

NAEP Interactive Computer Tasks— Virtual Science Experiments for the Classroom

The National Assessment of Educational Progress (NAEP) computer-based science scenarios can be used as engaging, classroom formative assessments.

In these interactive computer tasks, students

- Use simulations to make observations
- Make measurements and record data
- Use data tables and graphs
- Use data to make predictions



In this 20-minute task, students investigate what happens to the volume of water when it freezes. Then students use the results of their investigations to predict and test what will happen when water freezes in the cracks of a concrete sidewalk.



In this 20-minute task, students use a time lapse simulation to make observations about the path of the Sun as it relates to the amount of daylight. Students use this knowledge to determine the better of two locations for growing tomatoes.



In this 20-minute task, students investigate how four different liquids behave when they are poured and how temperature affects the flow rates of the liquids. Then students determine the best temperature range for bottling honey that will take the least amount of time while using as little energy as possible.



In this 20-minute task, students investigate the permeability of soil samples from two sites a town is considering for a play area. Students use their results to help decide which site has the better water drainage and is therefore the better place for a grassy play area.

Tasks are at http://www.nationsreportcard.gov/science_2009/ict_tasks.asp.

Teacher resources to use these tasks in the classroom are at <http://sde.ok.gov/sde/national-assessment-educational-progress>. These resources include a student activity guide for each task. Students use these guides to record their observations and predictions as they complete the interactive computer tasks. Answer keys with national student data are available for teachers.