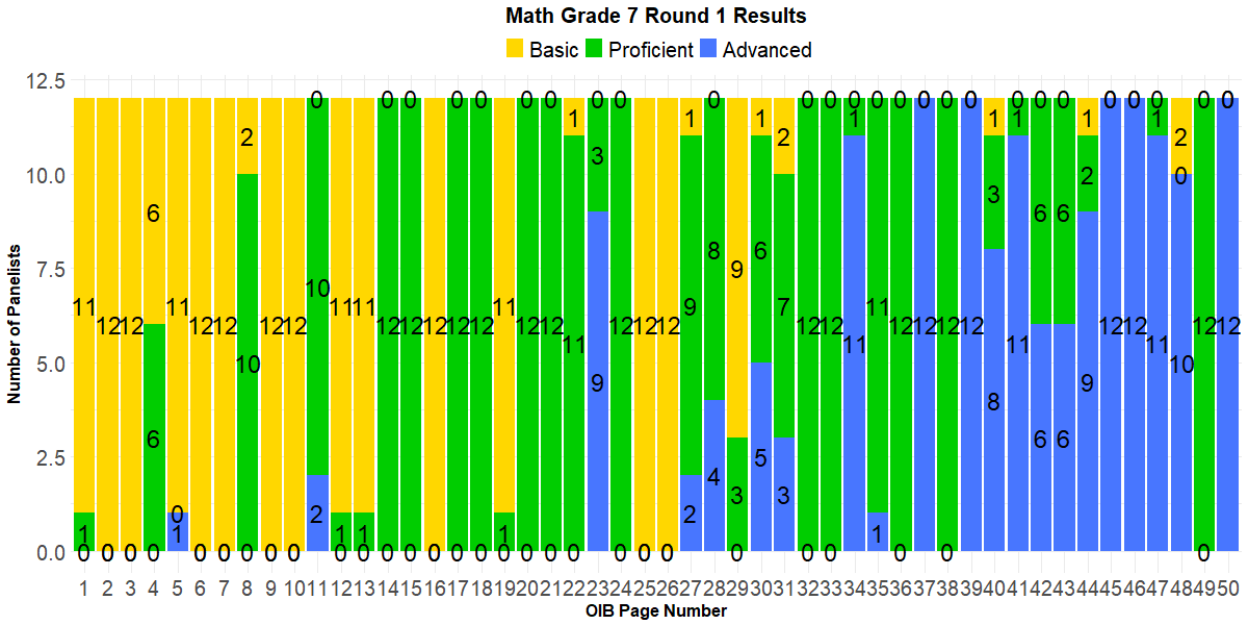


Figure 32. Mathematics Grade 7 Round 2 - Frequency of Panelist Judgments by Performance Level

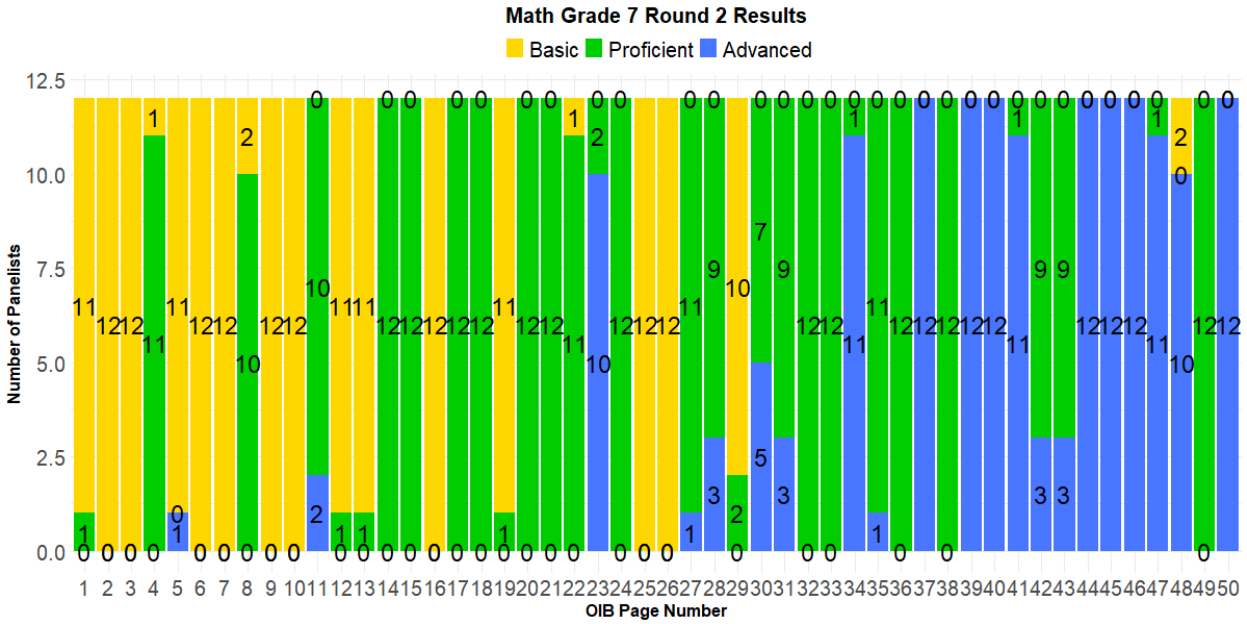


Figure 33. Mathematics Grade 7 Round 3 - Frequency of Panelist Judgments by Performance Level

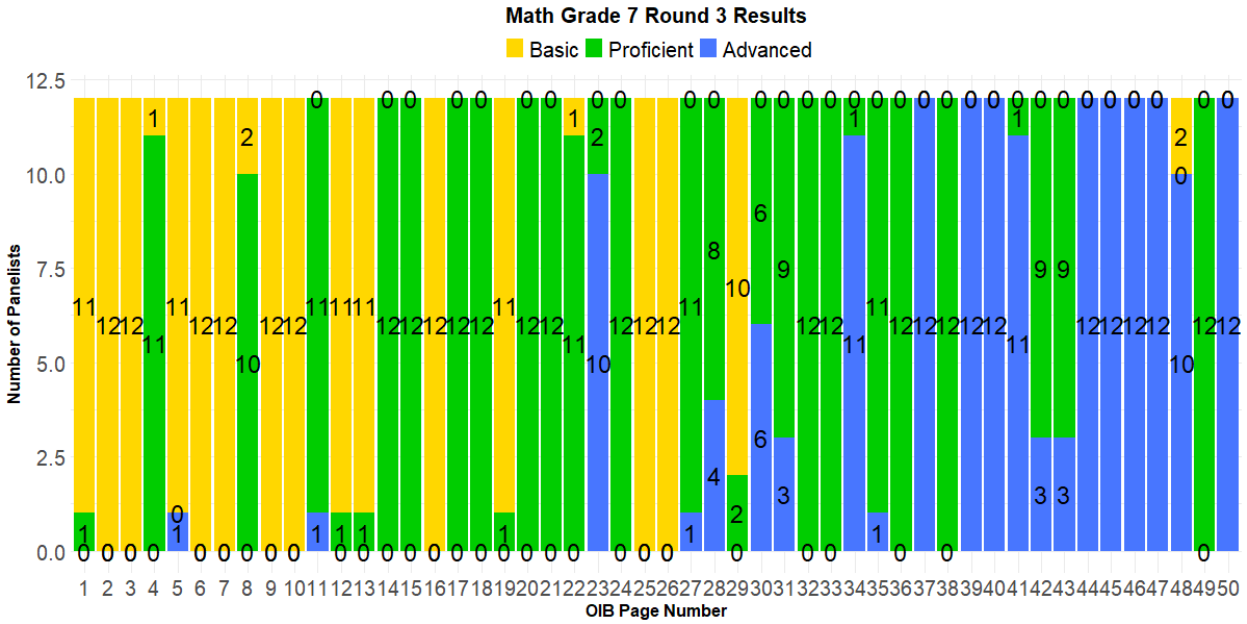


Figure 34. Mathematics Grade 8 Round 1 - Frequency of Panelist Judgments by Performance Level

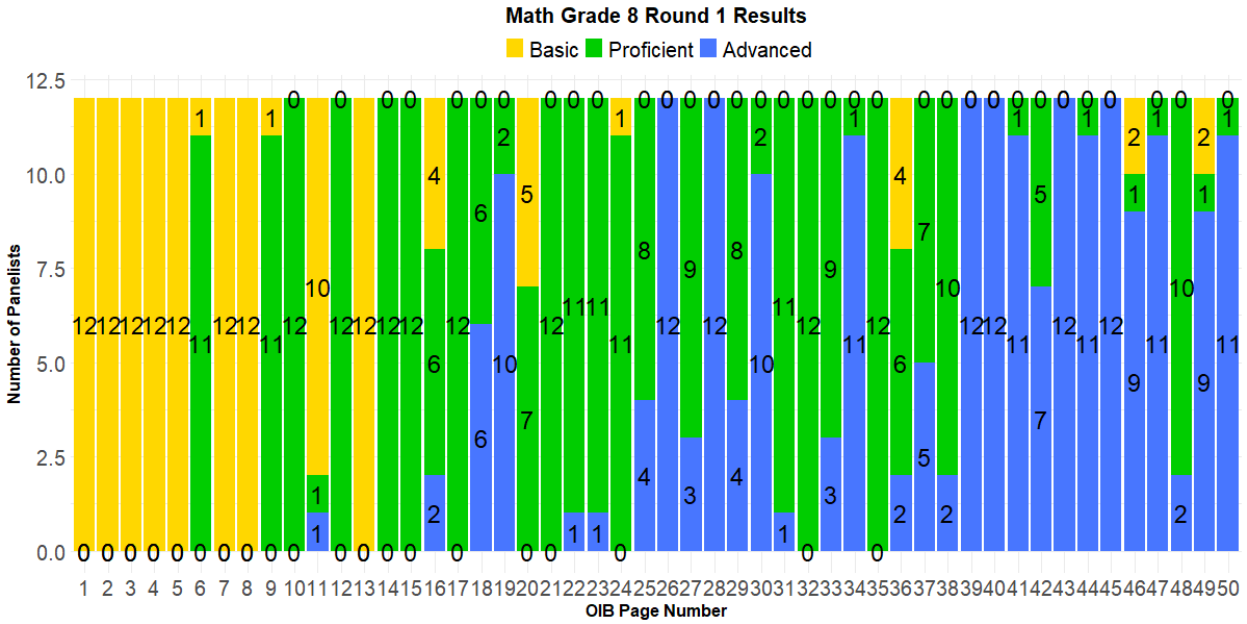


Figure 35. Mathematics Grade 8 Round 2 - Frequency of Panelist Judgments by Performance Level

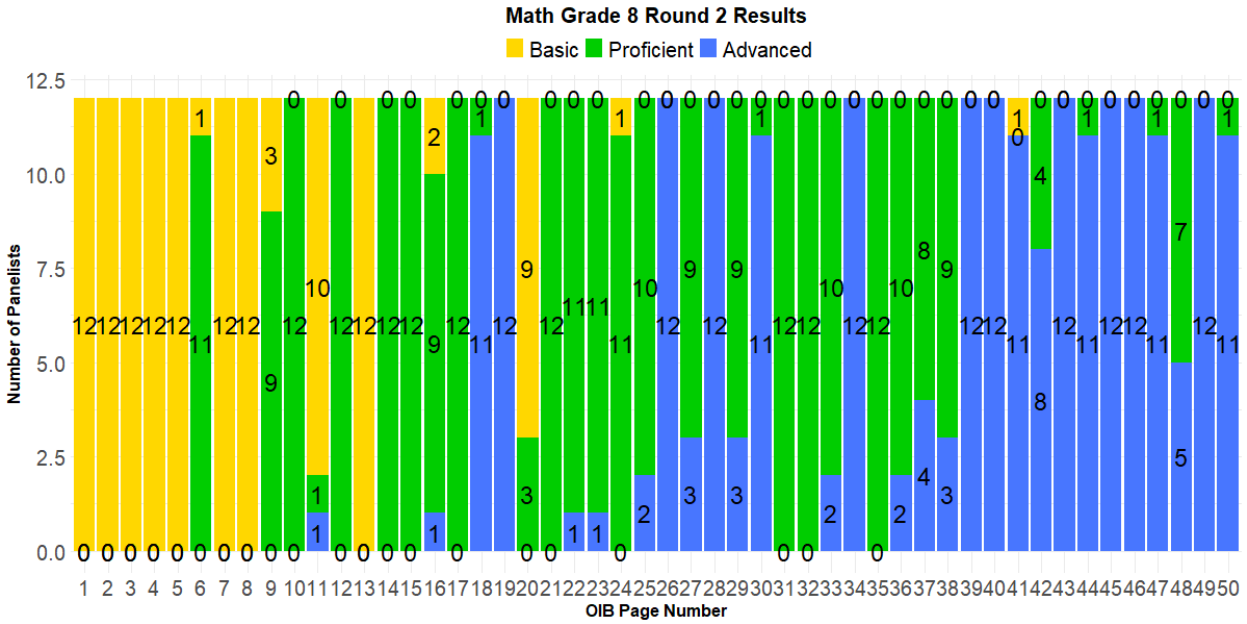
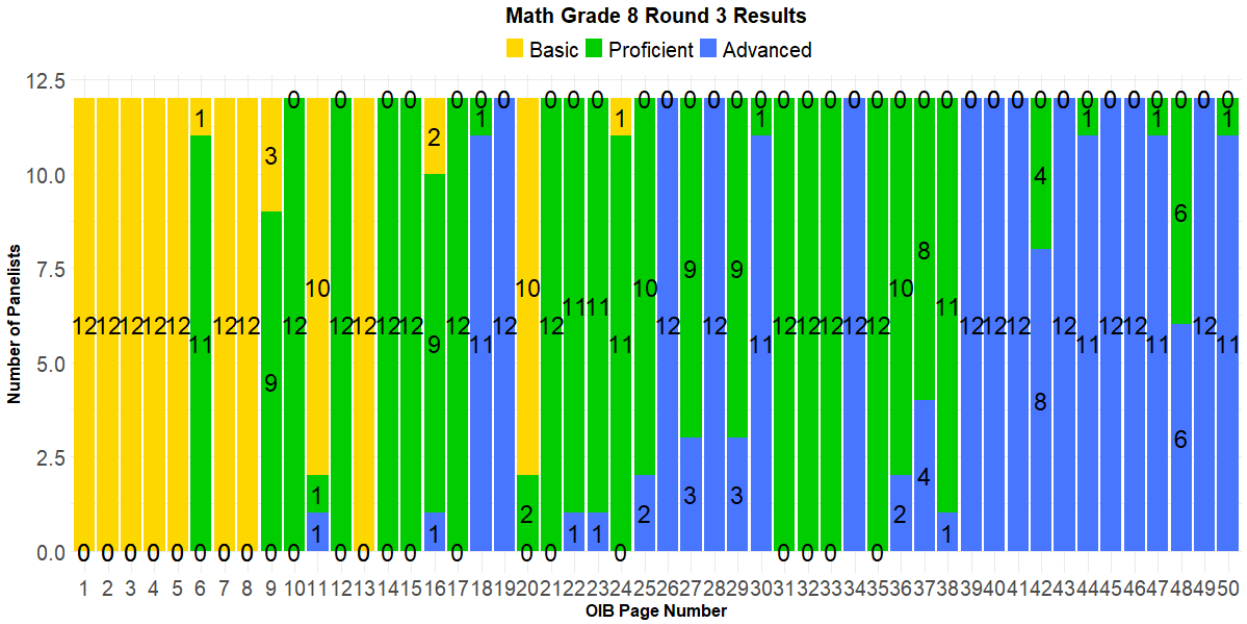


Figure 36. Mathematics Grade 8 Round 3 - Frequency of Panelist Judgments by Performance Level



APPENDIX—K
STANDARD-SETTING EVALUATION SURVEY & RESULTS

Table 1. ELA Panel Grades 3 & 4 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	1	10
2	I understood the procedures we followed to set standards.	0	0	0	1	10
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	0	11
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	1	10
5	I am confident about my understanding of this standard setting process.	0	0	0	2	9
6	The workshop facilitator explained things clearly to us.	0	0	0	0	11
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	0	11
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	1	10
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	0	11
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	1	10
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	0	6	5
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	0	0	0	4	7
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item response demands to PLDs.	0	0	0	4	7
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	1	10
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	2	9
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	1	10
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	0	1	10
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	0	1	10
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for ELA GRADE 3, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	8	3	0	0	0
20	Based on the impact data results for ELA GRADE 3, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	1	3	7	0	0
21	Based on the impact data results for ELA GRADE 3, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	9	2	0	0
22	Based on the impact data results for ELA GRADE 3, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	9	2	0	0
23	Based on the impact data results for ELA GRADE 4, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	10	1	0	0	0
24	Based on the impact data results for ELA GRADE 4, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	1	1	9	0	0
25	Based on the impact data results for ELA GRADE 4, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	7	4	0	0
26	Based on the impact data results for ELA GRADE 4, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	9	2	0	0

Table 2. ELA Panel Grades 3 & 4 – Text Responses for Open-ended Questions

Question #	Question Text	Response
27	Please indicate any parts of the standard setting training and process that we should improve.	I think that maybe there could be a better understanding of what the final goal is in the beginning before round 1. I wasn't fully understanding the final goal until after round 1.
		There were several PLDs that were too closely aligned that made it tricky to decipher which PLD to decide on. In our group we went back and forth between several in both 3rd and 4th grade ELA. I would recommend more clearly stating some of those PLDs to separate them more. For example, some of the PLDs only differed by "identify" vs. "find." If the PLDs stay as is, I would recommend adding the "Assessment Words" sheet to the PDF file of the PLDs for teachers to reference. I would also clarify what the difference is between "identify" and "find."
		Standards should be clearer on the few standards that require an opinion.
		This was my first time doing this and it was very well planned, and the instructor was a great help answering any questions that arose.
		Before beginning the workshop, I felt small and unqualified to be here. After the training, I can confidently say I felt equipped with the tools needed to get the job done. In the summarizing standard on 3rd grade, it does not state "summary" in the PLD Advanced. After discussion, we feel like it' s probably implied but maybe we could look at that PLD again and possibly add in the summary expectation.
		The first day is really long and overwhelming. I feel that some of it could be condensed down a bit and the room facilitators could explain the process in the room so we can go at our own pace.
		I only have one suggestion, and it is for seating placement. In the meeting we had a table of four. My chair placement had my back to the projector. I would recommend considering that for any future training sessions. I had to turn around to see the projector.
		The amount of down time. the waiting around tiring.
		I think a flowchart, or a pyramid diagram or some sort of visual aid would be helpful in knowing how to go about making decisions on items that di dn't perfectly align with the PLD. Do we place more weight on staying as close to the exact wording on the PLD? Do we consider text complexity/answer choices? Do we consider what we believe most students in the grade level are capable of doing/understanding?
		Having to discuss your own opinions about each standard was highly intimidating. People are not understanding even if they ar e told that it is ok to disagree. Teachers in particular are hard to carry out a discussion platform with because everyone thinks they are right and are not very understanding when someone doesn't agree. I don't know how to make it less intimidating but that would be my recommendation for the next standard setting process.
		Round 1 is long and tedious with needing to figure of KSAs and PLDs for all items. I am not sure how it would work with time, but perhaps splitting round 1 work into smaller chunks/sections would help with item fatigue. Some of the later items in the OIB require more thought (either due to item complexity or trying to comprehend why students found these specific items the most difficult) and after dissecting the other questions apart to determine KSAs and PLD, some of those later OIB items did not get the focus or attention they deserved in round 1.
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	I feel like having group discussions to talk out the PLDs and our opinions on where test items fell was helpful. I also think it was beneficial that teachers from across the state, grade levels, and content was helpful to get a clear and full-picture response. I enjoyed getting the graph from psychometrics to get a clearer picture and understanding of how our group was deciding on test question items. It was also beneficial to have the "Assessment Words" form when making our judgments on test items questions and looking at the PLDs. Several of the PLDs are closely related so reflecting on the "Assessment Words" sheet was beneficial.
		Most of the PLD's were clear and easy to tell the difference between levels.
		I believe being able to discuss with peers after each round was very helpful.
		The training was awesome. The discussion in between rounds was very valuable.
		The discussions after the rounds were very informative and I enjoyed listening to other teacher's thoughts and ideas. Our facilitator Jessica, was very informative and it was nice to work with her.
		I thought it was mapped out well. We stayed on task and followed the schedule pretty closely. I like having an agenda to follow.
		I loved the process and learning about how this works. I loved getting the opportunity to be part of this and learn. I feel that my input along with other teachers input is valuable.
		I appreciated working to make my own judgements first and then having two opportunities to discuss items.
		The training was beneficial I felt the way things were explained and the documents that we provided for me to use helped me to understand and fulfill the process to my best of abilities.

continued

Question #	Question Text	Response
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	The ability to debrief with fellow colleagues between rounds really helped me understand the way others viewed specific items on interpreted the PLDs.
29	Please note any other feedback you would like us to consider.	Thank you for being very generous hosts. I have never eaten so much in my life. You spoiled us!
		Treating yourself to a job well done!
		I really enjoyed the opportunity to help set the standards.
		This was an incredible learning experience! I will be honest. I signed up for this because I saw "stipend" and "travel accommodations" in the email. I did not have a clue what to expect. After my 4 days here though, I can honestly say I am so happy I came. It was really cool to see a piece of the puzzle behind the scenes and be a part of it. In addition to that, I truly believe using the PLDs this week will have me using them regularly in the classroom and really help me understand discrepancies in some of the complexity of learning materials in the classroom.
		I would love to participate in these types of meetings, data gathering more often. It has helped me as a teacher with my knowledge and understanding of the standards and has given me ideas that I will be using in my classroom this year.
		The 3rd grade PLDs were more clear on distinguishing between the proficiency levels compared to 4th grade. It was easier to align test items to the PLDs with the 3rd grade set. I am not sure if this is something to consider before PLDs are approved.

Table 3. ELA Panel Grades 5 & 6 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	2	8
2	I understood the procedures we followed to set standards.	0	0	0	3	7
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	2	8
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	5	5
5	I am confident about my understanding of this standard setting process.	0	0	0	4	6
6	The workshop facilitator explained things clearly to us.	0	0	0	1	9
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	2	8
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	2	8
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	1	9
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	3	7
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	1	3	6
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	0	0	0	2	8
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item response demands to PLDs.	0	0	0	4	6
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	1	9
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	1	9
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	2	8
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	0	4	6
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	0	3	7
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for ELA GRADE 5, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	3	6	0	1	0

continued

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
20	Based on the impact data results for ELA GRADE 5, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	2	4	4	0	0
21	Based on the impact data results for ELA GRADE 5, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	7	3	0	0
22	Based on the impact data results for ELA GRADE 5, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	3	7	0	0	0
23	Based on the impact data results for ELA GRADE 6, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	8	1	0	1	0
24	Based on the impact data results for ELA GRADE 6, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	1	3	6	0	0
25	Based on the impact data results for ELA GRADE 6, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	8	2	0	0
26	Based on the impact data results for ELA GRADE 6, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	2	8	0	0

Table 4. ELA Panel Grades 5 & 6 – Text Responses for Open-ended Questions

Question #	Question Text	Response
27	Please indicate any parts of the standard setting training and process that we should improve.	I would have appreciated being assigned to the specific grade-level band in which I was familiar. I was moved up the first day of the workshop, which added an additional layer of stress in being unfamiliar with both grades of which I participated.
		I think that a little bit more time should be allotted to DAY 1 of the standard setting process. I felt a little bit "rushed through" learning all of the new vocabulary terms & their meaning. I did not feel adequately prepared to begin "Round One" on the first day. There was ALOT of new information to mentally process and retain before "Round One."
		I liked this step in the process, I wish the PLD writing had as much training as this had and had a vertical articulation as well. I feel like the PLDs are unnecessarily flawed and inconsistent. I think there is a lot of room for improvement there. I really enjoyed this process otherwise. I loved the discussions and I felt like it is a solid process.
		I would have liked to have a conversation about our answers with my table as well as the room
		maybe a little more time explaining the initial process on day 1
		I liked how it was broken down. I think discussions allowed us to revisit the PLD alignment. The part I would change would be only visiting questions with a wide range of discrepancy.
		Table groups should be shuffled daily to provide for alternative perspectives in the small table conversations and discussion s that inevitably crop up between rounds.
		I think that we shouldn't have known about the OIB questions being in order until after the first round and the colored bands for data until the last round. Sometimes I felt pressured to make my judgements align with expectations. I would like time to discuss more of the questions. I know time is an issue, but I feel it would be helpful.
		Some PLDs were almost identical to others and resulted in lengthy discussions. Other wording could have been used so the differences were more apparent.
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	I thought the three rounds and discussions were adequate. It gave my group plenty of opportunity to discuss and rethink our choices, and I felt my final decisions were on target.
		I do feel that our workshop facilitator did a great job helping us prepare for tasks and keeping panelists on task.
		The people, the amount of time it took, the focus on training, and the inclusion of round discussions.
		The training and discussions
		discussion

continued

Question #	Question Text	Response
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	more understanding as we went through the process. The facilitator was amazing and helpful. gave us great knowledge
		I thought the rounds work really well.
		The general format (individual, analysis, discussion, repeat) was very effective. It allowed me to clarify items where needed and provided other viewpoints for items I had felt confident about. It also allowed grade-level experts to clarify items for those who did not teach that grade.
		I thought the process worked very well. Our facilitator did an amazing job of keeping us moving along and explaining everyth ing. I liked the size of the group and the ease with which we were able to communicate and collaborate. I felt that the process was very supportive.
		Everything worked well except as noted in #27
29	Please note any other feedback you would like us to consider.	I enjoyed the facility and thought the staff did an excellent job hosting us. I also thought it was a fairly smooth 4 days of work. Everyone on the Cognia and OSDE teams worked hard and in tandem to ensure we had everything we needed to do our week efficie ntly/effectively.
		Thank you for the opportunity to contribute knowledge and teaching experience to standard setting scores cuts this school yea r. It is my hope that our panelist group helps student learning to improve in some way with this exercise.
		It was fun and insightful
		I enjoyed it and would love to attend more!
		I felt the meeting really helped me familiarize myself with the standards of 5th grade.
		I am concerned that some people are participating in too many steps of the process. One individual in my group will have participated in 3 different elements of this process. Since these are very small groups, I worry that this could cause some bias. While some overlapping participation is likely beneficial (particularly for vertical articulation), I am concerned about having some dominant voices heard too much. Other than that, I feel that this was a very enjoyable, interesting, and valuable experience.
		I enjoyed being a part of this process. I feel like it was very helpful. I would like to have updates on how the process is going as it moves forward (mostly because I am just curious). I am a bit worried about how the OSDE will use the data -(to prove that public school isn't working) and I would like to know that the data isn't being overly manipulated.
		You did an excellent job by involving and listening to teachers who are at the frontline of this education war!

Table 5. ELA Panel Grades 7 & 8 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	1	9
2	I understood the procedures we followed to set standards.	0	0	0	3	7
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	1	9
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	3	7
5	I am confident about my understanding of this standard setting process.	0	0	0	2	8
6	The workshop facilitator explained things clearly to us.	0	0	0	2	8
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	2	8
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	2	8
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	1	9
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	1	9
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	0	5	5
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	1	0	0	2	7
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item response demands to PLDs.	0	0	0	4	6
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	2	8
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	2	8

continued

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	2	8
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	0	1	9
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	0	1	9
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for ELA GRADE 7, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	5	4	0	1	0
20	Based on the impact data results for ELA GRADE 7, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	0	4	5	1	0
21	Based on the impact data results for ELA GRADE 7, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	10	0	0	0
22	Based on the impact data results for ELA GRADE 7, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	8	2	0	0
23	Based on the impact data results for ELA GRADE 8, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	2	8	0	0	0
24	Based on the impact data results for ELA GRADE 8, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	0	9	1	0	0
25	Based on the impact data results for ELA GRADE 8, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	9	1	0	0
26	Based on the impact data results for ELA GRADE 8, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	7	3	0	0

Table 6. ELA Panel Grades 7 & 8 – Text Responses for Open-ended Questions

Question #	Question Text	Response
27	Please indicate any parts of the standard setting training and process that we should improve.	Great job! Thank you!
		I think that the training and process went smoothly, and everything was presented well and thought out.
		Provide clarity on the thinking behind creating the PLDs when considering passage complexity and genre.
		Standard setting for the second-grade level went more smoothly than for the first-grade level, because I had a better understanding of how to navigate the OIB and provide KSAs more efficiently. It would have been helpful to see a couple of examples of what it might look like to complete the KSA, notes, and ID match before beginning to know how much or how little to write.
		Break the work into smaller parts to prevent fatigue
		none
		Maybe let people know about the details sooner. It is a little easier to plan childcare and similar with more notice.
		Clearly articulating the expectations of the participants during breaks and downtime. There were lots of times that down time was ambiguous about how long or what participants were supposed to do/be.
		The process was straightforward, so I don't have any suggestions for this one.
		n/a
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	Loved our facilitator; loved the immediate data provided to inform each step of the process.
		I feel like the process was really organized and everything went really well.
		It went well when we are able to discuss our reasoning behind the items. However, some felt like we all had to have the same result.
		The debrief rounds with the breakdown of the participant results was super helpful in determining which questions we needed to discuss further.
		Cognia was great. Food was good. Isolation from home distractions allowed many teachers to focus and provide valued input.
		small groups
		The discussions held after the data was processed was valuable. It confirmed some of my ideas while challenging others.
		I really enjoyed the PLDs as well as the discussions. I did not love the independent work time, but it was helpful to have done that front loading, so our discussions were more productive. I also liked that we had a space to add comments or suggestions on things outside the work of Standards Setting even if we did constantly say them aloud anyway.
		Hearing the expertise in the room was helpful to inform my own judgments.
		I felt like it went well.
29	Please note any other feedback you would like us to consider.	Learned a lot this week! Going to buy a book on psychometrics this week!
		I think everything went really well and I enjoyed the experience of being on the panel.
		The process overall was well thought out, and the Cognia and SDE team did a great job keeping us on track.
		Thank you for the invitation.
		The hours, being in the summer, were a little long. I realize there is a lot to include, but it is a long day, especially when driving to the site.
		N/A
		I think we need norms for the discussion process. #11: I understood the progressions but encountered some PLD definitions that were vague in relationship to the item.
		I know there needs to include a good mixture of stakeholders on the panel, but it might be beneficial to have a couple more current classroom teachers who are in the trenches. Maybe like a 70/30 ratio. Just a suggestion. We did have a good group, though.

Table 7. Mathematics Panel Grades 3 & 4 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	4	7
2	I understood the procedures we followed to set standards.	0	0	0	3	8
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	1	10
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	4	7
5	I am confident about my understanding of this standard setting process.	0	0	1	5	5
6	The workshop facilitator explained things clearly to us.	0	0	0	5	6
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	3	8
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	7	4
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	5	6
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	3	8
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	0	6	5
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	0	0	0	4	7
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item, and matching those item-response demands to PLDs.	0	0	0	5	6
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	2	9
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	2	9
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	2	9
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	0	5	6
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	0	5	6
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for Mathematics GRADE 3, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	2	9	0	0	0
20	Based on the impact data results for Mathematics GRADE 3, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	4	5	2	0	0
21	Based on the impact data results for Mathematics GRADE 3, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	5	6	0	0
22	Based on the impact data results for Mathematics GRADE 3, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	2	7	1	1	0
23	Based on the impact data results for Mathematics GRADE 4, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	7	4	0	0	0
24	Based on the impact data results for Mathematics GRADE 4, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	4	5	2	0	0
25	Based on the impact data results for Mathematics GRADE 4, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	5	6	0	0
26	Based on the impact data results for Mathematics GRADE 4, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	1	5	4	1	0

Table 8. Mathematics Panel Grades 3 & 4 – Text Responses for Open-ended Questions

Question #	Question Text	Responses
27	Please indicate any parts of the standard setting training and process that we should improve.	I enjoyed learning about this whole process. I think a good job was done by everyone to make us understand what was required of us.
		I feel like it would have been more beneficial to diversify the people in this group. The majority of people in this group were from small rural schools and I feel like it should have been a better mixture. (Title 1, larger school)
		The informant on the PLD we had on the 3rd round of 3rd grade was very informative and helpful, since she was in on the PLD conversations. I wish we had her present earlier in the rounds, that would have clarified some more things.
		I'll be honest, some of it was confusing, but as we dug deeper, I did understand it better. Day 4 I was a lot more confident than I was on Day 1.
		While I understand that it is important to have different people in each portion to help keep the results from skewing one way or another, I think that having the same person participate in 2/3 procedures would help with explaining. We had someone in our group who was on the item review and she was able to give helpful feedback (not specific, but helpful) during the process. Having several people in the room who had participated in multiple portions of the standards/item/PLD portion would have been even more beneficial. Quite a few of us were very frustrated with item quality and/or the PLD layout. I was concerned that I could not effectively evaluate and place some of the items due to this frustration.
		Once we began to use the materials the entire training became super clear.
		maybe a better explanation on how tests are rated after the rounds-
		The first day of training was long and repetitive.
		If a panel is divided on items after multiple discussions, the question should be thrown out.
		On Thursday after viewing final results, I would have liked a condensed recap of the Monday morning training and description of the process, next steps, etc. The bug in the standard setting toolkit needs to be fixed.
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	I liked being able to review the material as a group and listen to other people talk about their idea of what the answer is and the reason for it.
		I appreciated the sharing and "debate" in each round. I felt that the overall process worked well
		I believe you were very informative and gave all the information between the standards, PLD and OIB
		Everyone from Cognia to OSDE were very helpful when we did have questions. Our facilitator, Karen Whisler, was amazing, too! It really did go pretty well. It was a great experience for me!
		I thought the people from Cognia and the SDE were very knowledgeable and helpful with understanding the process and allowing us to really talk through the process. Karen was especially helpful to bring us back to the process at hand when we got sidetracked. The food and snacks were really varied and a welcome addition to the day!
		We had plenty of time and really good discussions about the PLDs/how the items aligned. I really appreciated the insights into the whole process.
		I am grateful to know the PLD will be made available for teachers for the next school year. It will help in thinking about lesson to determine if they are meeting the needs of the skill set.
		I understood our rating process well and it was easy to work with
		I liked being part of the process and learning about the PLD and how the assessment is scored.
		The discussion part was super helpful for clarity. It was great to have mix of different grade levels to appreciate different perspectives.
		The ID matching process and use of the standard setting toolkit was a good concept.
29	Please note any other feedback you would like us to consider.	It was very helpful to have SDE and Breanne here to explain and answer questions that we needed. Our facilitator, Karen, did a wonderful job of politely and patiently getting everyone back on task and recapping the discussion. She was really good at taking our questions and finding the correct person to ask to answer that question.
		Thank you for this informative
		trying to hear how our rating impact the students finial score was foggy
		I did not feel like there was equal "air time" given to each person on the committee to speak. There was a lot of interruption and being talked over.

Table 9. Mathematics Panel Grades 5 & 6 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	0	12
2	I understood the procedures we followed to set standards.	0	0	0	0	12
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	0	12
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	2	10
5	I am confident about my understanding of this standard setting process.	0	0	0	3	9
6	The workshop facilitator explained things clearly to us.	0	0	0	0	12
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	0	12
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	0	12
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	0	12
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	0	12
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	0	4	8
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	0	0	0	2	10
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item and matching those item-response demands to PLDs.	0	0	0	2	10
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	1	11
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	0	12
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	1	11
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	1	0	11
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	1	0	11
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for Mathematics GRADE 5, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	8	3	0	1	0
20	Based on the impact data results for Mathematics GRADE 5, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	6	5	0	1	0
21	Based on the impact data results for Mathematics GRADE 5, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	3	8	1	0
22	Based on the impact data results for Mathematics GRADE 5, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	9	2	1	0
23	Based on the impact data results for Mathematics GRADE 6, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	10	1	0	1	0
24	Based on the impact data results for Mathematics GRADE 6, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	6	3	2	1	0
25	Based on the impact data results for Mathematics GRADE 6, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	4	7	1	0
26	Based on the impact data results for Mathematics GRADE 6, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	3	8	1	0

Table 10. Mathematics Panel Grades 5 & 6 – Text Responses for Open-ended Questions

Question #	Question Text	Responses
27	Please indicate any parts of the standard setting training and process that we should improve.	Sometimes, there is a lot of down time during the day. I am not sure if that can be fixed or modified, but it can be frustrating to feel like there is nothing to do.
		Maybe take a moment at the beginning to look at some of the work that has been done already with item development and PLD development so that people who may question some of these artifacts would have a better understanding of them and how they are formed.
		PLD need aligned to specific standard a little tighter or split to a standalone instead of 2 or more standards on one line.
		I left feeling like I really didn't have enoughinformation to talk sensibly about the cut score that was set. I really enjoyed the process and know that what I have learned will help instruct my teaching, but I would like to be able to help my district more. I am not looking for a magic wand just some guided help.
		Maybe timing, but it wasn't bad, having extra time as a group was nice
		Nothing to improve at this time.
		The only confusion I noticed was a result of not addressing how DOK of questions relates to this process.
		The training was well done. The information was introduced the first day and then our facilitator built on that. She answered any questions. She did a fantastic job.
		None
		I would like to see more items presented to the students so that that the Below Basic is not so easy to attain, and I would like the Advanced items to be more available.
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	Overall, I think it was a successful meeting from my POV as a participant.
		Discussions about application of PLD
		Training on using the PLDs to make content-based decisions.
		I felt like the timing allowed worked really well. The presenter was well versed in what we were doing. I enjoyed the experience
		Being allowed to have a voice and have the panel listen. To have a better understanding of testing
		Our facilitator was amazing!
		I thought the open discussions at the end of each round worked really well.
		Our facilitator kept us going. Kept our room positive and on task. It's hard to keep a room of teachers on task and not talking. ha-ha She was well prepared for that. Loved her.
		The discussions when we were we able to state our viewpoint and hear others' viewpoints were very helpful.
		None
		This was a very interesting and informational experience. I think that the facilitator, Katie, was perfectly chosen because of her bubbly personality. She made everyone feel comfortable to express any concerns, questions, or thoughts. I feel Mathematics grades 5-6 were very fortunate to have her be our facilitator because she made the environment so welcoming. I also feel confident in the fact that I know my knowledge of HOW to do everything was correct; I was properly trained.
29	Please note any other feedback you would like us to consider.	less spicy food
		I feel like there is still a disconnect in communication of the students' performance converted to the score. I would personally like to see, not just a summary of the data, but the actual data being summarized. I also would like to think about how we are communicating this information to others, there seems to be a general idea that we do not need to understand the inner "magical" workings of the psychometrics when that is exactly what we need to understand. Questions about the process were often partially answered or dismissed by the psychometrics people as though we may not be able to understand.
		Please consider a crash course in how to decipher the cut scores so that we can better help those in our district.
		Katie is the best!! She set the tone for the week. Her friendliness and passion was infectious. Everyone involved seemed to have the passion.
		I would love to attend a workshop or continuing education to help me understand the statistics that are used to move forward.

continued

Question #	Question Text	Responses
29	Please note any other feedback you would like us to consider.	Thank you so much for including the classroom teachers. It helps to know we are heard. Thanks again.
		Questions 19 to 26 are difficult to answer. Changing the impact level may increase or decrease students from a category, but I feel that lowers the level of where our students truly should be.
		I really hope to be able to come back to do more Standard Settings, IRW, PLD reviews, etc. I am very thankful for everything that Cognia/OSDE has done for me here. Thank you for letting me be a part of this very important process.
		I would love to be part of the standard setting panel. I wish we emphasized more on number operations and less on algebraic reasoning in elementary. We seem to reteach the same thing year after year, (fractions for instance). Students need more time for mastery of number operations and number sense before being introduced to algebraic reasoning. I also wish more emphasis would be placed on using correct mathematics terms. I saw places in our PLD's this week where mathematics terminology needs to be looked at (numerical expression vs algebraic expression). Correct terms should be in the PLD's if we expect teachers to know exactly what the standard is. The PLD's are for the teachers, not the students.

Table 11. Mathematics Panel Grades 7 & 8 - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the standard setting workshop.	0	0	0	0	12
2	I understood the procedures we followed to set standards.	0	0	0	0	12
3	I understood that my role was to make content-based judgments about the alignment between the items and the performance level descriptors.	0	0	0	0	12
4	The workshop procedures made sense to me, and I learned how to apply them efficiently.	0	0	0	1	11
5	I am confident about my understanding of this standard setting process.	0	0	0	2	10
6	The workshop facilitator explained things clearly to us.	0	0	0	0	12
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	0	12
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	0	0	12
9	The workshop facilitator took steps to help the standard setting process run smoothly.	0	0	0	0	12
10	Sufficient time was allotted for training and practice on the standard setting concepts, tasks, and procedures.	0	0	0	0	12
11	I understood the progressions in expectations across the Basic, Proficient, and Advanced performance levels as defined by the Performance Level Descriptors.	0	0	1	3	8
12	I became sufficiently familiar with the assessment to make item-PLD judgments, based on responding to items on the test and considering the knowledge, skills, and abilities required by the items.	0	0	0	2	10
13	I understood the ID Matching task, including considering the knowledge, skills, and abilities required by each item and matching those item-response demands to PLDs.	0	0	0	1	11
14	I understood how to use the standard setting tool to record my responses regarding skills and notes as instructed.	0	0	0	0	12
15	I understood how to use the standard setting tool to record my item-PLD alignment judgments.	0	0	0	0	12
16	I understood how to use the feedback after round 1, in preparation for round 2.	0	0	0	0	12
17	I understood what the content-based benchmarks, introduced in round 2, represented.	0	0	0	1	11

continued

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
18	I understood how to consider the content-based benchmarks in rounds 2 and 3, as I made my item-PLD alignment judgments.	0	0	0	1	11
Q#	**Question Text**	**Less**	**About the same**	**More**	**Unsure**	**Not Applicable**
19	Based on the impact data results for Mathematics GRADE 7, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	8	2	0	1	1
20	Based on the impact data results for Mathematics GRADE 7, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	3	4	4	0	1
21	Based on the impact data results for Mathematics GRADE 7, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	3	8	0	1
22	Based on the impact data results for Mathematics GRADE 7, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	10	1	0	1
23	Based on the impact data results for Mathematics GRADE 8, do you feel the percentage of students in the BELOW BASIC category should be less, about the same, or more?	8	2	0	2	0
24	Based on the impact data results for Mathematics GRADE 8, do you feel the percentage of students in the BASIC category should be less, about the same, or more?	3	4	4	1	0
25	Based on the impact data results for Mathematics GRADE 8, do you feel the percentage of students in the PROFICIENT category should be less, about the same, or more?	0	4	8	0	0
26	Based on the impact data results for Mathematics GRADE 8, do you feel the percentage of students in the ADVANCED category should be less, about the same, or more?	0	10	2	0	0

Table 12. Mathematics Panel Grades 7 & 8 – Text Responses for Open-ended Questions

Question #	Question Text	Responses
27	Please indicate any parts of the standard setting training and process that we should improve.	Add the instructions / information about how to consider the benchmark data to the slide that is displayed during judgement for round 2 and round 3. Display the panelists round results bar graph in colors that are considerate to ADA/color blind participants; examples could be adding a pattern or displaying in shades of gray. Provide a printed copy of the panelists round results bar graphs for review during discussion; they could be handed back in during judgement if deemed too influential The original time sent to participants was 9:00 - 4:00; the week before the training an updated schedule was an additional hour and a half, 8:30 - 5:00. For participants traveling daily, a week before may not be enough time to adjust their schedule with kids and other family members. Recognize the Juneteenth federal holiday and not have work on that day.
		I thought taking section 1 of the test before matching PLDs was extremely helpful. I wish we would have also done this for grade 7 as well instead of limiting it to just grade 8.
		In future please make all graphs color blind friendly both on screen and on projectors where color washes. The graphs at the end of each round were difficult for me to visually follow due to the yellow/green merging visually.
		The PLDs could be copied not front and back so you don't have to flip back and forth. The graph after round 1 was not easy to read for color blind individuals.
		The panelist round results bar graph is not able to be read by those who have a visual impairment (color blind, poor sight), It would make it easier if it was printed out or show on each individual computer. Having non-carbonated drink options for breakfast and lunch are important for those who do not drink soda. Water is great but juice, tea, flavored stuff is great too. Afternoon snacks should have non sugar options each day.
		On the PLD tool, I would like the Strand Descriptions at the top of each page, and I would like each category on a single page. (Less flipping)

continued

Question #	Question Text	Responses
27	Please indicate any parts of the standard setting training and process that we should improve.	All in all, this was the BEST standard setting I have ever participated in as a very old teacher I have seen several different testing companies and numerous different SDE staffs. If I could have one suggestion, it would be on the way the data is presented on the Panelist Round Results Bar Graph. The yellow and green are too similar for some eyes.
		I would like to see the panelist round results while I am going through round 2 and round 3. It would help me make choices as I re-read the items and revisit my judgements. The colors on the round results bar graph could be different colors from yellow and green. They were very hard to distinguish on the screen.
		1. Consider panelists who may have needs such as color-blindness or hard of hearing. 2. Consider flexible seating options within the panel room. Sitting for long periods of time can make it difficult to focus. I would have loved to have the option to sit by myself to focus more during independent work time. 3. In Grade 7 mathematics, items 30-31 would be great TEI items! 4. When doing PLD work, be mindful of wording in the sentences. We had several conversations about what the intention of the sentence was. Be clear and concise. Fewer sentences is not necessarily better. 5. As the scores were explained to us, it would be nice if SDE could give guidance to parents, stakeholders and administrators about the scores. I think a big misunderstanding is that students who score below basic or basic only got "x" amount of questions correct.
		n/a I was very impressed with the whole process
28	Please indicate any parts of the standard setting training and process that you felt worked really well.	I enjoyed the variety of food and snack options daily. All the tech set-up worked well for participants. The psychometrists, workshop facilitators, content specialists, SDE & other observers, were all knowledgeable and helpful when asked for clarifications or information.
		I thought Round 1 and the discussion process after Round 1 was the best part. It was the most insightful and impactful portion to decision making.
		I felt the information given was succinct and easily followed. As we progressed, we were better able to connect instructions to our actions.
		The process as a whole was very straight forward and made sense. the directions were also clear
		Jill was amazing about being a facilitator. She was pleasant and made sure that we stayed on task as well as everyone's voice was heard. Bri and Sandra also were amazing.
		I felt very good about all of it. Jill did an excellent job training each of us. Our panel had great discussions each time we discussed.
		I feel that the Cognia and SDE staff did an excellent job in preparing us for the task before we began. I also felt they did a phenomenal job of answering our questions as we went through the process. They did this while carefully assuring that they were not influencing anyone. Jill was a fabulous facilitator. She kept everyone moving forward and reminded not to try to influence others. Bri is exceptionally knowledgeable and was a terrific asset when we had questions about PLD language.
		The training was beneficial on day one in the opening session and in our 7/8 room. Jill did a great job keeping us on task and helping us focus on discussion on the task at hand. The mathematics specialist the joined our rooms were very helpful and answered all of our questions to the best of their ability.
		The process was very well organized and efficient. Jill did a great job of keeping us fair and ensuring that we all felt heard.
		Jill was a superior moderator. She kindly kept us on task and was extremely professional and personal at the same time
		Staff was very helpful and responsive to all our questions.
29	Please note any other feedback you would like us to consider.	For Mathematics standard 7.D.1.1, there was no proficient category; should this be a standard for 7th grade if students must be advanced in their understanding? Will other opportunities to continue in this type of work be sent to participants as they occur?
		Jill was an AMAZING asset to have as a facilitator. The process would not have gone as well without her.
		Several of the questions would have made some actually awesome technology assisted answers. GR7 Item 31 for example could use a drag/drop to put parenthesis. Jill was awesome, Bri helped many times, psychometricians were all super helpful.
		The temperature versus humidity made it hard to focus at times in our meeting room.
		Sandra and Qui did great at explaining what all our work was going to be used for. EVERYONE from Cognia, SDE, outside observers, and hotel staff were courteous and helpful. I felt very supported and appreciated!!!!!!
		Bre was very knowledgeable as well. This week was a great learning experience for me.

APPENDIX—L
ARTICULATION POWERPOINT PRESENTATION

OSTP Articulation Grades 3 – 8

1

Articulation agenda

- Introductions, meeting norms, and overview
- The “why” and “how” of the articulation process
- The Consensus Process for Articulation
- Modeling our standard setting panel decisions
- Familiarization with standards, blueprints and PLDs
  - Across unfamiliar grades
- Expectations for between-grade transitions
- Presentation of Impact Data and discussion
- Recommendations (if any) for adjustments

2

Welcome & Introductions - Panelists

- Introduce yourself:
  - Name
  - District
  - Which grade-band you were with during standard setting
  - Grades and content areas you've taught
  - Fun fact about yourself?

3

Meeting Norms

- All conversations are **confidential**.
- What happens here, stays here.
- Outside of this meeting, please **DO** talk about the process we undertake, but **DO NOT** disclose the specifics.
- Please **DO NOT**:
  - use any personal devices in the room; you may step out at any time if needed.
  - use the Chromebooks for anything other than standard setting or articulation activities.

4

Overview

- Our shared goals:
  - collect your recommendations on performance standards for OSTP ELA or Math assessments that provide meaningful and actionable information.
- Your goals as panelists:
  - adapt to forming consensus recommendations.
  - listen carefully to your fellow panelists.
  - make content and student-based judgments about the rigor of grade-to-grade transitions.
  - rely on your expertise about the content standards, blueprints, PLDs and student learning throughout the process.

5

Purpose

- Capture panelist expectations for differences in rigor between grades
  - Does student performance on the test, calculated with the new cut scores, align with those expectations?
  - If they don't align, how are they different?
  - Use educator expectations to assess the reasonableness of the cut scores
  - Recommend adjustments to smooth differences between grade panels
  - Inform policy decisions regarding the rigor of the OSTP assessment

6

Articulation process: The "why"

- Why do we want to **COMPARE** the challenge of demonstrating proficiency for students in different grades?
  - Each of our panelists and facilitators are different (thank goodness)
  - On a different day, with different people and different facilitators (reviewing different items) there would likely be different judgments. That's okay and expected!
  - We know each grade has greater expectations in general (that's learning!), but…
  - We want to compare the challenge for a 5th grader (for example) who has had a full year of 5th grade instruction and development to a 6th grader!

7

Articulation process: Comparing Rigor

Is 5th grade more challenging for a 5th grader than 6th grade is for a 6th grader?

8

Articulation process: The "why" (cont.)

- Once we capture those expectations, the panel will look at impact data.
  - The percentage of students in each performance level using the cuts we developed this week.
- You'll compare your expectations to those empirical percentages
- You'll arrive at consensus advice to inform policymakers where the panel thinks those percentages don't fully agree with your expectations for rigor.
- BECAUSE we want to smooth the variation of different panel results to align with your expectations.

9

Articulation process: The "how"

- Review previous PLD alignments for select items.
- Review unfamiliar PLDs, standards and blueprints.
- Determine expectations for transition between grades based on content demands as reflected in PLDs, standards, and blueprints.
- Review impact data based on standard setting cut scores and compare these results to the expectations identified in the previous step
- Recommend adjustments

10

Articulation is an Advisory Process

Item-student Judgments

Apply Your Expertise

Consensus Judgments

11

Content-based Judgment - Overview

Useful

- Standards and PLDs
- Blueprints
- Compare rigor between grades
- How students progress through each grade

Not Useful

- Compare rigor between grades for the same student
- Your aspirations or concerns regarding student test scores

12

Reviewing Previous PLD Alignments

- We will present some items and judgments from the standard setting panels
- Panelists who worked on an item during standard setting will present their reasoning for the item-PLD alignment
- We will look at one item from each grade-band (3-4,5-6,7-8)
- Our goal is to become familiar with the judgment tasks from unfamiliar grade-bands

13

Items for Review

- We will review one item each from grades 4, 5, and 7, respectively.
- Starting with the 4th grade item, we will look at the item in the Toolkit
  - Panelists from the 3-4 panel will summarize their PLD alignment & reasoning for the item
  - Panelists from other panels comment and ask questions
  - Repeat for the other two items

14

Blueprints: Review Across Grades

Grade	Reading & Writing Process	Critical Reading & Writing	Vocabulary	Language	Research
3	38 – 42 %	12 – 18 %	22 – 26 %	12 – 18 %	12 – 18 %
4	30 – 34 %	18 – 22 %	22 – 26 %	12 – 18 %	12 – 18 %
5	30 – 34 %	22 – 26 %*	18 – 22 %	12 – 18 %	12 – 18 %
6	34 – 38 %	18 – 22 %	18 – 22 %	12 – 18 %	12 – 18 %
7	34 – 38 %	18 – 22 %	14 – 20 %	12 – 18 %	14 – 20 %
8	24 – 30 %	24 – 30 %*	14 – 20 %	12 – 18 %	12 – 18 %

15

Standards: Independent Review & Discussion

- Review the **standards and PLDs** across grades 3 – 8.
- Consider differences and progressions across the grades
- Discuss findings with the group.

16

You're familiar with the standard setting process

1. **Review the item and identify the KSAs**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.

What does a student need to know or be able to do to correctly respond to this item?

2. **Make an item-PLD alignment judgment**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced performance level descriptor (PLD).

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

17

Now consider what it means to demonstrate KSAs from one grade to the next

1. **Review unfamiliar PLDs, standards and blueprints**
   - Consider how rigorous the demands are for a student in this grade

How challenging are these PLDs, blueprints, and standards for a student in one grade?

2. **Consider how rigorous the content demands of the next grade are *for a student in the next grade*.**
   - Example: Is it more, less, or about the same difficulty for a 4th grader to demonstrate proficiency on 4th grade standards than it is for a 4th grader to demonstrate proficiency on 3rd grade standards?

Compared to the PLDs, blueprints and standards for a student in the next grade

18

What are we looking for?

- How do the standards and expectations for students at performance levels change from grade to grade?
  - How do the verbs change?
  - How do the students change from grade to grade?
  - Does your expectation for the pace of learning align with the change in standards and performance level expectations?
- We will review and discuss five transitions
  - Transition from grade 3 to 4, grade 4 to 5, grade 5 to 6, grade 6 to 7, and grade 7 to 8.

19

For each of five grade transitions

- Review the blueprints, standards, and PLDs, blueprints for the proximal grades
- Answer guided questions by considering
  - Differences in standards
  - Blueprints: % of items in domains
  - PLDs: Verbs, etc.
- We will make a consensus judgment
- Facilitator will take notes on the discussions

20

Transition between Grades 7 and 8

- How much more or less challenging is it for 8th graders to demonstrate proficiency in an 8th grade test (blueprint), assessing 8th grade standards, as described by 8th grade PLDs

THAN IT IS

- For 7th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

21

Transition between Grades 7 and 8

- Do we expect a similar difference for other performance levels?
  - Basic
  - Advanced
- If not, what are the expected differences?
- Provide our reasoning for our expectations to help inform policy makers

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

22

Transition between Grades 6 and 7

- How much more or less challenging is it for 7th graders to demonstrate proficiency in a 7th grade test (blueprint), assessing 7th grade standards, as described by 7th grade PLDs

THAN IT IS

- For 6th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

23

Transition between Grades 6 and 7

- Do we expect a similar difference for other performance levels?
  - Basic
  - Advanced
- If not, what are the expected differences?
- Provide our reasoning for our expectations to help inform policy makers

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

24

Transition between Grades 5 and 6

- How much more or less challenging is it for 6th graders to demonstrate proficiency in a 6th grade test (blueprint), assessing 6th grade standards, as described by 6th grade PLDs

THAN IT IS

- For 5th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

25

Transition between Grades 5 and 6

- Do we expect a similar difference for other performance levels?
  - Basic
  - Advanced
- If not, what are the expected differences?
- Provide our reasoning for our expectations to help inform policy makers

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

26

Transition between Grades 4 and 5

- How much more or less challenging is it for 5th graders to demonstrate proficiency in a 5th grade test (blueprint), assessing 5th grade standards, as described by 5th grade PLDs

THAN IT IS

- For 4th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

27

Transition between Grades 4 and 5

- Do we expect a similar difference for other performance levels?
  - Basic
  - Advanced
- If not, what are the expected differences?
- Provide our reasoning for our expectations to help inform policy makers

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

28

Transition between Grades 3 and 4

- How much more or less challenging is it for 4th graders to demonstrate proficiency in a 4th grade test (blueprint), assessing 4th grade standards, as described by 4th grade PLDs

THAN IT IS

- For 3rd graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

29

Transition between Grades 3 and 4

- Do we expect a similar difference for other performance levels?
  - Basic
  - Advanced
- If not, what are the expected differences?
- Provide our reasoning for our expectations to help inform policy makers

1. Much less challenging
2. Less challenging
3. About the same
4. More challenging
5. Much more challenging

30

Expectations compared to Standard Setting results

- We have captured our consensus expectations on a white board here in the room
- We will look at impact data based on Standard Setting cut scores
  - This data shows us what percentage of students we would expect in each performance level for each grade
- Compare the impact data to our consensus expectations. Do they match expectations?
  - If not, discuss and make recommendations for adjustments
  - Our facilitators will capture notes on the discussion and recommendations

31

For each grade

- Review impact data
- Consider the expectations we identified
- Answer the following question:

Do we think the percentage of students in the proficient and above category should be…

1. Much less
2. Less
3. About the same
4. More
5. Much more

32

APPENDIX—M
ARTICULATION EVALUATION SURVEY & RESULTS

Table 1. ELA Articulation - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the articulation workshop.	0	0	0	5	5
2	I understood the procedures we followed to advise policymakers on cut recommendations.	0	2	0	3	5
3	I understood that my role was to communicate educator expectations regarding the progression of rigor in student transitions from lower to higher grade-levels in my content area of expertise.	0	0	0	5	5
4	The workshop procedures made sense to me.	0	1	1	4	4
5	I am confident about my understanding of our consensus recommendations	0	1	1	5	3
6	The workshop facilitators explained things clearly to us.	0	2	0	5	3
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	3	7
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	1	0	0	5	4
9	The workshop facilitator took steps to help the process run smoothly.	1	0	0	4	5
10	Sufficient time was allotted for training and discussion.	1	1	1	3	4
11	I understood the progressions in expectations across grade-levels for Oklahoma students.	0	0	2	3	5
12	I became sufficiently familiar with blueprints, standards and PLDs for each content area to help inform our consensus recommendations to Oklahoma policymakers.	0	1	0	7	2
13	Our facilitators captured notes for our discussion that represented our process to arrive at consensus recommendations.	0	0	2	5	3
14	My expertise and input helped our group arrive at our consensus recommendations.	0	1	1	4	4

Table 2. ELA Articulation Panel – Text Responses for Open-ended Questions

Question #	Question Text	Response
15	Please indicate any parts of the articulation training and process that we should improve.	I thought that the articulation training process was well done. The only note I have is that I thought that we were rushed to look through the standards and PLDs. I wished that we had a some more time to look through them especially for the grade levels that we are not familiar with.
		There should be more time to familiarize ourselves with the standards AND blueprints (these were not available to us). More time for discussion as well so that we could really dig in and analyze differences in the standards across grade levels.
		I believe that the articulation training and process would be more beneficial if educators were given more opportunities to view assessments, or assessment questions, across grade levels. Only working with 2 grades does not allow me to fully capture what the other grade levels are attempting to accomplish.
		Maybe more data ahead of time would alleviate the outrage
		Please make sure that people listen and stay on task.
		The meeting today was brief, so I think we needed more time to flush out ideas.
		This felt like it should have been an important process, but the allotted time was not enough to actually get valuable data. I am not confident at all in the consensus and many of the other panelists were very confused and therefore the graph that the facilitator made did not match was on the board. I cannot perceive how this information could be valuable. With such a small group and such little time, the data gathered during vertical articulation seems like it will be damaging to the process. I really enjoyed Sandra's explanations and felt that she explained things very well and helped to correct several confused panelists.
		The workshop procedures and expectations could have been explained better, clearer. Time should have been allotted to give teachers opportunities to ask questions about the articulation workshop process.
16	Please indicate any parts of the articulation training and process that you felt worked really well.	I felt like the overall organization and flow worked really well. I also like the process used. The only breakdown I felt there was, is that teachers were hesitant to put in graph form the idea that 6th-8th grade proficiency should be less than in already was on the graph. Our facilitators were great and patient in helping us to dig through and overcome challenges we experienced.
		I am thankful that educators across grade levels and state were provided the opportunity to bring their expertise to the articulation training and process. It was also beneficial to deep dive into the state standards and the PLDs to determine the differences.
		I liked seeing the data and seeing that scores are adjusted so that we have a better idea of how the students are taking to the standards
		I thought that the open discussion parts were well done and that everyone respected each other's thoughts and opinions.
		The expertise of the facilitators was most impactful for me.
		Sandra is great, easy to understand and communicate with.
		Monday through Thursday worked very well when we were in our 5-6 group with Lisa who kept us on task and focused!
		Including teachers' perspectives and opinions, and relevant teaching experiences was valuable and appreciated.

continued

Question #	Question Text	Response
17	Please note any other feedback you would like us to consider.	I would love to participate in more!
		Thank you for incorporating teachers into the process. I believe that if a group of educators were given the opportunity to work across all of the grade level standards and assessments then the articulation process would have run smoother.
		I have no other notes at this time.
		If this is going to be a part of the process, it should be over several days with a larger group of teachers. We should be given more direction, have more time with the standards, and be comfortable with the items. If student experience is going to be considered, there should be social science data provided as well as past test scores.
		Thank you for including actual teachers in the process.
		I would recommend the articulation workshop being longer maybe, one full day to 2 days in length.
		Setting norms and expectations prior to meeting.
		I really enjoyed this experience. I know I have learned and grown a lot through this experience.

Table 3. Math Articulation Panel - Frequency of Responses for Likert-type Questions

Q#	Question Text	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	I understood the goals of the articulation workshop.	0	0	1	6	4
2	I understood the procedures we followed to advise policymakers on cut recommendations.	0	0	1	6	4
3	I understood that my role was to communicate educator expectations regarding the progression of rigor in student transitions from lower to higher grade-levels in my content area of expertise.	0	0	0	7	4
4	The workshop procedures made sense to me.	0	0	5	3	3
5	I am confident about my understanding of our consensus recommendations	0	0	2	6	3
6	The workshop facilitators explained things clearly to us.	0	1	1	5	4
7	The workshop facilitator encouraged us to raise questions and put our understandings into our own words.	0	0	0	6	5
8	The workshop facilitator provided clear and helpful responses to my questions and other requests for clarification.	0	0	2	6	3
9	The workshop facilitator took steps to help the process run smoothly.	0	0	0	8	3
10	Sufficient time was allotted for training and discussion.	0	5	0	4	2
11	I understood the progressions in expectations across grade-levels for Oklahoma students.	0	0	1	6	4
12	I became sufficiently familiar with blueprints, standards and PLDs for each content area to help inform our consensus recommendations to Oklahoma policymakers.	0	0	0	6	5
13	Our facilitators captured notes for our discussion that represented our process to arrive at consensus recommendations.	0	0	0	5	6
14	My expertise and input helped our group arrive at our consensus recommendations.	0	0	1	6	4

Table 4. Math Articulation Panel – Text Responses for Open-ended Questions

Question #	Question Text	Response
15	Please indicate any parts of the articulation training and process that we should improve.	n/a
		None
		It was hard for some participants to stay on task and wanted to solve much larger issues rather than answer the questions we had to answer right now. It may have been easier to agree on difficulty changing grade to grade if we got to experience the test rather than just looking at the PLDs.
		A more formal way of having discussions, people were talking over other people and having side conversations.
		I understand we were ahead of schedule, but moving Friday to Thursday afternoon did make it feel rushed. I would also have liked more time to process through the other grade level PLDs before this meeting, if possible.
		I think more time to compare the grade level PLDs and standards before being asked to compare them.
		I did not feel totally clear on what some of the procedures were or maybe more so where they were going.
		I am honestly not sure
		I would like to see an improvement in how the recommendations are made. Unfortunately, by the time we got to 8th grade we were out of wiggle room for it to make sense.
16	Please indicate any parts of the articulation training and process that you felt worked really well.	None
		I enjoyed the process...I learned a lot about testing and scores.
		vertical alignment was beneficial
		I appreciate it is a smaller group.
		We were able to eventually come to a consensus on most points.
		grouping the teachers by having a mixture of the groups
		Everyone is able to share.
17	Please note any other feedback you would like us to consider.	I enjoyed the process
		Honestly, I do feel that overall, the cut scores, though better than say last iteration, I do feel it still does a disservice to Oklahoma students.
		I enjoyed the process but feel totally overwhelmed with the responsibility we were given. I don't feel like I was totally comfortable covering standards in the articulation process that I don't teach. It takes me a while to process things, and I don't feel like I had enough time to do that.
		I have enjoyed this entire process and the dialog that has transpired. I truly feel that I have grown from all of the collaboration that has occurred

APPENDIX—N
STANDARD-SETTING MEMO

Oklahoma Standard Setting Memo
OSTP ELA and Mathematics Grades 3 - 8

June 17-21, 2024

Overview

Cognia and the Oklahoma State Department of Education (OSDE) convened six panels of ELA and Mathematics educators during June 17–21, 2024, to establish Basic, Proficient, and Advanced cut scores to enable reporting of student performance on the OSTP ELA and Mathematics Grades 3 – 8 assessments. Each panel included 10–12 educators from around the state and completed the standard setting activities for two grades, starting with the upper grade in their respective panels. The standard setting panelists reviewed test content and performance level descriptors and followed the modified Item-Descriptor (ID) Matching standard setting method. The standard setting portion of the meeting was conducted over the first four days of the meeting from Monday, June 17 to Thursday, June 20. At the conclusion of the standard setting portion, two articulation panels (one each for ELA and Mathematics) were convened to complete a half day of articulation activities across all grades within their respective content areas. The articulation panelists included three–four panelists from each of the original standard setting panels.

The purpose of this memo is to present the results from the standard setting and articulation meeting, including cut scores and associated impact data.

Methods

Standard Setting Procedure

During the standard setting meeting, the panelists were trained on and followed the modified ID-Matching method. Each panelist reviewed each item in a content and grade-specific ordered item booklet (OIB) and considered the knowledge, skills, and abilities required by the item. Panelists then matched those item-response demands to the knowledge and skill expectations in the performance level descriptors for the Basic, Proficient, and Advanced levels. Working independently, the standard setting panelists conducted the ID matching process over three rounds and made item-PLD alignment judgements for each item. Before each round, panelists completed a round readiness survey. After rounds 1 and 2, the Cognia workshop facilitator led panelists through a discussion of agreements and disagreements among the panelists and rationales for their various item-PLD alignment judgements. The ensuing discussion enabled panelists to consider their colleagues' insights about item response demands and rationales for matching items to descriptors, and to consider adjusting their judgements in rounds 2 and 3.

At the beginning of round 2, content-based benchmarks were introduced to panelists, which served as additional information for panelists to consider as they made their item-PLD alignment judgements in rounds 2 and 3. Panelists completed the activities for two grades, beginning with the upper grade in their respective panels. At the completion of both grades, standard setting cut scores were calculated and the associated impact data for both grades were presented to panelists within their respective panels. Impact data are the percentages of students who would be sorted into the Below Basic, Basic, Proficient, and Advanced performance levels, using their scores from the 2024 administration of the OSTP ELA and Mathematics grades 3-8 assessments. Panelists then completed a final evaluation survey about their overall experience with the standard setting workshop, as well as their opinions on the results (impact data) presented.

Analyses Procedure

During the standard setting meeting, a subject matter expert (SME) reviewed the qualitative data for panelists as the data became available. Specifically, the SME reviewed panelists' notes on the knowledge, skills, abilities required by the items, as well as their reasoning notes to determine if the panelists were on task.

Additionally, Cognia psychometricians conducted statistical analyses of panelists' item-PLD alignment data by calculating the percent exact, adjacent, and discrepant for each panelist on each performance level.

At the conclusion of Round 3 for each grade, Cognia psychometricians conducted initial logistical regression analyses. Since the logistical regression method is sensitive to statistical outliers and the presence of such outliers violates the assumptions of the model, outlier analyses were performed in the form of visual inspection of the initial logistic regression curves. Statistical outliers were identified, and the associated data points were removed and then the final logistic regression analyses were conducted to calculate the proficient and advanced cut scores. After calculating the proficient and advanced cut scores, the TCC method was used to calculate the Basic cut score.

Finally, the resulting cut scores were applied to student data from the spring 2024 administration of the OSTP ELA and Mathematics grades 3-8 assessments to calculate the impact data (i.e., the percentage of students that would be classified into each performance level based on the standard setting cut scores).

Articulation Procedure

At the conclusion of the standard setting meeting, an articulation panel was convened for each content area. Three to four panelists from each of the original standard setting panels participated in the articulation meeting. During the articulation meeting, panelists engaged in a cross-grade qualitative review of test blueprints, standards, and PLDs. In a consensus-based process and based on their review, panelists then identified performance expectations for transitions between grades (i.e., whether it is more or less challenging for a student in grade 4 to reach proficiency on the 4th grade assessment, than it is for a student in grade 3 to reach proficiency on the 3rd grade assessment). After identifying the performance expectations across grades, panelists review impact data based on the standard setting cut scores in comparison to the expectations identified in the previous step. Finally, panelists made consensus-based recommendations for adjustments. The meeting concluded with an articulation workshop survey.

Results

This section details the results from the standard setting and articulation meetings and is organized by content area, starting with the ELA grades 3–8 results.

ELA Grades 3–8: Standard Setting Results

Table 1 shows the three cut scores (basic, proficient, and advanced) for each ELA grade that resulted from the standard setting meeting and analyses. The table includes the OIB page range, theta, and associated standard error for each cut. In addition, the same information is presented based on the benchmark cut scores. Finally, the prior (pre-standard setting) theta cut scores are also listed for reference.

Table 1. OSTP ELA Grades 3-8 Cut Score Details based on Standard Setting, Benchmarks, and Prior

Subject Grade	Performance Cut Placement Level	Standard Setting			Benchmarks			Prior Theta
		OIB #	Theta	Standard Error	OIB #	Theta	Standard Error	
	Basic	3 - 4	-0.890	--	6 - 7	-0.600	--	-0.531
ELA 03	Proficient	11 - 12	-0.288	0.035	16 - 17	-0.102	0.114	0.341
	Advanced	41 - 42	0.949	0.042	45 - 46	1.667	0.609	1.396
	Basic	4 - 5	-0.700	--	4 - 5	-0.670	--	-0.527
ELA 04	Proficient	17 - 18	-0.225	0.042	14 - 15	-0.432	0.186	0.386
	Advanced	35 - 36	0.941	0.043	34 - 35	0.903	0.166	1.499
	Basic	5 - 6	-1.120	--	5 - 6	-0.830	--	-0.783
ELA 05	Proficient	11 - 12	-0.531	0.042	32 - 33	0.000	0.102	0.325
	Advanced	42 - 43	0.315	0.038	50 - 51	0.948	0.311	1.172
	Basic	2 - 3	-0.670	--	8 - 9	-0.280	--	-0.909
ELA 06	Proficient	9 - 10	-0.232	0.044	19 - 20	0.051	0.267	0.285
	Advanced	45 - 46	1.222	0.059	48 - 49	1.552	0.347	1.392
	Basic	8 - 9	-0.380	--	8 - 9	-0.470	--	-0.498
ELA 07	Proficient	15 - 16	0.015	0.070	17 - 18	0.139	0.152	0.467
	Advanced	47 - 48	1.551	0.124	47 - 48	1.599	0.436	1.259
	Basic	8 - 9	-0.740	--	8 - 9	-0.570	--	-0.695
ELA 08	Proficient	10 - 11	-0.207	0.068	16 - 17	0.061	0.244	0.451
	Advanced	50 - 51	1.351	0.172	50 - 51	1.606	0.524	1.208

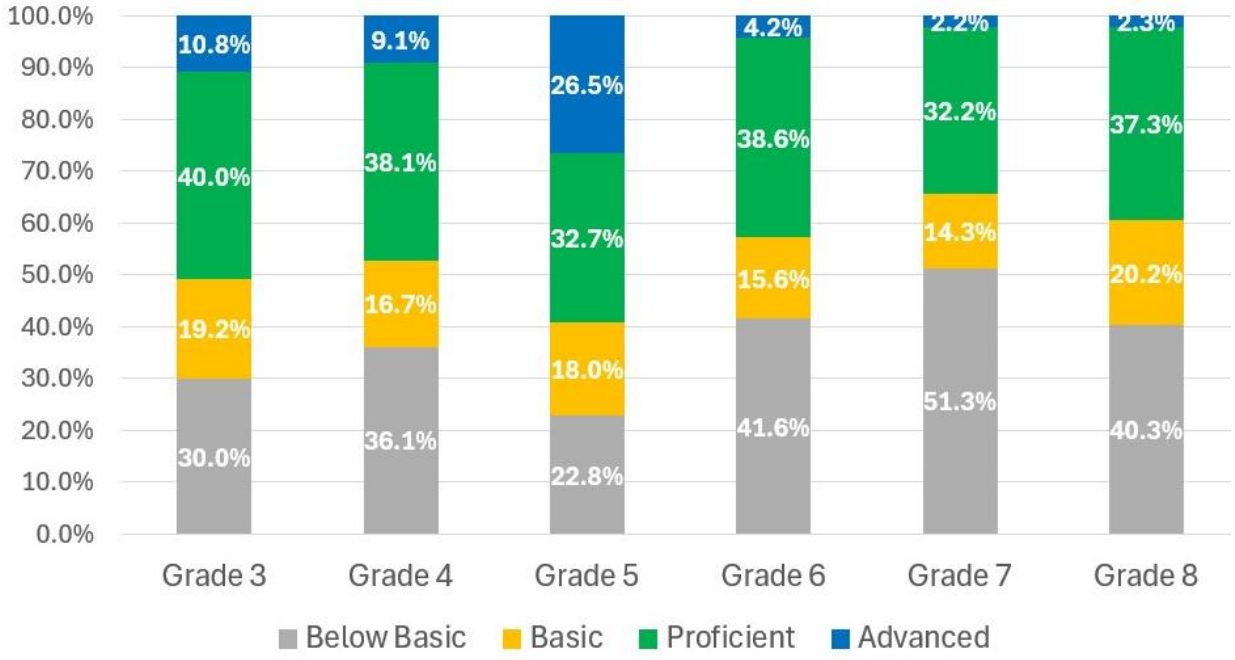
Table 2 shows the impact data (percentage of students classified in each performance level) for each ELA grade based on the cut scores from the Standard Setting meeting and benchmarks. In addition, impact data based on the prior (pre-standard setting) cut scores are listed for reference. Note that percentages related to the standard setting, benchmark, and prior cut scores were calculated by applying the cut scores to student data from the Spring 2024 OSTP ELA test administration. Finally, where relevant, percentages based on NAEP data for Oklahoma are also shown. The NAEP data are based on the 2022 test administration for "Reading" and represent the most recent data available (NAEP OK State Profile Website).

Figure 1 gives a visual representation of the impact data based on the ELA standard setting cut scores across grades 3–8.

Table 2. OSTP ELA Grades 3-8 Impact Data based on Standard Setting, Benchmarks, Prior, and NAEP

Subject Grade	Impact based on	Below Basic	Basic	Proficient	Advanced	Basic & above	Proficient & above
ELA 03	Standard Setting	30.0	19.2	40.0	10.8	70.0	50.8
	Benchmarks	38.4	17.7	42.3	1.6	61.6	43.9
	Prior	40.7	31.6	23.9	3.9	59.3	27.8
ELA 04	Standard Setting	36.1	16.7	38.1	9.1	63.9	47.2
	Benchmarks	37.0	8.2	44.9	9.9	63.0	54.7
	Prior	41.8	33.9	22.5	1.8	58.2	24.3
	OK NAEP (2022)	--	--	--	4.0	55.0	24.0
ELA 05	Standard Setting	22.8	18.0	32.7	26.5	77.2	59.2
	Benchmarks	30.6	30.8	29.8	8.8	69.4	38.6
	Prior	32.1	41.8	21.0	5.2	67.9	26.1
ELA 06	Standard Setting	41.6	15.6	38.6	4.2	58.4	42.8
	Benchmarks	55.5	11.7	31.0	1.7	44.5	32.7
	Prior	34.2	41.0	22.3	2.6	65.8	24.9
ELA 07	Standard Setting	51.3	14.3	32.2	2.2	48.7	34.5
	Benchmarks	48.0	21.7	28.4	1.9	52.0	30.3
	Prior	47.0	32.9	15.2	4.8	53.0	20.0
ELA 08	Standard Setting	40.3	20.1	37.3	2.3	59.7	39.6
	Benchmarks	46.6	23.3	29.1	1.0	53.4	30.1
	Prior	42.0	40.6	14.0	3.4	58.0	17.5
	OK NAEP (2022)	--	--	--	1.0	62.0	21.0

Figure 1. OSTP ELA Grade 3-8 Impact Data based on Standard Setting Cut Scores



ELA Articulation Results

During the articulation portion of the meeting, panelists reviewed test blueprints, standards, and PLDs across grades and discussed their expectation for student performance relative to between grade transition. The discussion was facilitated with guided questions to consider for each grade transition. Table 3 shows the articulation guided questions alongside the panel's consensus or majority response and panel discussion notes associated with each grade transition. Response options for the transition questions were on a Likert-type scale: (1) Much less challenging, (2) less challenging, (3) about the same, (4) more challenging, or (5) much more challenging.

Based on the panel's consensus response for each grade transition, Cognia psychometricians adjusted the standard-setting cut scores to achieve articulation as recommended by the articulation panelists. Table 4 shows the articulation adjustments and associated articulated impact data percentages. The OIB page numbers and theta based on the standard setting results are provided in the first two columns. In addition, the change (unit additions or subtractions) in OIB page numbers and theta values based on articulation adjustments are listed for reference.

Figure 2 gives a visual representation of the impact data based on the ELA articulated cut scores across grades 3–8.

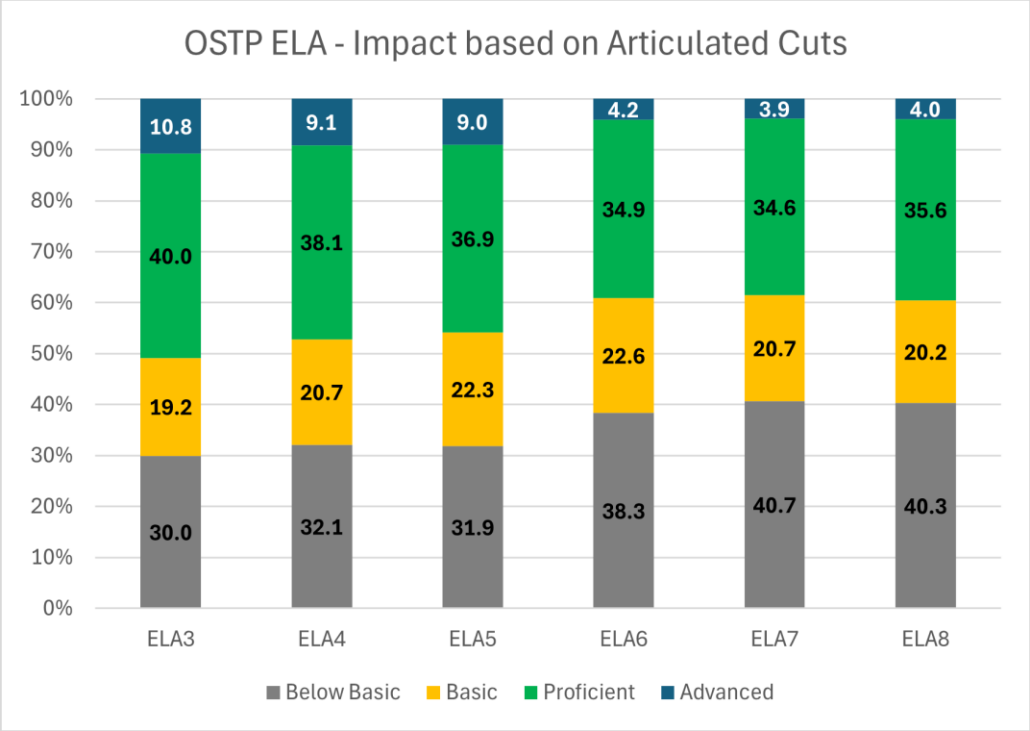
Table 3. OSTP ELA Articulation – Performance Expectations for Grade Transitions

Question	Panel Response	Panel Discussion Notes
Transition 1: How much more/less challenging is it for 4th graders to demonstrate proficiency in a 4th grade test (blueprint), assessing 4th grade standards, as described by 4th grade PLDs THAN IT IS for 3rd graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	About the same	a. Transition from 3-4 i. Third grade is the last year for learning to read. Fourth grade they should make the transition to reading to learn. ii. Historically, fourth grade is an extension of the standards. For example, the very first standard indicates that third grade is harder, and fourth grade is easier. (Main idea/supporting details) iii. For the writing standards, fourth grade IS harder. iv. 3.W.1 represents a cognitive leap from 3rd to 4th grade, BUT that is the only one. All the other standards represent an extension of writing. v. Reading is less, but writing is more. Some of their examples of "reading to learn" are shown by their writing. vi. About the same = 3 votes. vii. More difficult = 2 votes viii. One panelist thinks it is more difficult because reading to learn is hard. But a 3rd grade teacher felt like that shift happens in 3rd grade, NOT from 3rd to 4th. ix. 4th grade is more application of what they've learned in 3rd grade. x. Based on the standards, 4th grade is an extension of grade 3, not a huge leap. xi. About the same – 6
Transition 2: How much more/less challenging is it for 5th graders to demonstrate proficiency in a 5th grade test (blueprint), assessing 5th grade standards, as described by 5th grade PLDs THAN IT IS for 4th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	More challenging	a. Transition from 4-5 i. Especially in standard 3, this seemed to be a big leap; there are harder concepts in the standards. For example, 4.R.1 describing the purpose, vs. 5th grade more evaluation of achieving the purpose. ii. Writing is essentially the same, but reading is more challenging. iii. More inference required in grade 5. iv. Votes for more challenging: consensus
Transition 3: How much more/less challenging is it for 6th graders to demonstrate proficiency in a 6th grade test (blueprint), assessing 6th grade standards, as described by 6th grade PLDs THAN IT IS for 5th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	Much more challenging	a. Transition from 5-6 i. 6th grade begins puberty for many students, which makes learning more difficult. 6.W.2 – the jump is huge. They must develop a thesis statement, which is a huge leap beyond the 5th grade standard. Research paper is another big jump. ii. Maybe there are not so many huge leaps in the other standards, but the writing demands are much larger. iii. There are other changes in 6th grade, like changing classes, etc. It is hard for them to show proficiency because the structure of the classes is difficult. iv. Much more challenging: almost unanimous; one vote for more challenging.
Transition 4: How much more/less challenging is it for 7th graders to demonstrate proficiency in a 7th grade test (blueprint), assessing 7th grade standards, as described by 7th grade PLDs THAN IT IS for 6th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	About the same	a. Transition from 6-7 i. About the same – The jump from 5-6 was much more significant than the jump from 6-7. Seventh graders are going through some things (physically, emotionally) but it's not as much as the shifts for 6th grade. The demands of the standards and the PLDs are about the same. ii. A little more challenging, because they must look at short articles instead of paragraphs. Parts of speech has made a big jump; iii. Consensus – about the same. There were two who were on the fence with less challenging.
Transition 5: How much more/less challenging is it for 8th graders to demonstrate proficiency in an 8th grade test (blueprint), assessing 8th grade standards, as described by 8th grade PLDs THAN IT IS for 7th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	About the same	Transition from 7-8 i. About the same – although another layer is added to the standard/PLDs, it is just a continuation of growth. Although we are adding onto their learning, it is not beyond what you would expect from grade to grade. ii. 3.R.5 – 7th grade theme and mood; 8th grade, just adding tone; this is just the next level and isn't a huge leap. iii. Seeing very few standards that are different. iv. Less challenging – 3.R.4 – in 8th grade, just supporting interpretations; not a huge leap. v. Students are not going through huge transitions in the 8th grade. vi. One panelist would never say less challenging, because the standards are so challenging for the majority of the students. This allows all their learning/physical/emotional changes to "gel" so that they are ready for high school. vii. Less challenging – because the standards and PLDs are about the same, and the other challenges (physical, emotional, etc. viii. About the same – almost all; one vote for less challenging)

Table 4. OSTP ELA Standard Setting Cut Score Articulation Adjustments

Grade	Performance Level	Standard Setting OIB page	Standard Setting Theta	Change in OIB page	Change in Theta	Articulated Theta Value	Articulated Impact %
ELA 03	Below Basic	--	--	--	--		29.96
	Basic	3 - 4	-0.890	--	--	-0.890	19.22
	Proficient	11 - 12	-0.288	--	--	-0.288	40.03
	Advanced	41 - 42	0.949	--	--	0.949	10.79
	Prof + Adv	--	--	--	--	--	50.82
ELA 04	Below Basic	--	--	--	--	--	32.11
	Basic	4 - 5	-0.700	0	- 0.130	-0.830	20.69
	Proficient	17 - 18	-0.225	--	--	-0.225	38.11
	Advanced	35 - 36	0.941	--	--	0.941	9.09
	Prof + Adv	--	--	--	--	--	47.20
ELA 05	Below Basic	--	--	--	--	--	31.88
	Basic	5 - 6	-1.120	0	+ 0.330	-0.790	22.25
	Proficient	11 - 12	-0.531	+14	+ 0.350	-0.181	36.89
	Advanced	42 - 43	0.315	+8	+ 0.620	0.935	8.99
	Prof + Adv	--	--	--	--	--	45.88
ELA 06	Below Basic	--	--	--	--	--	38.34
	Basic	2 - 3	-0.670	0	- 0.100	-0.770	22.56
	Proficient	9 - 10	-0.232	+1	+ 0.100	-0.132	34.94
	Advanced	45 - 46	1.222	--	--	1.222	4.16
	Prof + Adv	--	--	--	--	--	39.10
ELA 07	Below Basic	--	--	--	--	--	40.70
	Basic	8 - 9	-0.380	-4	- 0.300	-0.680	20.73
	Proficient	15 - 16	0.015	-3	- 0.120	-0.105	34.63
	Advanced	47 - 48	1.551	0	- 0.210	1.341	3.93
	Prof + Adv	--	--	--	--	--	38.57
ELA 08	Below Basic	--	--	--	--	--	40.28
	Basic	8 - 9	-0.740	--	--	-0.740	20.15
	Proficient	10 - 11	-0.207	--	--	-0.207	35.60
	Advanced	50 - 51	1.351	-2	- 0.200	1.151	3.96
	Prof + Adv	--	--	--	--	--	39.57

Figure 2. OSTP ELA Impact Data based on Articulated Cut Scores



Mathematics Grades 3-8: Standard Setting Results

Table 5 shows the three cut scores (basic, proficient, and advanced) for each Mathematics grade that resulted from the standard setting meeting and analyses. The table includes the OIB page range, theta, and associated standard error for each cut. In addition, the same information is presented based on the benchmark cut scores. Finally, the prior (pre-standard setting) theta cut scores are also listed for reference.

Table 6 shows the impact data (percentage of students classified in each performance level) for each Mathematics grade based on the cut scores from the Standard Setting meeting and benchmarks. In addition, impact data based on the prior (pre-standard setting) cut scores are listed for reference. Note that percentages related to the standard setting, benchmark, and prior cut scores were calculated by applying the cut scores to student data from the Spring 2024 OSTP Mathematics test administration. Finally, where relevant, percentages based on NAEP data for Oklahoma are also shown. The NAEP data are based on the 2022 test administration and represent the most recent data available.

Figure 2 gives a visual representation of the impact data based on the mathematics standard setting cut scores across grades 3–8.

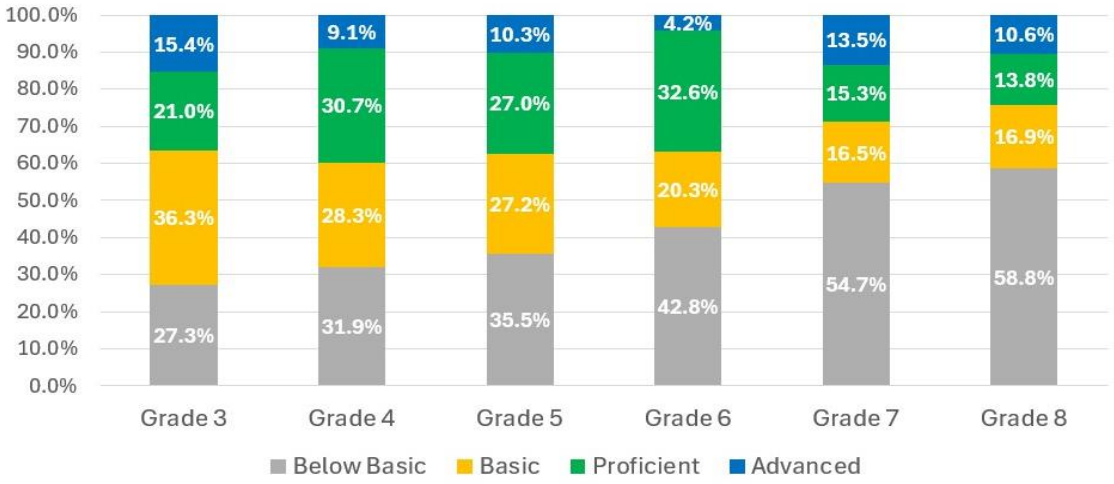
Table 5. OSTP Mathematics Grades 3-8 Cut Score Details based on Standard Setting, Benchmarks, and Prior

Subject Grade	Performance Cut Placement Level	Standard Setting			Benchmarks			Prior Theta
		OIB #	Theta	Standard Error	OIB #	Theta	Standard Error	
	Basic	11 - 12	-1.000	--	11 - 12	-0.910	--	-0.840
Mathematics	Proficient	21 - 22	0.106	0.041	19 - 20	0.071	0.140	0.187
03	Advanced	42 - 43	0.739	0.058	47 - 48	1.156	0.359	0.988
	Basic	5 - 6	-0.770	--	5 - 6	-0.730	--	-0.771
Mathematics	Proficient	12 - 13	0.092	0.023	12 - 13	0.121	0.071	0.270
04	Advanced	47 - 48	1.180	0.076	47 - 48	1.301	0.270	1.062
	Basic	7 - 8	-0.660	--	7 - 8	-0.680	--	-0.829
Mathematics	Proficient	18 - 19	0.141	0.025	18 - 19	0.153	0.081	0.427
05	Advanced	45 - 46	1.109	0.017	46 - 47	1.190	0.157	1.170
	Basic	9 - 10	-0.480	--	6 - 7	-0.520	--	-0.759
Mathematics	Proficient	19 - 20	0.078	0.027	21 - 22	0.204	0.068	0.440
06	Advanced	48 - 49	1.503	0.120	49 - 50	1.627	0.515	1.511
	Basic	6 - 7	-0.180	--	6 - 7	-0.190	--	-0.336
Mathematics	Proficient	14 - 15	0.314	0.026	14 - 15	0.297	0.112	0.447
07	Advanced	32 - 33	0.881	0.024	39 - 40	1.160	0.113	1.471
	Basic	6 - 7	-0.090	--	6 - 7	0.030	--	-0.027
Mathematics	Proficient	10 - 11	0.416	0.021	11 - 12	0.443	0.073	0.756
08	Advanced	32 - 33	0.971	0.028	36 - 37	1.033	0.096	1.267

Table 6. OSTP Mathematics Grades 3-8 Impact Data based on Standard Setting, Benchmarks, Prior, & NAEP

Subject Grade	Impact based on	Below Basic	Basic	Proficient	Advanced	Basic & above	Proficient & above
	Standard Setting	27.3	36.3	21.0	15.4	72.7	36.4
Mathematics	Benchmarks	29.6	32.7	30.7	6.9	70.4	37.6
03	Prior	31.6	35.0	23.7	9.7	68.4	33.4
	Standard Setting	31.9	28.3	30.7	9.1	68.1	39.8
Mathematics	Benchmarks	33.0	28.2	31.7	7.1	67.0	38.8
04	Prior	31.9	34.4	22.3	11.4	68.1	33.7
	OK NAEP (2022)	--	--	--	3.0	71.0	27.0
	Standard Setting	35.5	27.2	27.0	10.3	64.5	37.3
Mathematics	Benchmarks	34.9	28.2	28.0	8.9	65.1	36.9
05	Prior	30.4	41.9	18.5	9.2	69.6	27.8
	Standard Setting	42.8	20.3	32.6	4.2	57.2	36.9
Mathematics	Benchmarks	41.4	26.3	29.1	3.2	58.6	32.3
06	Prior	33.4	41.9	20.5	4.1	66.6	24.7
	Standard Setting	54.7	16.5	15.3	13.5	45.3	28.8
Mathematics	Benchmarks	54.3	16.4	21.1	8.2	45.7	29.3
07	Prior	49.1	26.3	20.3	4.3	50.9	24.6
	Standard Setting	58.8	16.9	13.8	10.6	41.2	24.4
Mathematics	Benchmarks	62.8	13.7	14.1	9.4	37.2	23.5
08	Prior	60.8	24.2	9.2	5.8	39.2	15.0
	OK NAEP (2022)	--	--	--	3.0	52.0	16.0

Figure 2. OSTP Mathematics Grade 3-8 Impact Data based on Standard Setting Cut Scores



Mathematics Articulation Results

Table 7 shows the questions alongside the panel's consensus or majority response and panel discussion notes associated with each grade transition. Response options for the transition question were on a Likert-type scale: (1) Much less challenging, (2) less challenging, (3) about the same, (4) more challenging, or (5) much more challenging.

Based on the panel's consensus response for each grade transition, Cognia psychometricians adjusted the mathematics standard setting cut scores to achieve articulated impact data as recommended by the articulation panelists. Table 8 shows the articulation adjustments and associated articulated impact data percentages. The OIB page numbers and theta based on the standard setting results are provided in the first two columns. In addition, the change (unit additions or subtractions) in OIB page numbers and theta values based on articulation adjustments are listed for reference.

Figure 3 gives a visual representation of the impact data based on the mathematics articulated cut scores across grades 3–8.

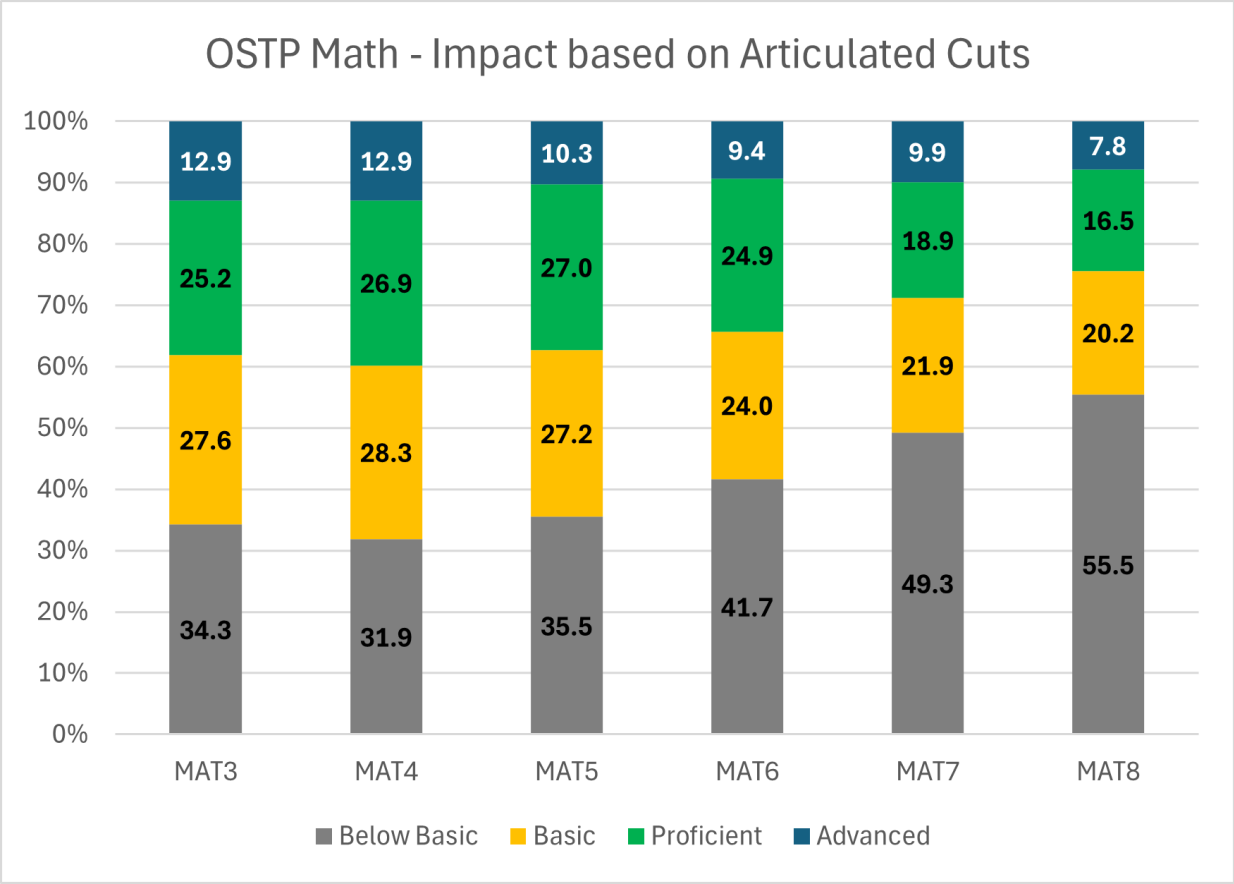
Table 7. OSTP Mathematics Articulation – Performance Expectations for Grade Transitions

Question	Panel Response	Panel Discussion Notes
Transition 1: How much more/less challenging is it for 4th graders to demonstrate proficiency in a 4th grade test (blueprint), assessing 4th grade standards, as described by 4th grade PLDs THAN IT IS for 3rd graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	Less challenging	Same concepts, but just extended. Lots of practice, not as many new concepts as other grades.
Transition 2: How much more/less challenging is it for 5th graders to demonstrate proficiency in a 5th grade test (blueprint), assessing 5th grade standards, as described by 5th grade PLDs THAN IT IS for 4th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	More challenging	Many new and challenging concepts in 5th grade. First real application tasks, students have multi-operational task with meaning – getting to the WHY. Not a monumental shift, but an increase in challenge.
Transition 3: How much more/less challenging is it for 6th graders to demonstrate proficiency in a 6th grade test (blueprint), assessing 6th grade standards, as described by 6th grade PLDs THAN IT IS for 5th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	More challenging	From grade 5 to grade 6, the concepts are moving from concrete to abstract. Now students must illustrate tougher concepts, and some new concepts. The material is more challenging. Basic and abstract are not different.
Transition 4: How much more/less challenging is it for 7th graders to demonstrate proficiency in a 7th grade test (blueprint), assessing 7th grade standards, as described by 7th grade PLDs THAN IT IS for 6th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	More challenging	Notes: several panelists (3-4) felt that the transition was MUCH MORE challenging. 7th grade skills go heavy into percents, other big blueprint changes include less Number and Operations, more Algebraic Reasoning and Algebra, and WAY more Geometry and Measurement (22-26% in 6th grade to 30-36% in 7th grade). If students don't have strong Number and Operations skills, it affects all other areas. 7th grade starts to use operations with rational numbers. 7th grade flows around proportional reasoning.
Transition 5: How much more/less challenging is it for 8th graders to demonstrate proficiency in an 8th grade test (blueprint), assessing 8th grade standards, as described by 8th grade PLDs THAN IT IS for 7th graders to demonstrate proficiency on the blueprint, standards and PLDs of their grade	Much more challenging	"Geometry for 8th grade is a very small percentage of the blueprint. The majority is algebraic reasoning and algebra. New concepts galore, solving multi-step problems, variables on both sides. There is scientific notation, other abstract concepts too. Foundation started early and progressed. (for Algebraic Reasoning & Algebra). More dramatic flip from concrete topics in 7th grade to abstract concepts in 8th grade. Students feel the stress of the new content. 7th graders seem to feel more comfortable, still in elementary school."

Table 8. OSTP Mathematics Standard Setting Cut Score Articulation Adjustments

Grade	Performance Level	Standard Setting OIB page	Standard Setting Theta	Change in OIB page	Change in Theta	Articulated Theta Value	Articulated Impact %
	Below Basic	--	--	--	--		34.26
	Basic	11 - 12	-1.000	+1	+0.250	-0.750	27.61
Mathematics	Proficient	21 - 22	0.106	-2	-0.050	0.056	25.23
03	Advanced	42 - 43	0.739	+3	+0.100	0.839	12.89
	Prof + Adv	--	--	--	--	--	38.13
	Below Basic	--	--	--	--	--	31.88
	Basic	5 - 6	-0.770	--	--	-0.770	28.34
Mathematics	Proficient	12 - 13	0.092	--	--	0.092	26.92
04	Advanced	47 - 48	1.180	-1	-0.190	0.989	12.86
	Prof + Adv	--	--	--	--	--	39.78
	Below Basic	--	--	--	--	--	35.50
	Basic	7 - 8	-0.660	--	--	-0.660	27.20
Mathematics	Proficient	18 - 19	0.141	--	--	0.141	27.03
05	Advanced	45 - 46	1.109	--	--	1.109	10.27
	Prof + Adv	--	--	--	--	--	37.30
	Below Basic	--	--	--	--	--	41.70
	Basic	9 - 10	-0.480	-1	-0.030	-0.510	24.00
Mathematics	Proficient	19 - 20	0.078	0	+0.070	0.148	24.93
06	Advanced	48 - 49	1.503	-2	-0.410	1.093	9.37
	Prof + Adv	--	--	--	--	--	34.30
	Below Basic	--	--	--	--	--	49.28
	Basic	6 - 7	-0.180	0	-0.150	-0.330	21.90
Mathematics	Proficient	14 - 15	0.314	--	--	0.314	18.88
07	Advanced	32 - 33	0.881	+3	+0.180	1.061	9.94
	Prof + Adv	--	--	--	--	--	28.82
	Below Basic	--	--	--	--	--	55.45
	Basic	6 - 7	-0.090	0	-0.100	-0.190	20.16
Mathematics	Proficient	10 - 11	0.416	--	--	0.416	16.54
08	Advanced	32 - 33	0.971	+3	+0.150	1.121	7.84
	Prof + Adv	--	--	--	--	--	24.39

Figure 3. OSTP Mathematics Impact Data based on Articulated Cut Scores



APPENDIX—O
FINAL CUT POINTS

Table 1. OSTP ELA Final Cut Scores and Impact Percentages by Grade

Grade	Performance Level	OIB Page Range	Theta Value	Impact %
3	Below Basic	--		29.96
	Basic	3 - 4	-0.890	19.22
	Proficient	11 - 12	-0.288	40.03
	Advanced	41 - 42	0.949	10.79
	Prof + Adv	--	--	50.82
4	Below Basic	--	--	32.11
	Basic	4 - 5	-0.830	20.69
	Proficient	17 - 18	-0.225	38.11
	Advanced	35 - 36	0.941	9.09
	Prof + Adv	--	--	47.20
5	Below Basic	--	--	31.88
	Basic	5 - 6	-0.790	22.25
	Proficient	25 - 26	-0.181	36.89
	Advanced	50 - 51	0.935	8.99
	Prof + Adv	--	--	45.88
6	Below Basic	--	--	38.34
	Basic	2 - 3	-0.770	22.56
	Proficient	10 - 11	-0.132	34.94
	Advanced	45 - 46	1.222	4.16
	Prof + Adv	--	--	39.10
7	Below Basic	--	--	40.70
	Basic	4 - 5	-0.680	20.73
	Proficient	12 - 13	-0.105	34.63
	Advanced	47 - 48	1.341	3.93
	Prof + Adv	--	--	38.57
8	Below Basic	--	--	40.28
	Basic	8 - 9	-0.740	20.15
	Proficient	10 - 11	-0.207	35.60
	Advanced	48 - 49	1.151	3.96
	Prof + Adv	--	--	39.57

Table 2. OSTP Mathematics Final Cut Scores and Impact Percentages by Grade

Grade	Performance Level	OIB Page Range	Theta Value	Impact %
3	Below Basic	--		34.26
	Basic	12 - 13	-0.750	27.61
	Proficient	19 - 20	0.056	25.23
	Advanced	45 - 46	0.839	12.89
	Prof + Adv	--	--	38.13
4	Below Basic	--	--	31.88
	Basic	5 - 6	-0.770	28.34
	Proficient	12 - 13	0.092	26.92
	Advanced	46 - 47	0.989	12.86
	Prof + Adv	--	--	39.78
5	Below Basic	--	--	35.50
	Basic	7 - 8	-0.660	27.20
	Proficient	18 - 19	0.141	27.03
	Advanced	45 - 46	1.109	10.27
	Prof + Adv	--	--	37.30
6	Below Basic	--	--	41.70
	Basic	8 - 9	-0.510	24.00
	Proficient	19 - 20	0.148	24.93
	Advanced	46 - 47	1.093	9.37
	Prof + Adv	--	--	34.30
7	Below Basic	--	--	49.28
	Basic	6 - 7	-0.330	21.90
	Proficient	14 - 15	0.314	18.88
	Advanced	35 - 36	1.061	9.94
	Prof + Adv	--	--	28.82
8	Below Basic	--	--	55.45
	Basic	6 - 7	-0.190	20.16
	Proficient	10 - 11	0.416	16.54
	Advanced	35 - 36	1.121	7.84
	Prof + Adv	--	--	24.39

APPENDIX—P
COMMISSION FOR EDUCATIONAL QUALITY AND ACCOUNTABILITY (CEQA) PRESENTATION

Performance Levels and Cut Scores for the OSTP ELA and Math Assessments

Presentation to the Commission for Educational Quality and Accountability

July 10, 2024

OKLAHOMA Education

cognia™

1

Members of the Team

- **Catherine Boomer,** Program Director, State Assessments, OSDE
- **Alyssa Tyra,** Project Manager, ELA Assessments, OSDE
- **Corinne Beasler,** Project Manager, Math Assessments, OSDE
- **Dr. Frank Padellaro**, Vice President Psychometrics and Reporting Services, Cognia
- **Julie DiBona,** Vice President, Program Management, Cognia

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Background on Grades 3-8 ELA & Math Assessments

OKLAHOMA Education

3

Oklahoma Statute on Performance Levels

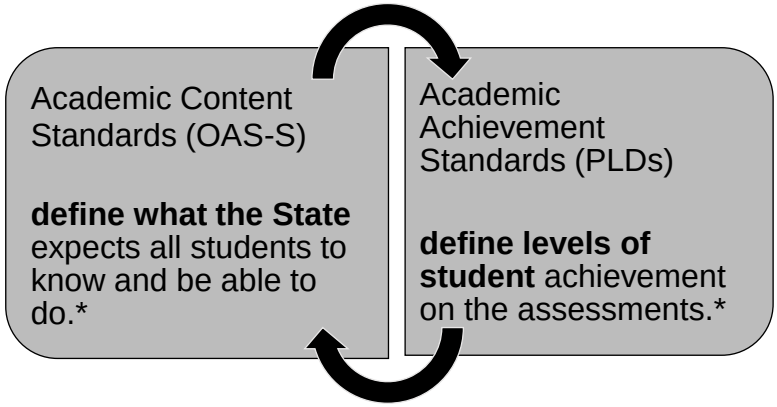
- OSTP Performance is divided into performance levels.
- The Performance levels shall be set by a method that indicates students are ready for the next grade, course, or level of education, as applicable.
- The Commission for Educational Quality and Accountability (CEQA) shall determine and adopt a series of student performance levels and the corresponding cut scores pursuant to the Oklahoma School Testing Program Act.
- §70-1210.541

4

OKLAHOMA Education

4

Content Standards and PLDs



**U.S. Department of Education Peer Review of State Assessment Systems Non-Regulatory Guidance for States, September 25, 2015*

OKLAHOMA Education

Logistics of the Standard Setting Meeting

- Standard Setting: June 17-20, 2024
- Location: Stoney Creek Hotel, Tulsa-Broken Arrow, OK

Grade Span	Content	Number of Panelists
Grades 3-4	Math	11
Grades 5-6	Math	12
Grades 7-8	Math	12
Grades 3-4	ELA	11
Grades 5-6	ELA	10
Grades 7-8	ELA	10

Logistics of the Standard-Setting Meeting

- Articulation Meeting:
  - Math: Afternoon of June 20, 2024
  - ELA: Morning of June 21, 2024
- Location: Stoney Creek Hotel, Tulsa-Broken Arrow, OK

Grade Span	Content	Number of Panelists
Grades 3-8	Math	12
Grades 3-8	ELA	11

Logistics Continued

- How long have you been teaching?

Years Teaching	Number of Panelists
1-5 Years	29
6-10 Years	11
11-20 Years	16
21+ Years	10

- Location Demographics
  - *Based on National Center for Education Statistics
  - https://nces.ed.gov/ccd/districtsearch/district_list.asp?Search=1&State=40

Location*	Number of Panelists
City: Large	14
City: Small	1
Rural: Distant	10
Rural: Fringe	8
Rural: Remote	3
Suburb: Large	11
Town: Distant	12
Town: Fringe	1
Town: Remote	5

Standards and Assessments

What are standards?

The content students are expected to know by the end of a grade level and subject.

Guideposts for teachers to build their lesson plans and develop “can-do” statements.

They answer: What can students do as a result of learning these standards?

What are large-scale assessments?

They are designed to cover the depth (complexity) and breadth (scope) of the standards across a year.

They provide large grain-size information on how student performance compares to end-of-grade level expectations.

9

Assessments and Performance Expectations

There is a lot of content to cover in an assessment based on the breadth and depth of the state’s standards.

How much content is enough to say students are on track to meet the challenges of the *next grade, course, or level of education, as applicable*?

Setting achievement **standards** (i.e., standard setting) requires expert judgment from teachers of the content to determine what content represents Below Basic, Basic, Proficient, or Advanced knowledge.

10

What are Performance Level Descriptors?

- PLDs provide a narrative account of the knowledge, skills, and abilities demonstrated by students in each level of achievement:
  - Below Basic, Basic, Proficient and Advanced
- Describe what students know and can do based on the Oklahoma Academic Standards.
- Inform stakeholders of how to interpret student test scores in relation to the Oklahoma Academic Standards.
- Are typically used for standard setting and score reporting.

11

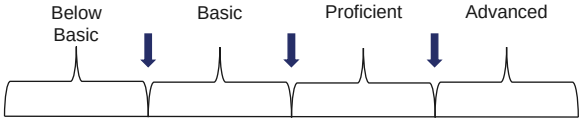
Background on PLD development

- New standards were adopted by OSDE. As a result, the PLDs needed to be updated so that they accurately reflect what students know and can do at each performance level.
- After adopting new standards, OSDE and Cognia staff collaborated on the development of new PLDs using the updated standards as a foundation.
- Teacher committees reviewed and discussed draft PLDs. After this discussion, OSDE finalized the PLDs.

12

Standard Setting for OSTP ELA and Math Grades 3 – 8 Content Assessments

- Standard setting is a deliberative process used to establish the test scores that separate achievement levels (e.g., basic/proficient) on a test.
- A total of 66 Oklahoma educators from various districts were selected to participate in this process.
- These Oklahoma experts matched test performance to descriptions of the knowledge, skills, and abilities defining each of the four performance levels on the OSTP assessments.
- Note: Oklahoma educators were organized into grade-band panels where each panel completed the standard setting activities for two grades



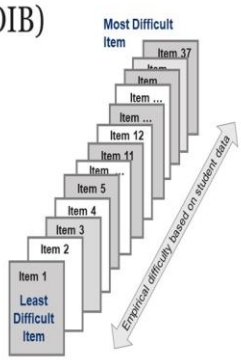
13

Standard Setting for OSTP ELA and Math Grades 3 - 8 Content Assessments

The Expert Judgment Task

Ordered item booklet (OIB)

- The OIB contains test items ordered by difficulty.
- Each OIB page represents an item.
- The difference in difficulty is not exactly the same between each pair of neighboring items.
- Difficulty is based on data from the students who took the test during prior administrations.



ID Matching process

For each item in the OIB:

1. **Review the item and identify the KSAs**
   - Identify the knowledge, skills, and abilities (KSAs) required to respond to the item correctly.
2. **Make an item-PLD alignment judgment**
   - Match the KSAs required by the item with the expectations described in either the Basic, Proficient, or Advanced performance level descriptor (PLD).

What does a student need to know or be able to do to correctly respond to this item?

Which PLD most closely matches the knowledge, skills, and abilities (KSAs) required by the item?

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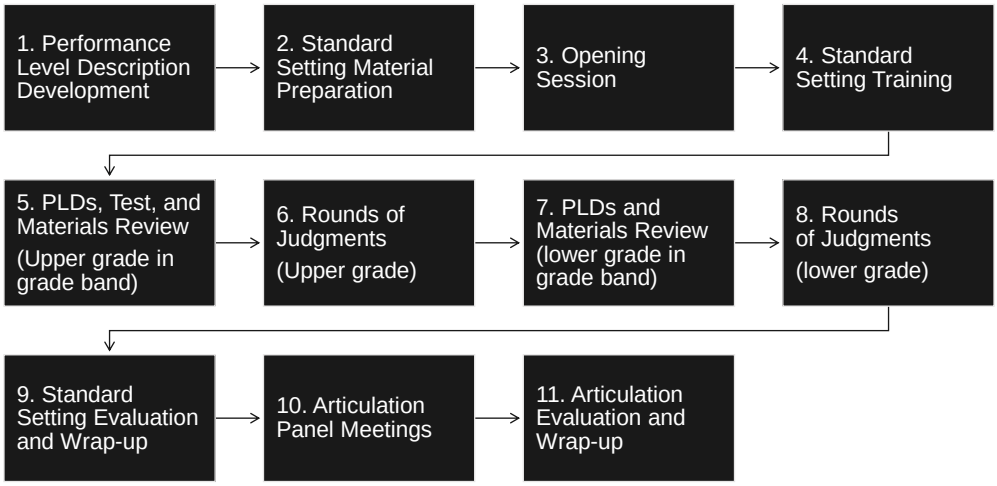
Standard Setting for OSTP ELA and Math Grades 3 - 8 Content Assessments



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Independent Observer Feedback

"Cognia implemented the ID matching approach with fidelity. Panelist exit surveys clearly indicates that panelists felt that they: understood the task, tools and feedback at each step in the process; had sufficient time for training and practice as well as opportunities to pose questions; and felt like the facilitator provided clear responses to questions and requests for clarification. Our observations confirm these results – the training, facilitation, tools, and participation were all the highest quality" – Dr. Erika Landl

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Articulation process: The "why"

- Why do we **COMPARE** the challenge of demonstrating proficiency for students in different grades?
  - Each of our panelists and facilitators are different (thank goodness)
  - On a different day, with different people and different facilitators (reviewing different items) there would likely be different judgments. That's okay and expected!
  - We know each grade has greater expectations in general (that's learning!), but…
  - We had Oklahoma educators examine the challenge for a 5th grader (for example) who has had a full year of 5th grade instruction and development compared to that for a 6th grader.

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Why is it reasonable to articulate (adjust) cuts?

- Because there is no perfect cut judgment from a single standard setting activity, it is reasonable to make adjustments
  - Large jumps in impact data (performance level percentages) that can't be explained by differences in the grade level challenges for students may be the result of random differences in panel results
  - This difference creates a lack of program coherence that is hard to explain to stakeholders
  - Minor changes to the cuts were reviewed by SDE and TAC members who noted the changes (for the most part) were trivial compared to panelist variance
  - The recommended articulation cuts reflected the feedback of OSDE, TAC and OK educators
  - This process is a normal part of most standard settings involving multiple grades in the same content area

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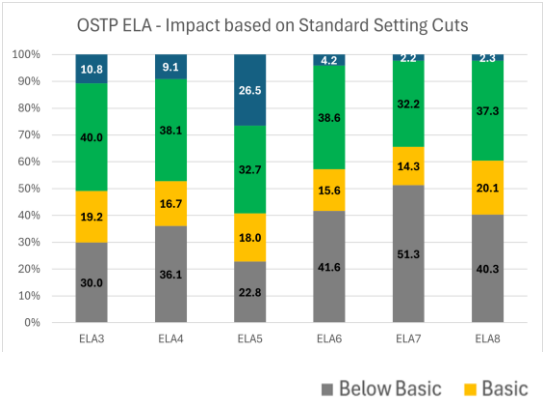
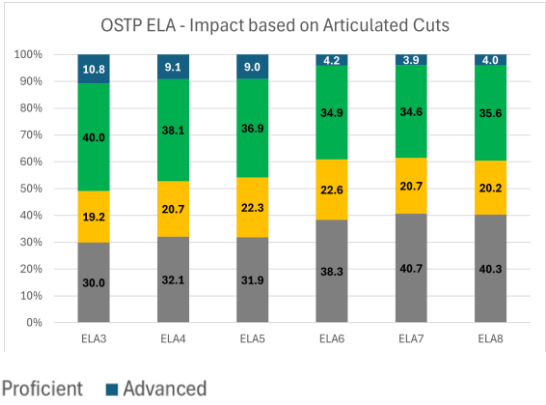
Comparison of an unarticulated to smoothed content area (ELA)

Unarticulated



Smoothed



Below Basic Basic Proficient Advanced

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ELA Recommended Cut Scores

Grade	Performance Level	Standard Setting Theta	Articulation	Recommended Theta Cuts	Impact %
ELA 03	Below Basic	--	--		29.96
	Basic	-0.89	--	-0.89	19.22
	Proficient	-0.288	--	-0.288	40.03
	Advanced	0.949	--	0.949	10.79
	Prof + Adv	--	--	--	50.82
ELA 04	Below Basic	--	--	--	32.11
	Basic	-0.7	-0.13	-0.83	20.69
	Proficient	-0.225	--	-0.225	38.11
	Advanced	0.941	--	0.941	9.09
	Prof + Adv	--	--	--	47.2
ELA 05	Below Basic	--	--	--	31.88
	Basic	-1.12	0.33	-0.79	22.25
	Proficient	-0.531	0.35	-0.181	36.89
	Advanced	0.315	0.62	0.935	8.99
	Prof + Adv	--	--	--	45.88

Grade	Performance Level	Standard Setting Theta	Articulation	Recommended Theta Cuts	Impact %
ELA 06	Below Basic	--	--	--	38.34
	Basic	-0.67	-0.1	-0.77	22.56
	Proficient	-0.232	0.1	-0.132	34.94
	Advanced	1.222	--	1.222	4.16
	Prof + Adv	--	--	--	39.1
ELA 07	Below Basic	--	--	--	40.7
	Basic	-0.38	-0.3	-0.68	20.73
	Proficient	0.015	-0.12	-0.105	34.63
	Advanced	1.551	-0.21	1.341	3.93
	Prof + Adv	--	--	--	38.57
ELA 08	Below Basic	--	--	--	40.28
	Basic	-0.74	--	-0.74	20.15
	Proficient	-0.207	--	-0.207	35.6
	Advanced	1.351	-0.2	1.151	3.96
	Prof + Adv	--	--	--	39.57

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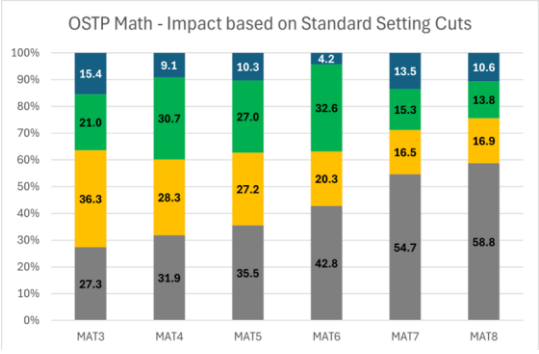
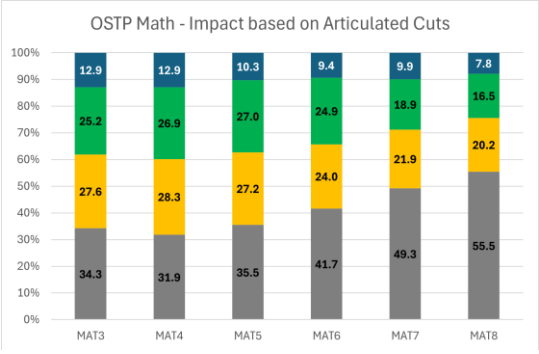
Comparison of an unarticulated to smoothed content area (Math)

Unarticulated



Smoothed



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Math Recommended Cut Scores

Grade	Performance Level	Standard Setting Theta	Articulation	Recommended Theta Cuts	Impact %
Math 03	Below Basic	--	--		34.26
	Basic	-1	0.25	-0.75	27.61
	Proficient	0.106	-0.05	0.056	25.23
	Advanced	0.739	0.1	0.839	12.89
	Prof + Adv	--	--	--	38.13
Math 04	Below Basic	--	--	--	31.88
	Basic	-0.77	--	-0.77	28.34
	Proficient	0.092	--	0.092	26.92
	Advanced	1.18	-0.19	0.989	12.86
	Prof + Adv	--	--	--	39.78
Math 05	Below Basic	--	--	--	35.5
	Basic	-0.66	--	-0.66	27.2
	Proficient	0.141	--	0.141	27.03
	Advanced	1.109	--	1.109	10.27
	Prof + Adv	--	--	--	37.3

Grade	Performance Level	Standard Setting Theta	Articulation	Recommended Theta Cuts	Impact %
Math 06	Below Basic	--	--	--	41.7
	Basic	-0.48	-0.03	-0.51	24
	Proficient	0.078	0.07	0.148	24.93
	Advanced	1.503	-0.41	1.093	9.37
	Prof + Adv	--	--	--	34.3
Math 07	Below Basic	--	--	--	49.28
	Basic	-0.18	-0.15	-0.33	21.9
	Proficient	0.314	--	0.314	18.88
	Advanced	0.881	0.18	1.061	9.94
	Prof + Adv	--	--	--	28.82
Math 08	Below Basic	--	--	--	55.45
	Basic	-0.09	-0.1	-0.19	20.16
	Proficient	0.416	--	0.416	16.54
	Advanced	0.971	0.15	1.121	7.84
	Prof + Adv	--	--	--	24.39

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