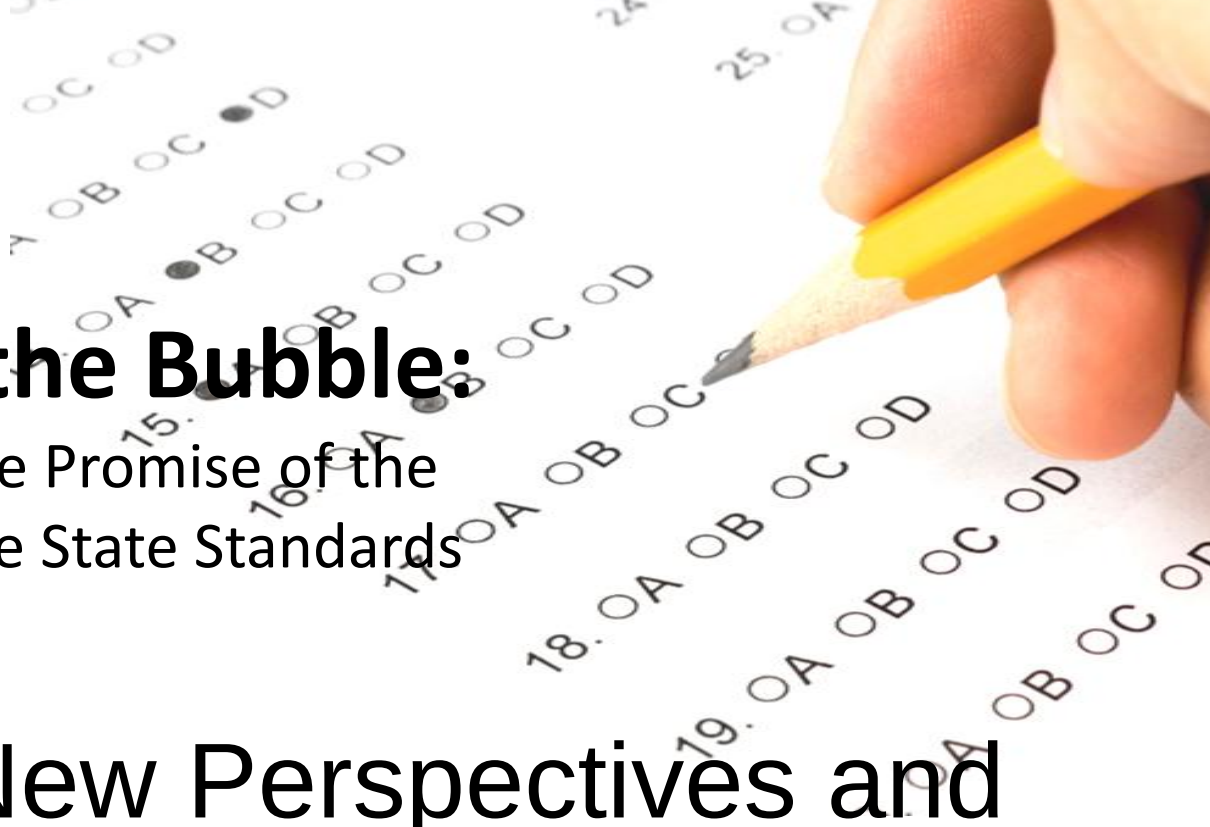


Beyond the Bubble:

Achieving the Promise of the Common Core State Standards

Opening New Perspectives and Enabling New Ideas

Rogers Public Schools

2011-2012

www.corestandards.org

State-led effort coordinated by the

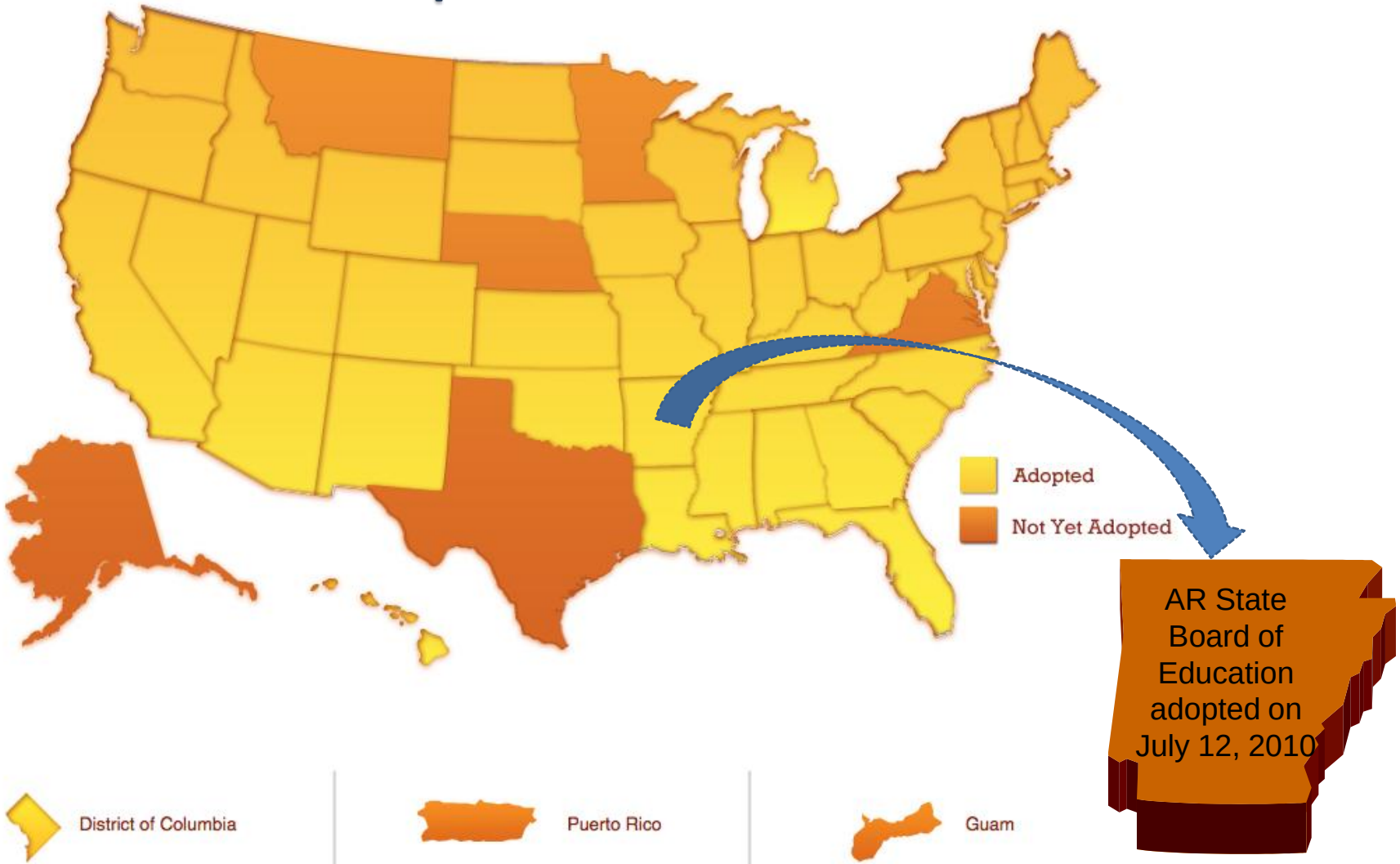
National Governors Association Center for Best Practices

and the

Council of Chief State School Officers (CCSSO)

with assistance from Achieve, ACT, and the College Board (SAT)

Status of State Adoption of Common Core State Standards



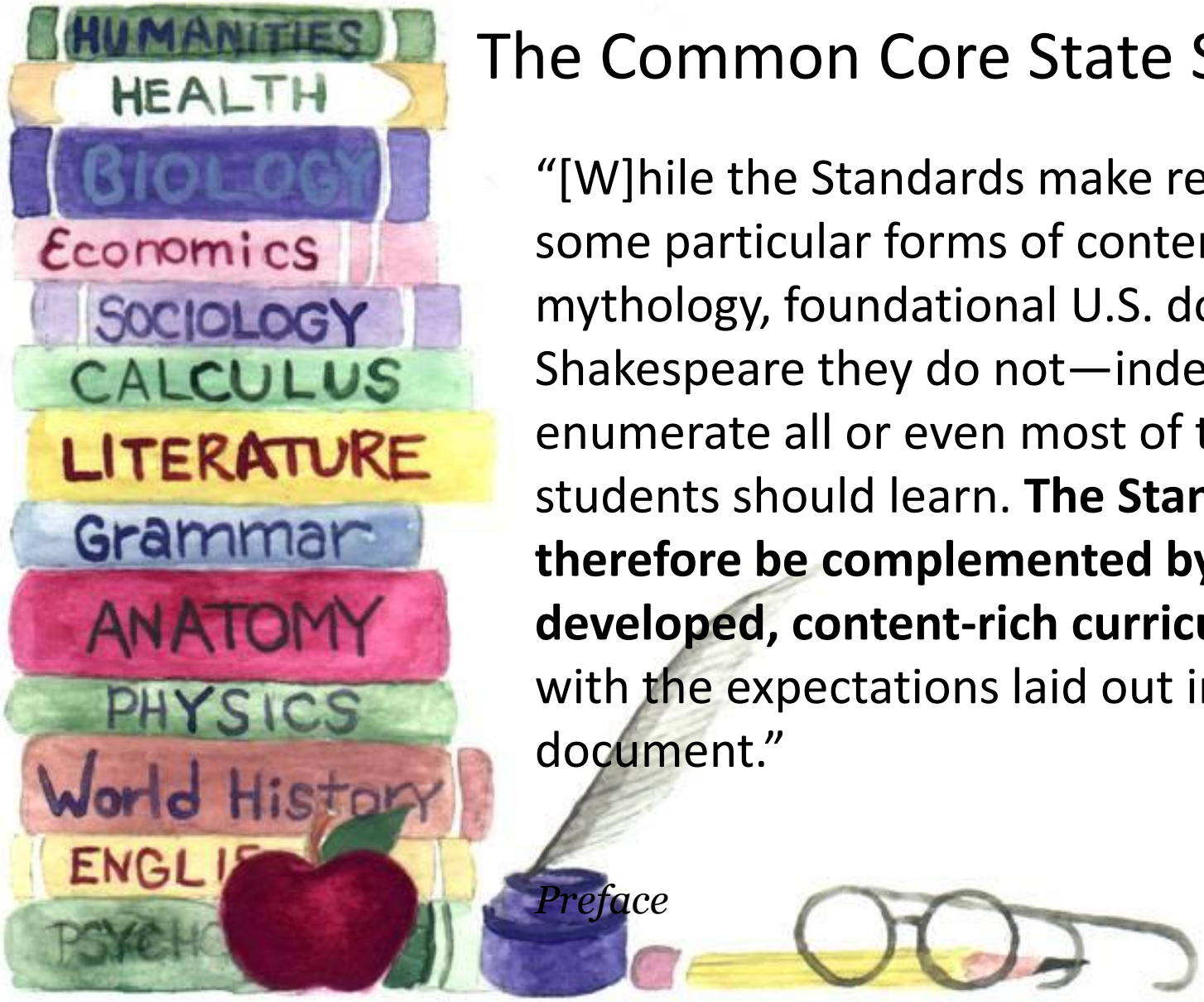
Academic Standards: Fewer, Clearer, Higher…

- More focus, more depth
- Cross curricular and integrated
- Emphasis on literacy in the content area
- Thinking, problem-solving, and applying knowledge will be required

Key Advances of the Common Core

MATHEMATICS	ENGLISH LANGUAGE ARTS/LITERACY
Focus, coherence and clarity: emphasis on key topics at each grade level and coherent progression across grades	Balance of literature and informational texts; focus on text complexity
Procedural fluency and understanding of concepts and skills	Emphasis on argument, informative/ explanatory writing, and research
Promote rigor through mathematical proficiencies that foster reasoning and understanding across discipline	Speaking and listening skills
High school standards organized by conceptual categories	Literacy standards for history, science and technical subjects

ANCHORED IN COLLEGE AND CAREER READINESS



The Common Core State Standards

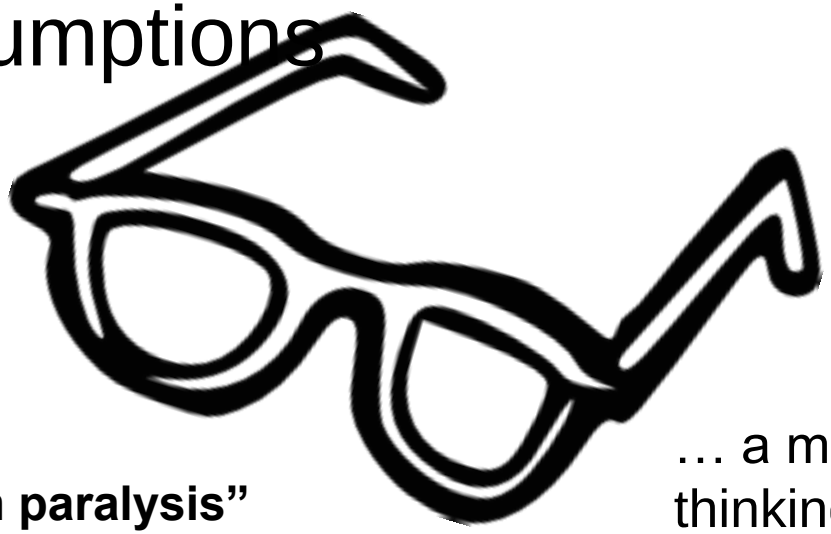
"[W]hile the Standards make reference to some particular forms of content, including mythology, foundational U.S. documents, and Shakespeare they do not—indeed, cannot—enumerate all or even most of the content that students should learn. **The Standards must therefore be complemented by a well-developed, content-rich curriculum** consistent with the expectations laid out in this document."

- CCSS

Preface

paradigm shift

…term used to describe a change in basic assumptions



… to change from one way of thinking to another

“Paradigm paralysis”
Perhaps the greatest barrier to a paradigm shift is the inability or refusal to see beyond the current models of thinking

… a major change in thinking and planning, which ultimately changes the way projects are implemented

PARCC
Partnership for Assessment of Readiness for College and Careers

Literacy

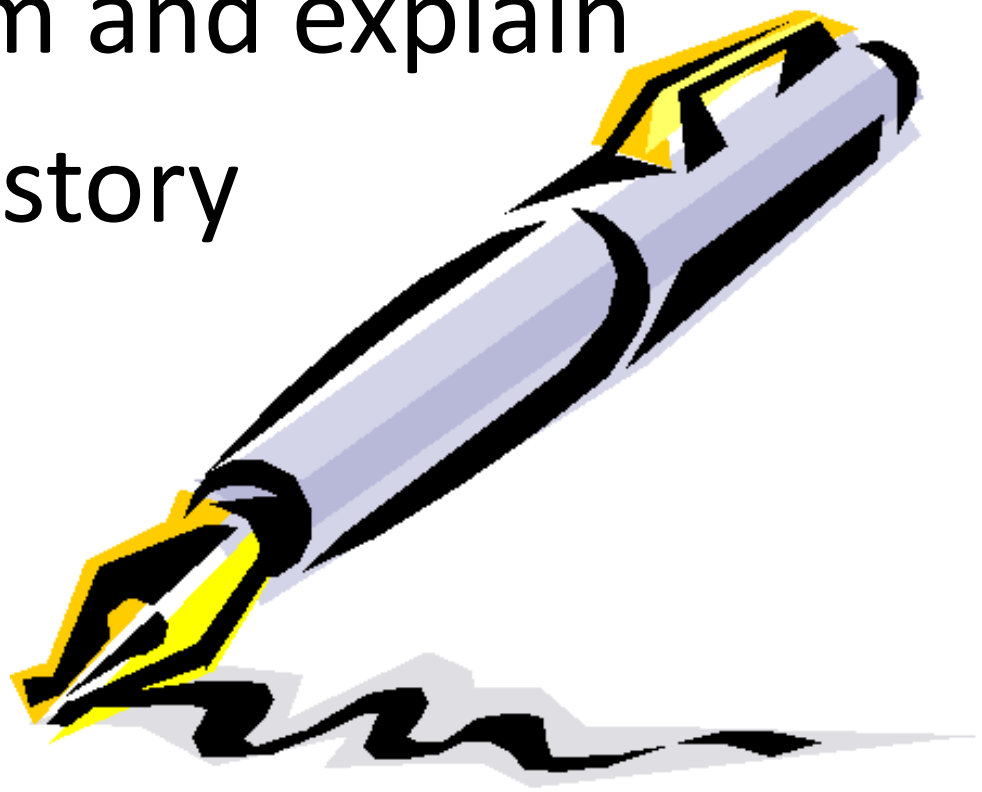
- Students will be required to draw evidence from **literary** or **informational texts** to support ***analysis, reflection, and research***.
- Students will be asked to write an **argument**, write with the intent to **inform or explain**, or write a **narrative**.
- Extended items will require students to **conduct a research** project to **gather and synthesize information** from multiple sources.
- Students will respond to different text formats, including ***audio, video or multimedia***.

Big Shifts in

- Text complexity
- Analyze, infer, give evidence
- Writing to sources
- Mastery of writing and speaking
- Academic vocabulary

3 Types of Writing

- To argue
- To inform and explain
- To tell a story



PARCC
Partnership for Assessment of Readiness for College and Careers

Grade 3

PARCC Grant - page 81

Guess what grade level?

Over several sessions, the assessment could provide a set of sources (some more relevant than others) and require students to analyze them, evaluate their credibility and relevance, and draw on them as necessary in order to compose a coherent account of a subject or to take and defend a position on a controversial topic.

Read like a detective!

Write like an investigative reporter!

Major Shifts within Mathematics CCSS

Focus

•Fewer big ideas --- learn more
•Learning of concepts is emphasized

Coherence

•Articulated progressions of topics and performances that are developmental and connected to other progressions

Application

•Being able to apply concepts and skills to new situations

Critical Areas in Mathematics

Grade	Priorities in Support of Rich Instruction and Expectations of Fluency and Conceptual Understanding
K–2	Addition and subtraction, measurement using whole number quantities
3–5	Multiplication and division of whole numbers and fractions
6	Ratios and proportional reasoning; early expressions and equations
7	Ratios and proportional reasoning; arithmetic of rational numbers
8	Linear algebra

Standards for Mathematical Practice

- ✓ Make sense of problems and persevere in solving them
- ✓ Reason abstractly and quantitatively
- ✓ Construct viable arguments and critique the reasoning of others
- ✓ Model with mathematics
- ✓ Use appropriate tools strategically
- ✓ Attend to precision
- ✓ Look for and make use of structure
- ✓ Look for and express regularity in repeated reasoning

Next Generation Assessments

The goal is to

develop assessments that don't simply measure whether students can fill in a bubble on a test,
but whether they possess 21st century skills like **problem-solving** and **critical thinking** and **entrepreneurship** and **creativity**.

2 Testing Consortia

- Smarter Balanced Assessment Consortium (SBAC)

- **Partnership for the Assessment of Readiness for College and Careers (PARCC)**

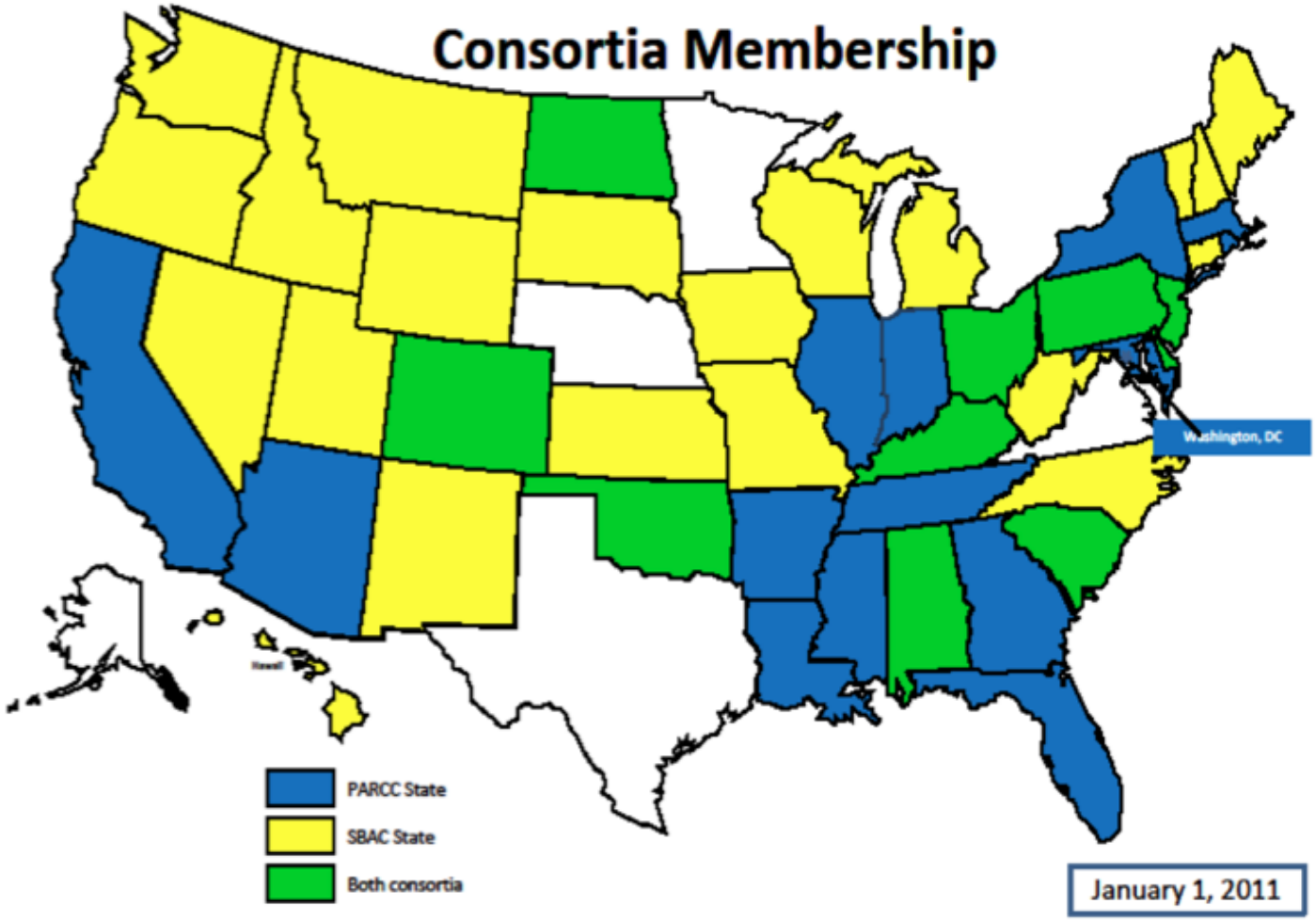
PARCC
Partnership for Assessment of Readiness for College and Careers

New assessments will be ready by 2014-2015

PARCC

Partnership for Assessment of Readiness for College and Careers

PARCC and SBAC Consortia Membership



The PARCC Goals

1. Create high-quality assessments
2. Build a pathway to college and career readiness for ***all*** students
3. Support educators in the classroom
4. Develop 21st century, technology-based assessments
5. Advance accountability at all levels

Assessments will include sophisticated items, challenging performance tasks and innovative, computer-enhanced items.

PARCC
Partnership for Assessment of Readiness for College and Careers

What about students with disabilities or English learners?

"PARCC will design assessment items so that students with disabilities and English learners, who have a wide range of cognitive abilities, content knowledge and English proficiency, will be able to demonstrate what they know and can do."

PARCC Grant – page 74

PARCC
Partnership for Assessment of Readiness for College and Careers

What about students with disabilities or English learners?

- Audio files could be presented in text or image formats or with *signing avatars*.
- Video can include *closed captioning* or rich description.
- *Text-to-speech* and screen readers can provide auditory access to item content.
- *Multiple language dictionaries* can be made available for vocabulary support.

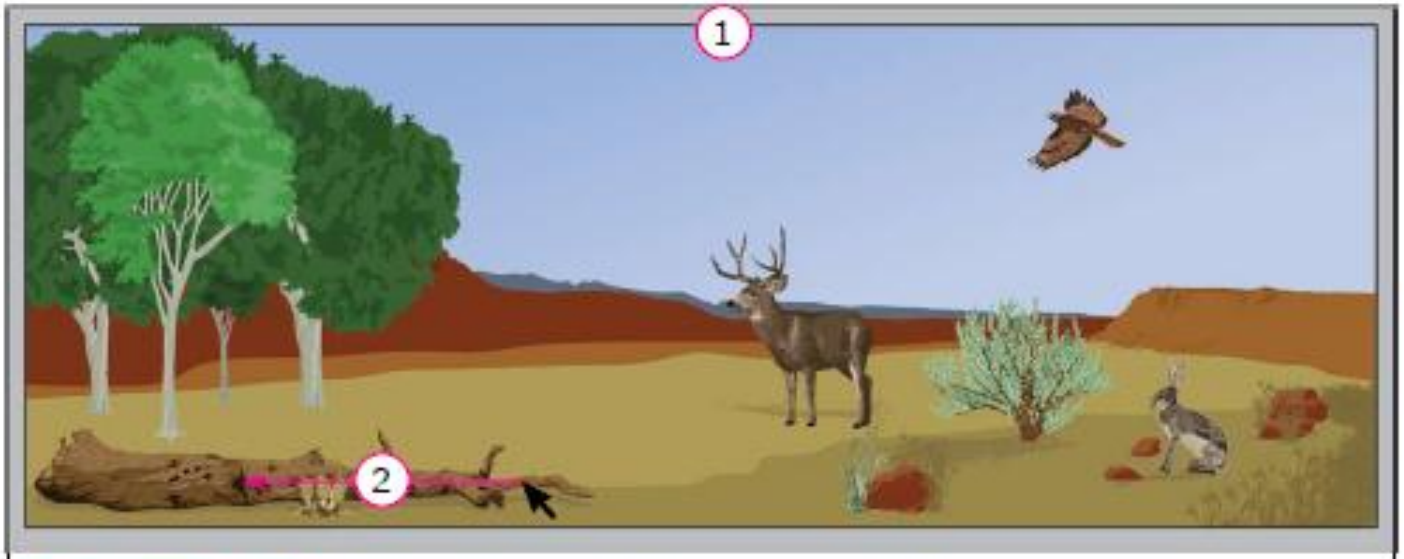
The following slides contain some examples of what assessment items MIGHT look like.

No sample items have been released, this is based on descriptions in the PARCC grant application.

Look carefully at the Utah ecosystem shown. Sort the organisms in the ecosystem into three groups: producers, consumers, and decomposers.

There are two ways to explore the scene.
1. Move the mouse cursor over the scene to view organisms more closely.
2. Hover the mouse cursor over the name of an organism in the Word Bank to highlight the organism in the ecosystem.

Click and drag the names of organisms from the Word Bank to the correct places in the chart below.
- You may move the words in the chart after you have placed them.
- To complete the question, place all the organisms in the chart.

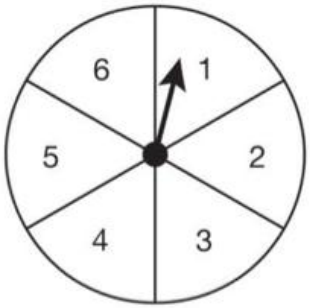


Word Bank
Bacteria
Cottonwood
Fungi
Grasses
Jackrabbit
Mule deer
Red-tailed hawk
Sagebrush

Producers	Consumers	Decomposers

Clear all

You will now conduct an experiment by spinning the spinner 20 times. Use the spinner below to conduct the experiment. Use the spin button to run each trial, then tabulate the results on your scratch paper.



Spin

b. Create a frequency table in the template below that shows the results of the spins. Provide appropriate labels for the table.

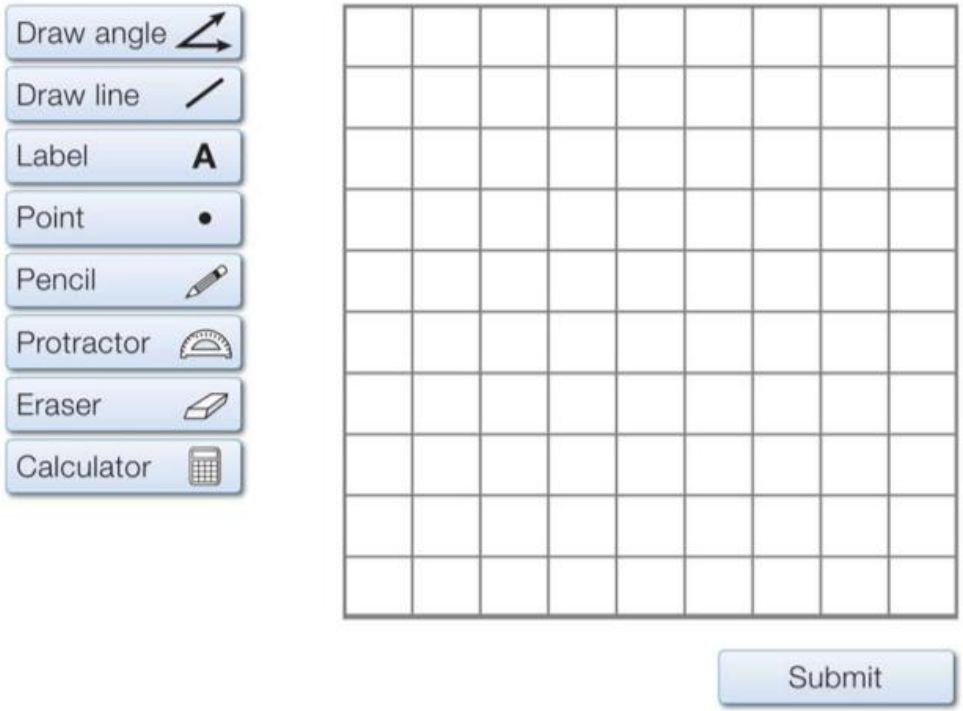
Submit

(*continued*)

The Hardwood Furniture Company manufactures small tables and chairs. It costs \$30 to make each table and \$20 to make each chair. The amount available to produce all the tables and chairs in one week is \$1,200. Let t represent the number of tables produced and c represent the number of chairs produced.

a. The equation for the cost of making furniture for one week is $30t + 20c = 1{,}200$. On the grid below, construct a graph of this equation (with correct labels and scales).

b. The Hardwood Furniture Company always produces two chairs with each table. Write an equation that represents the number of chairs (c) in terms of the number of tables (t). Graph and label this equation on the same grid used for **part a**.



(*continued*)

*Watch the video of an actual roller coaster ride and the animation showing the same roller coaster. You will be asked to determine at what point the roller coaster car has the most **kinetic** energy.*

Select the activity you would like to do. Then use controls below the images to view the video or the animation:

At what point does the roller coaster car have the greatest amount of kinetic energy?

To answer, select "Answer Space." Then click on the red roller coaster track in the answer space to show the correct location. To change your answer, click on a different point along the red roller coaster track.

Gas Bills, Heating Degree Days, and Energy Efficiency

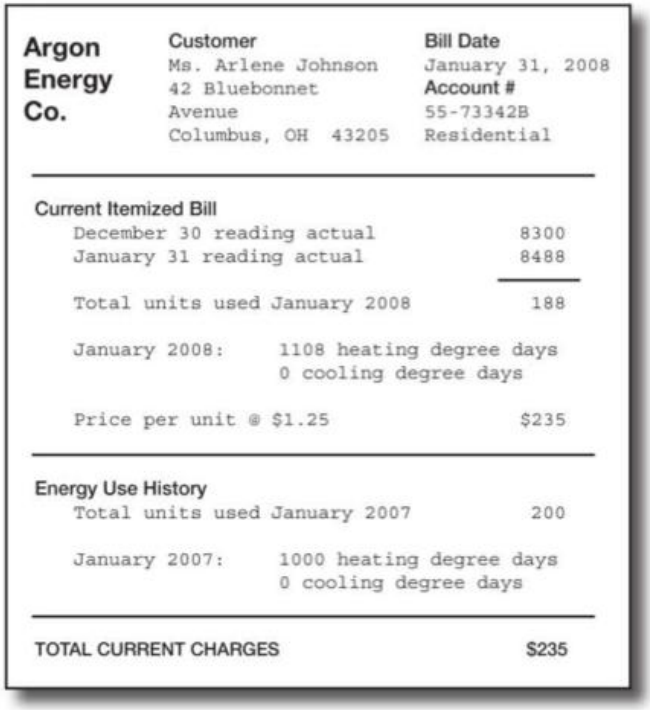
Here is a typical story about an Ohio family concerned with saving money and energy by better insulating their house.

Kevin and Shana Johnson's mother was surprised by some very high gas heating bills during the winter months of 2007. To improve the energy efficiency of her house, Ms. Johnson found a contractor who installed new insulation and sealed some of her windows. He charged her $600 for this work and told her he was pretty sure that her gas bills would go down by "at least 10 percent each year." Since she had spent nearly $1,500 to keep her house warm the previous winter, she expected her investment would conserve enough energy to save at least $150 each winter (10% of $1,500) on her gas bills.

Ms. Johnson's gas bill in January 2007 was $240. When she got the bill for January 2008, she was stunned that the new bill was $235. If the new insulation was going to save only $5 each month, it was going to take a very long time to earn back the $600 she had spent. So she called the insulation contractor to see if he had an explanation for what might have gone wrong. The contractor pointed out that the month of January had been very cold this year and that the rates had gone up from last year. He said her bill was probably at least 10% less than it would have been without the new insulation and window sealing.

Ms. Johnson compared her January bill from 2008 to her January bill from 2007. She found out that she had used 200 units of heat in January of 2007 and was charged $1.20 per unit (total = $240). In 2008, she had used 188 units of heat but was charged $1.25 per unit (total = $235) because gas prices were higher in 2008. She found out the average temperature in Ohio in January 2007 had been 32.9 degrees, and in January of 2008, the average temperature was more than 4 degrees colder, 28.7 degrees. Ms. Johnson realized she was doing well to have used less energy (188 units versus 200 units), especially in a month when it had been colder than the previous year.

Since she used gas for heating only, Ms. Johnson wanted a better estimate of the savings due to the additional insulation and window sealing. She asked Kevin and Shana to look into whether the "heating degree days" listed on the bill might provide some insight.



Argon Energy Co.

Customer
Ms. Arlene Johnson
42 Bluebonnet Avenue
Columbus, OH 43205

Bill Date
January 31, 2008
Account #
55-73342B
Residential

Current Itemized Bill

December 30 reading actual	8300
January 31 reading actual	8488
Total units used January 2008	188
January 2008: 1108 heating degree days 0 cooling degree days	
Price per unit @ $1.25	$235

Energy Use History

Total units used January 2007	200
January 2007: 1000 heating degree days 0 cooling degree days	

TOTAL CURRENT CHARGES $235

(*continued*)

a. Assess the cost-effectiveness of Ms. Johnson's new insulation and window sealing. You will need to research on "heating degree days" on the internet. In your response, you must do the following:

- Compare Ms. Johnson's gas bills from January 2007 and January 2008.
- Explain Ms. Johnson's savings after the insulation and sealing.
- Identify circumstances under which Ms. Johnson's January 2008 gas bill would have been at least 10% less than her January 2007 bill.
- Decide if the insulation and sealing work on Ms. Johnson's house was cost-effective and provide evidence for this decision.

Enter response here

Submit

(*continued*)

Want more information?

bit.ly/uacc