Project Coordinator and Evaluation Panel Guide

***Achieving Classroom Excellence Act* (ACE)**
End of Course Project
Algebra I
Tall and Wide

Project Overview
Design and conduct an investigation in order to determine and explain the relationship between a person's height and their arm span. This project will require collecting data from at least 30 people.

Role of the Project Coordinator

The Project Coordinator is an important part of the End of Course Project process. The Project Coordinator's role is to make sure the student understands the scope of the project, manage the paperwork, review a student's progress toward completion of the project at the indicated CHECK POINTS, and adjust the student's completion timeline if necessary.

In the case of a student with an Individualized Education Program (IEP) or an English Language Learner (ELL) plan, the Project Coordinator should consult the student's records and resource personnel to ensure that all appropriate accommodations allowed on the Oklahoma Core Curriculum Tests (OCCT) are provided on the End of Course Project.

Once the student has completed the project, the Project Coordinator will prepare the paperwork necessary to submit the project to the Project Evaluation Panel. To the extent possible, it is recommended that the Project Coordinator serve only as a facilitator of the evaluation process rather than as an active participant of the Project Evaluation Panel.

Directions for the Project Coordinator

1. Read the Tall and Wide Student Guide.
2. With the student, determine a timeline for completing the project and enter target dates for completing each of the CHECK POINTS in the space provided.
3. Assist the student in determining an appropriate format to represent their work. Read the Representation of Work section for more information.
4. Check in with the student at the CHECK POINTS listed in the project to ensure that the student is making appropriate progress toward completion. Adjust the timeline if necessary.
5. Arrange a time for the student to complete the Student Learning Reflection as described in the project. This reflection must be completed in your presence or in the presence of another certified educator. This reflection will follow the same guidelines for Representation of Work as all other components of the project.
6. Submit the final project, including the Student Learning Reflection, to the Project Evaluation Panel for scoring. Attach the Project Submission Form.
7. After the Project Evaluation Panel has reviewed the project, ensure that the project and the panel's recommendation is forwarded to the District Superintendent.
8. Ensure that the District Superintendent submits the final project determination to the Oklahoma State Department of Education and communicates the final project determination to the student.

Representation of Work

Representation of work may come in a variety of forms, including multi-media presentations, constructed objects, artistic expression, written documents, and verbal expression. Creativity is encouraged!

All student work must be documented for scoring by the Project Evaluation Panel and kept on file for at least five years after completion. If a student completes any components of the project

in a form other than written documents, these components may need to be documented through electronic files, video recordings, audio recordings, or other documentation method for accurate scoring and efficient storage. The Project Coordinator may assist the student with this documentation process by photographing, recording, or otherwise making digital copies of student work. The Project Coordinator may not assist in completion of the student work.

Role of the Project Evaluation Panel

The Project Evaluation Panel is an important part of the End of Course Project process. The Project Evaluation Panel's role is to provide a recommendation to the District Superintendent regarding the overall performance of the student on the project. The Panel will make this recommendation without bias, adhering to the procedures and guidelines set by the Oklahoma State Board of Education, and using the scoring criteria and Performance Level Rubric included in this guide.

The Panel must consist of at least three certified educators. The Panel must include at least one teacher who is highly qualified in the content area of the project. To the extent possible, it is recommended that all panel members be highly qualified in the content area of the project. It is also recommended that the Panel include at least one educator who does not currently have the student in class and at least one administrator. Schools and districts are encouraged to work collaboratively with other schools and districts to develop Project Evaluation Panels that include qualified individuals who can provide a fair assessment of student mastery of content.

Directions for the Project Evaluation Panel

1. Read the Tall and Wide Student Guide.
2. Become familiar with the Algebra I Performance Level Rubric (Appendix C).
3. Follow all directions and scoring criteria included in this guide.
4. Submit a recommendation to the District Superintendent on the overall performance of the student on the project. Use the Review Panel Recommendations Form.

General Scoring Criteria

This project will be evaluated on the student's demonstration of mastery of the state academic content standards. A final recommendation of the student's performance level will be made to the District Superintendent based on the Algebra I Performance Level Rubric (Appendix C).

Scoring Considerations

- Representation of work may come in a variety of forms, including multi-media presentations, constructed objects, artistic expression, written documents, and verbal expression. Creativity is encouraged! Work that is not submitted in written form should be documented or recorded and provided to the Panel for accurate scoring.
- Due to the nature of this in-depth, sequential project, it is very possible that a student will make computational errors and/or display misconceptions of content in early steps that will impact the student's work in subsequent steps. In order to keep from penalizing a student multiple times throughout the 14 steps of the project, it is important for the student's errors to be taken into consideration throughout the scoring process.
- Use of technology for project completion is acceptable. At any point that a student uses technology to assist in calculations or product creation, the student must be able to explain the inputs and justify the outputs as required by the 14 steps listed below.

Scoring Directions

1. Score each step of the student project using the Scoring Criteria provided in the Project Scoring Rubric (Appendix A).
2. Transfer assigned points for each step to the Scoring Table (Appendix B).
    - On Step 5, separate scores will be listed in the column for Standard 2 and the column for Standard 3.
    - On Steps 6, 7, 9, 11, 13, and 14, the same score will be listed in more than one column.
3. Total the points for each column on the Scoring Table (Appendix B).
4. Use the Scoring Table Guide (Appendix B) to determine how to rate the student's project on each row of the Algebra I Performance Level Rubric (Appendix C).
5. Total the points earned on the Algebra I Performance Level Rubric.
    - An overall score of 7 or more on the Algebra I Performance Level Rubric is required for the student to score Limited Knowledge on the Algebra I End of Course Project.
    - An overall score of 13 or more on the Algebra I Performance Level Rubric is required for the student to score Proficient on an Algebra I End of Course Project.
    - An overall score of 19 or more on the Algebra I Performance Level Rubric is required for the student to score Advanced on an Algebra I End of Course Project.
    - A student may not score Proficient or Advanced on an Algebra I End of Course Project if the student scored a 1 on any row of the Algebra I Performance Level Rubric.
6. Based on the information in #5, make a recommendation to the District Superintendent for the Performance Level score of the student on the Algebra I End of Course Project.

APPENDIX A

Tall and Wide Project Scoring Rubric

PROJECT STEP	STANDARD COMPONENT	SCORING CRITERIA
1. Determine if you will use the metric system or the standard system of measurement. Defend your selection.	Process Standards	0 – No justification or inappropriate reason 1 – Gives a valid reason to support his/her choice
2. Describe the design of the experiment and provide a rationale for the methods you will use to ensure that your measurements of height, vertical reach, and horizontal leap are accurate.	Process Standards	0 – No explanation or inappropriate explanation 1 – Explains the design of the experiment including the need for accuracy 2 – Explains the design of the experiment including the need for consistency and accuracy
3. Select a sample of at least 30 individuals, half of which are male and half of which are female. Describe and defend your sample selection.	Process Standards	0 – Did not choose at least 30 people or did not include an explanation 1 – Chose at least 30 people and gave an explanation of how the sample was selected 2 – Chose at least 30 people using a systematic sampling method and defended the methodology
4. Collect and record data. Submit a table of your data, showing all individuals' heights and arm spans, separating males and females.	Standard 3	0 – No table submitted 1 – A table is submitted with incomplete data or without titles and labels 2 – A complete table is submitted with appropriate titles and labels
5. Create two scatterplots (one for males and one for females), where each scatterplot includes all individuals' heights and their arm span lengths. • Label the independent and dependent variables. • Use appropriate scales. • Include descriptive titles.	Standard 2	0 – Did not label independent and dependent variables on one or both scatterplots 1 – Labeled independent and dependent variables correctly on both scatterplots
	Standard 3	0 – Did not create two scatterplots 2 – Created two scatterplots but not all data points are accurate, scales are inappropriate, and/or descriptive titles are missing 4 – Created two scatterplots with accurate data points, appropriate scales, and descriptive titles

6. Explain any relationships you notice in the data.	Process Standards & Standard 3	0 – Does not explain relationships in the data or provides an explanation of relationship that does not exist 1 – Provides an explanation of relationships in the data
7. Determine the linear model/equation for each scatterplot of data. Explain how you arrived at those two equations, justifying the steps for each.	Standard 1, Standard 2, & Standard 3	0 – Did not determine two accurate linear models/equations. 1 – Determined two accurate linear models/equations but did not provide any explanation. 2 – Determined two accurate linear models/equations and explained how equations were determined. 3 – Determined two accurate linear models/equations, explained how equations were determined, and provided justification for each step. 4 – Determined two accurate linear models/equations, and provided a in-depth explanation and justification for each step.
8. Solve this system of equations algebraically.	Standard 2	0 – Did not solve the system of equations accurately. 1 – Solved the system of equations accurately.
9. Explain the meaning of each equation in terms of the context of the situation. Include the meaning of each variable, slope, and y-intercept.	Standard 1 & Standard 2	0 – Does not explain 3 – States the meaning of each variable, slope, and y-intercept. 6 – Clearly articulates the meaning of each variable, slope, and y-intercept in context.
10. Graph both equations on one coordinate plane.	Standard 2	0 – Did not graph both equations accurately on one coordinate plane 1 – Graphs both equations accurately on one coordinate plane 2 – Graphs both equations accurately on one coordinate plane, including labels, identified equations, clearly distinguished lines, and/or additional analysis

11. Answer the following questions using correct unit labels: • Based on your linear equations, at what height would a girl's arm span and a boy's arm span be equal? • Based on your linear equations, if a boy was 5' 6" tall, what would you predict his arm span to be? Based on your data, if a girl was 5' 6" tall, what would you predict her arm span to be? • Based on your linear equations, if a boy's arm span is 175 cm, what would you predict his height to be? Based on your data, if a girl's arm span is 175 cm, what would you predict her height to be?	Standard 1, Standard 2, & Standard 3	0 – Does not answer the questions correctly or answers 1 questions correctly without unit labels 1 – Answers 1 question correctly with correct unit label or answers 2 questions correctly without unit labels 2 – Answers 2 questions correctly with correct unit labels or answers 3 questions correctly without unit labels 3 – Answers 3 questions correctly with correct unit labels
12. Discuss a reasonable domain and range for this experiment.	Standard 2	0 – Does not provide a mathematically reasonable domain and/or range 1 – Provides a mathematically reasonable domain and range 2 – Provides a mathematically reasonable domain and range and explains within the context of the situation
13. In addition to the identified variables, what other factors might affect your findings? Explain whether or not you believe any of these factors affected your results.	Process Standards & Standard 3	0 – No factors given 1 – Lists additional factors but does not provide a logical explanation of how these may or may not have affected the student's results 2 – Lists additional factors with a logical explanation of how these may or may not have affected the student's results 3 – Lists additional factors with an in-depth explanation of how these may or may not have affected the student's results

14. If someone repeated your experiment, would you expect them to get similar or different results? Justify your answer.	Process Standards & Standard 3	0 – No justification given 1 – Logical justification provided 2 – In-depth justification provided

APPENDIX B

Tall and Wide Scoring Table

Project Step	Process Standards	Standard 1	Standard 2	Standard 3
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
TOTALS				

Tall and Wide Scoring Table Guide

	Column Totals from Scoring Table	Performance Level Rubric Correlation
Process Standards	0-2	1
	3-6	2
	7-9	3
	10-11	4
Standard 1	0-2	1
	3-8	2
	9-11	3
	12-13	4
Standard 2	0-3	1
	4-12	2
	13-17	3
	18-19	4
Standard 3	0-4	1
	5-15	2
	16-17	3
	18-19	4

APPENDIX C

ACE End of Course Projects
Performance Level Rubric

Algebra I

	1	2	3	4
Process Standards: Problem Solving, Communication, Reasoning, Connections, and Representation	Student demonstrates little to no mastery of the process standards.	Student demonstrates partial mastery of the process standards.	Student demonstrates mastery of the process standards including such skills as use mathematics to solve problems encountered in daily life; and use a variety of mathematical representations to model real world situations.	Student demonstrates a superior and in-depth mastery of the process standards.
Standard 1: Number Sense and Algebraic Operations - The student will use expressions and equations to model number relationships.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as translate word phrases and sentences into expressions and equations; use formulas and mathematics concepts to solve multi-step problems; and simplify and factory polynomials.	Student demonstrates a superior and in-depth mastery of the standard.
Standard 2: Relations and Functions - The student will use relations and functions to model number relationships.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as calculate slope; use and interpret slope and intercepts; distinguish between parallel, perpendicular, horizontal, or vertical lines; develop the equation of a line and graph linear relationships; and match simple equations or inequalities to a graph, table, or situation.	Student demonstrates a superior and in-depth mastery of the standard.

APPENDIX C

	1	2	3	4
Standard 3: Data Analysis, Probability and Statistics - The student will use data analysis, probability and statistics to formulate and justify predictions from a set of data.	Student demonstrates little to no mastery of the standard.	Student demonstrates partial mastery of the standard.	Student demonstrates mastery of the standard including such skills as make valid predictions and/or arguments based on collected data; and use a line-of-best-fit model to represent collected data.	Student demonstrates a superior and in-depth mastery of the standard.
Student Learning Reflection	Student demonstrates less than a Limited Knowledge level of understanding how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates a partial understanding how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates understanding of how this project has contributed to the student's learning and real world application of Algebra I skills.	Student demonstrates superior understanding of how this project has contributed to the student's learning and real world application of Algebra I skills, including past and future benefits of this experience on the student's life.

Advanced
To score Advanced, a student must have a total of at least 19 points on the Algebra I Performance Level Rubric, with no component scoring a 1.

Proficient
To score Proficient, a student must have a total of at least 13 points on the Algebra I Performance Level Rubric, with no component scoring a 1.

Limited Knowledge
To score Limited Knowledge, a student must have a total of at least 7 points on the Algebra I Performance Level Rubric.

Unsatisfactory
Students scoring less than 7 points on the Algebra I Performance Level Rubric will score Unsatisfactory.