Illinois State Board of Education

PARCC
Partnership for Assessment of Readiness for College and Careers

A New Vision of Assessment:
Texts Worth Reading
Problems Worth Solving
Tests Worth Taking

November, 2013

What Is PARCC?

The Partnership for Assessment of Readiness for College and Careers:

- Made up of **19 states + DC and US Virgin Islands**
  - **KY and PA are participating states**
- Developing common, high-quality **math** and **English language arts (ELA) tests** for **grades 3–11**
  - Computer-based and linked to what students need to know for college and careers
  - For use starting in the 2014–15 school year

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Why New Assessments *Now*?

The Common Core State Standards are here and better standards require better tests.

Unlike many current tests, PARCC tests will be ***engaging*** and will test the ***critical-thinking*** and ***problem-solving skills*** students need to succeed in school and life.

Validity of interpretation for large-scale assessment data rests squarely on the close alignment of assessment items with curriculum.

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Assessment Overview

Diagnostic (2-8) and Formative (K-1) Assessment
- Early indicator of student knowledge and Non-summative

Mid-Year Assessment
- Performance-based
- Emphasis on hard-to-measure standards
- Potentially summative

Performance-Based Assessment (PBA)
- Extended tasks
- Applications of concepts and skills
- Required

End-of-Year Assessment
- Innovative, computer-based items
- Required

2 Non-summative Optional Assessments/Flexible Administration

2 Summative Required Assessments
From these administrations, districts are provided, College and Career "On-Track" determination

Speaking And Listening Assessment
- Locally scored
- Non-summative, required

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What are Performance Level Descriptors?

Performance Level Descriptors or **PLDs** describe what students at each performance level know and can do relative to grade-level or course content standards assessed.

Claims for ELA/Literacy

ELA/Literacy for Grades 3–11

"On Track" Master Claim/Reporting Category:

Students are "on track" to college and career readiness in ELA/Literacy.

Major Claim: Reading Complex Text

Students read and comprehend a range of sufficiently complex texts independently.

Major Claim: Writing

Students write effectively when using and/or analyzing sources.

SC: Vocabulary Interpretation and Use (RL/RI.X.4 and L.X.4-6)

Students use context to determine the meaning of words and phrases.

SC: Reading Literature (RL.X.1-10)

Students demonstrate comprehension and draw evidence from readings of grade-level, complex literary text.

SC: Reading Informational Text (RI.X.1-10)

Students demonstrate comprehension and draw evidence from readings of grade-level, complex informational texts.

SC: Written Expression (W.X.1-10)

Students produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.

SC: Conventions and Knowledge of Language (L.X.1-3)

Students demonstrate knowledge of conventions and other important elements of language.

SC: Research (data taken from Research Simulation Task)

Students build and present knowledge through integration, comparison, and synthesis of ideas

Looking at the PLDs: Written Expression

This row provides the sub-claim being viewed

This row provides the level being described

This row provides information about the patterns displayed by students in writing at this level

Writing Sub-Claim for Written Expression: Students produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.	
EVIDENCES: Students are expected to produce responses that demonstrate the skills and content listed in the evidence tables at the accuracy level and with the quality of evidence as described for students at each level.	**See Writing Evidence Table** http://www.parcconline.org/assessment-blueprints-test-specs

Level 5	Level 4	Level 3	Level 2
A student who achieves at **Level 5** demonstrates distinguished command of the grade-level standards.	A student who achieves at **Level 4** demonstrates strong command of the grade-level standards.	A student who achieves at **Level 3** demonstrates moderate command of the grade-level standards.	A student who achieves at **Level 2** demonstrates partial command of the grade-level standards.
In **writing**, students address the prompts and consistently provide effective and comprehensive development of ideas, including when drawing evidence from multiple sources, while demonstrating effective coherence, clarity, and/or cohesion. The student: • Provides effective and comprehensive development of the claim, topic, and/or narrative elements, using clear convincing reasoning, details, text-based evidence, and/or description. • Develops claim, topic, and/or narrative elements consistently appropriate to the task, purpose, and audience. • Demonstrates purposeful coherence, clarity, and cohesion and includes a strong introduction, conclusion, and a logical, well-executed progression of ideas. • Establishes and maintains an effective style, while attending to the norms and conventions of the discipline. • Effectively draws evidence from literary or informational texts to support analysis, reflection, and research. • Includes precise language consistently, including descriptive words and phrases, sensory details, linking and transitional words, words to indicate tone, and/or domain-specific vocabulary.	In **writing**, students address the prompts and provide effective development of ideas, including when drawing evidence from multiple sources, while demonstrating effective coherence, clarity, and/or cohesion. The student: • Provides effective development of the claim, topic, and/or narrative elements, using clear reasoning, details, text-based evidence, and/or description. • Develops claim, topic, and/or narrative elements in a manner that is largely appropriate to the task, purpose, and audience. • Demonstrates a great deal of coherence, clarity, and cohesion and includes an introduction, conclusion, and a logical progression of ideas. • Establishes and maintains an effective style, while attending to the norms and conventions of the discipline. • Effectively draws evidence from literary or informational texts to support analysis, reflection, and research. • Includes mostly precise language including descriptive words and phrases, sensory details, linking and transitional words, words to indicate tone, and/or domain-specific vocabulary.	In **writing**, students address the prompts and provide adequate development of ideas, including when drawing evidence from multiple sources, while demonstrating coherence, clarity, and/or cohesion. The student: • Provides some development of the claim, topic, and/or narrative elements, using some reasoning, details, text-based evidence, and/or description. • Develops claim, topic, and/or narrative elements in a manner that is somewhat appropriate to the task, purpose, and audience. • Demonstrates some coherence, clarity, and cohesion and includes an introduction, conclusion, and logically grouped ideas. • Establishes and maintains a mostly effective style, while attending to the norms and conventions of the discipline. • Draws evidence from literary or informational texts to support analysis, reflection, and research. • Includes some precise language, including descriptive words and phrases, sensory details, linking and transitional words, words to indicate tone, and/or domain-specific vocabulary.	In **writing**, students address the prompts and provide partial development of ideas, including when drawing evidence from multiple sources, while minimally demonstrating limited coherence, clarity, and/or cohesion. The student: • Provides minimal development of the claim, topic, and/or narrative elements, using limited reasoning, details, text-based evidence, and/or description. • Develops claim, topic, and/or narrative elements in a manner that is limited in its appropriateness to the task, purpose, and audience. • Demonstrates limited coherence, clarity, and/or cohesion, making the writer's progression of ideas somewhat unclear. • Has a style that has limited effectiveness, with limited awareness of the norms of the discipline. • Draws minimal evidence from literary or informational texts to support analysis, reflection, and research. • Includes limited descriptions, sensory details, linking or transitional words, words to indicate tone, or domain-specific vocabulary.

Claims for Mathematics

Master Claim: Students are on-track or ready for college and careers

Sub-claim A: Students **solve problems involving the major content** for their grade level with connections to practices

Sub-Claim B: Students **solve problems involving the additional and supporting content** for their grade level with connections to practices

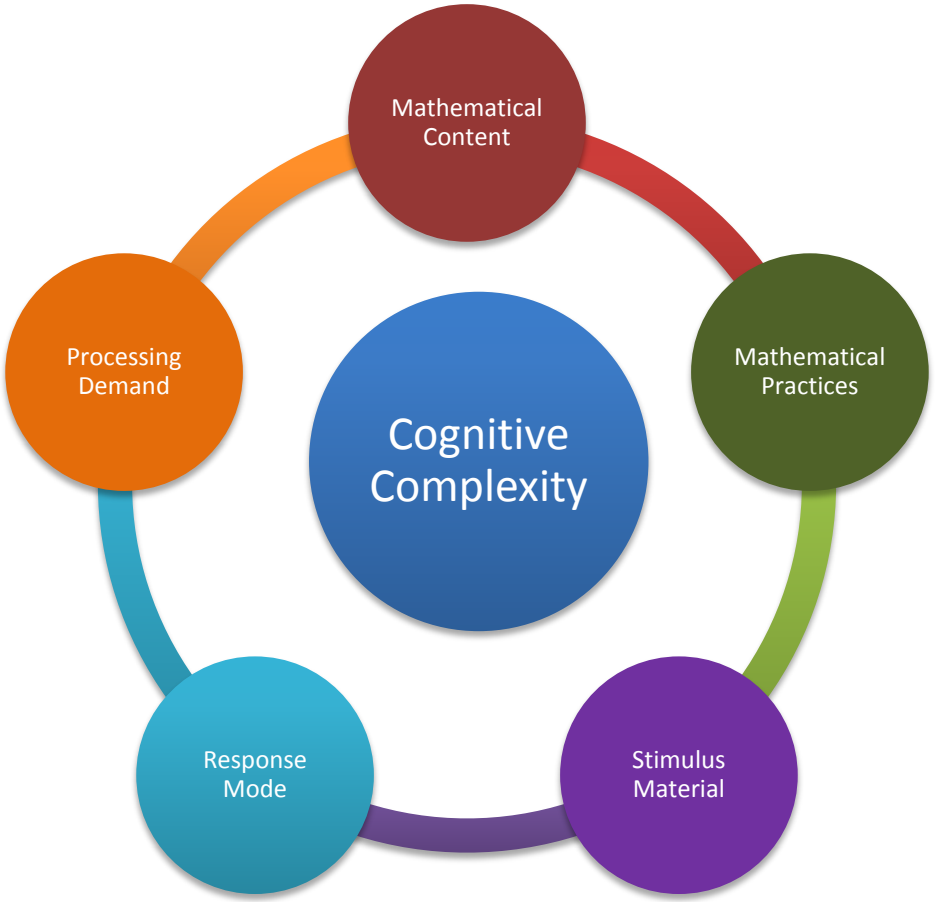
Sub-claim C: Students **express mathematical reasoning** by constructing mathematical arguments and critiques

Sub-Claim D: Students solve real world problems engaging particularly in the **modeling practice**

Sub-Claim E: Student **demonstrate fluency** in areas set forth in the Standards for Content in grades 3-6

Factors Determining Performance Levels (Cognitive Complexity)

1. Mathematical Content
2. Mathematical Practices
3. Stimulus Material
4. Response Mode
5. Processing Demand



For further reading on the PARCC Cognitive Complexity Framework see, " **Proposed Sources of Cognitive Complexity in PARCC Items and Tasks: Mathematics "** Aug. 31, 2012

Looking at the PLDs: Mathematics

This row provides the sub-claim being viewed

This row provides the level being described

This row gives the Conceptual Concept the PLD is based on

	Math III: Sub-Claim A The student solves problems involving the Major Content for the grade/course with connections to the Standards for Mathematical Practice.			
	Level 5: Distinguished Command	**Level 4: Strong Command**	**Level 3: Moderate Command**	**Level 2: Partial Command**
Equivalent Expressions A-SSE.2-3 A-SSE.2-6	Uses the structure of polynomial, exponential and rational expressions to create equivalent expressions in solving mathematical problems with **three or more steps** required.	Uses the structure of polynomial, exponential and rational expressions to create equivalent **expressions that aid in solving mathematical problems with two steps required.**	Uses the structure of polynomial, exponential **and rational** expressions to create equivalent expressions.	Uses the structure of polynomial and exponential expressions to create equivalent expressions.
Interpreting Functions A-APR.2 A-APR.3-1 F-IF.4-5	Uses mathematical properties and relationships to reveal key features of polynomial, rational, trigonometric and logarithmic functions to sketch graphs and identify characteristics of the relationship between two quantities. **Identifies how changing the parameters of the function impacts key features of the graph.** Identifies zeros and sketches graphs of quadratics and cubics, applying the remainder theorem where appropriate.	Uses mathematical properties and relationships to reveal key features of polynomial, rational, trigonometric and logarithmic functions to sketch graphs **and identify characteristics of the relationship between two quantities.** Identifies zeros and sketches graphs of quadratics and cubics, **applying the remainder theorem where appropriate.**	**Interprets key features of graphs and tables**, and uses mathematical properties and relationships to reveal key features of polynomial and rational functions to sketch graphs. Identifies zeros **and sketches graphs** of easily factorable quadratics and cubics.	Uses provided mathematical properties and relationships to reveal key features of polynomial functions to sketch graphs. Identifies zeros of easily factorable quadratics and cubics.

A local mini-golf course charges $5 per person to play a round of golf, and the course sells 120 rounds of golf per week. The manager of the course studied the effect of raising the price to increase revenue and found the following data.

The table shows the price, number of rounds of golf, and weekly revenue for different numbers of $0.25 increases in price.

Number of $0.25 price increases, n	0	1	2	3	4
Price of a round of golf, $p(n)$	$5.00	$5.25	$5.50	$5.75	$6.00
Number of rounds of golf sold, $s(n)$	120	117	114	111	108
Weekly revenue, $r(n)$	$600	$614.25	$627	$638.25	$648

Part A

Based on the data, write a linear function to model the price of one round of golf, $p(n)$, in terms of n, the number of $0.25 increases.

Based on the data, write a linear function to model the number of rounds of golf sold in a week, $s(n)$, in terms of n, the number of $0.25 increases.

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Part B

Based on the data, write a quadratic function for the weekly revenue in a week, $r(n)$, in terms of n, the number of $0.25 increases.

Use your quadratic function to determine the weekly revenue in a week when tickets cost $6.25.

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Part C

The maximum possible weekly revenue is what percent greater than the weekly revenue with no price increases? Justify your answer graphically or algebraically.

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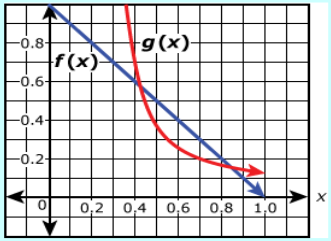
Mathematics Sample Item: Algebra 1/ Math 2

The functions $f(x) = 1 - x$ and $g(x) = \frac{0.11}{x^2}$ are defined for all values of $x > 0$. The graphs are shown in the coordinate plane.



Part A

Explain how you can use the graph to find the solution(s) of the equation $f(x) = g(x)$. In your answer, provide the approximate value(s) of the solution(s).

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Part B

Write the value(s) of $f(x)$ when x equals the solution(s) from Part A.

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Part C

Let the function $h(x)$ be defined as $h(x) = f(x) - g(x)$.

What are the coordinates of the point(s) on the graph of $h(x)$ when x equals the solution(s) from Part A? Explain your reasoning.

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Mathematics Sample Item: Algebra 2/ Math 3

Model Content Framework - Mathematics

The Real Number System
Extend the properties of exponents to rational exponents
Quantities
Reason quantitatively and sue units to solve problems
The Complex Number System
Perform arithmetic operations with complex numbers
Use complex numbers in polynomial identities and equations
Seeing Structure in Expressions
Interpret the structure of expressions
Write expressions in equivalent forms to solve problems

Major Content Supporting Content Additional Content

Mathematics Performance-based Assessment and End-of-Year Assessment

PARCC Subclaim	Percentage of Items on High School Assessments	Task Types
A: Solve problems with major content	39%	• Balance of conceptual understanding, fluency, and application • Can involve any or all mathematical practice standards
B: Solve problems with additional and supporting content	21%	• Balance of conceptual understanding, fluency, and application • Can involve any or all mathematical practice standards
C: Express mathematical reasoning	17%	• Each task calls for written arguments / justifications, critique of reasoning, or precision in mathematical statements • Can involve other mathematical practice standards
D: Solve real-world problems engaging in modeling	22%	• Each task calls for modeling/application in a real-world context or scenario • Can involve other mathematical practice standards

Prairie State Achievement Exam

- Approximately 50% of the items on the ACT Mathematics Test involve knowledge and skills
- Approximately 30% of items involve direct application
- Approximately 20% of the items involve understanding concepts/integrated conceptual understanding

ILS Goal	Percentage of Items on PSAE	Percentage of Items from ACT	Percentage of Items on WorkKeys
Goal #6 – Number Sense	29%	18%	63%
Goal #7 - Measurement	18%	11%	37%
Goal #8 - Algebra	32%	40%	0%
Goal #9 - Geometry	19%	24%	0%
Goal #10 – Data Analysis, Statistics, and Probability	4%	7%	0%

Grade 10 ELA Sample Task

Ovid's Metamorphoses: Daedalus and Icarus

But Daedalus abhorred the Isle of Crete—
and his long exile on that sea-girt shore,
increased the love of his own native place.
"Though Minos blocks escape by sea and land."
He said, "The unconfined skies remain
though Minos may be lord of all the world
his sceptre is not regnant of the air,
and by that untried way is our escape."
This said, he turned his mind to arts unknown
and nature unrevealed. He fashioned quills
and feathers in due order -- deftly formed
from small to large, as any rustic pipe
prom straws unequal slants. He bound with thread
the middle feathers, and the lower fixed
with pliant wax; till so, in gentle curves
arranged, he bent them to the shape of birds

While he was working, his son Icarus,
with smiling countenance and unaware
of danger to himself, perchance would chase
the feathers, ruffled by the shifting breeze,
or soften with his thumb the yellow wax,
and by his playfulness retard the work
his anxious father planned.
But when at last
the father finished it, he poised himself,
and lightly floating in the winnowed air
waved his great feathered wings with bird-like ease.
And, likewise he had fashioned for his son
such wings; before they ventured in the air
he said, "My son, I caution you to keep
the middle way, for if your pinions dip
too low the waters may impede your flight;
and if they soar too high the sun may scorch them

Grade 10 ELA Sample Task

Part A

Which of the following sentences best states an important theme about human behavior as described in Ovid's "Daedalus and Icarus"?

a. Striving to achieve one's dreams is a worthwhile endeavor.

b. The thoughtlessness of youth can have tragic results.

c. Imagination and creativity bring their own rewards

d. Everyone should learn from his or her mistakes.

Grade 10 ELA Sample Task

Part B

Select three pieces of evidence from Ovid's "Daedalus and Icarus" that support the answer to Part A.

a. "and by his playfulness retard the work/his anxious father planned" (lines 310-311)

b. "But when at last/the father finished it, he poised himself" (lines 312-313).

c. "he fitted on his son the plumed wings/ with trembling hands, while down his withered cheeks/the tears were falling" (lines 327-329).

d. "Proud of his success/the foolish Icarus forsook his guide" (lines 348-349)."

e. "and, bold in vanity, began to soar/rising upon his wings to touch the skies"

f. "and as the years went by the gifted youth/began to rival his instructor's art "

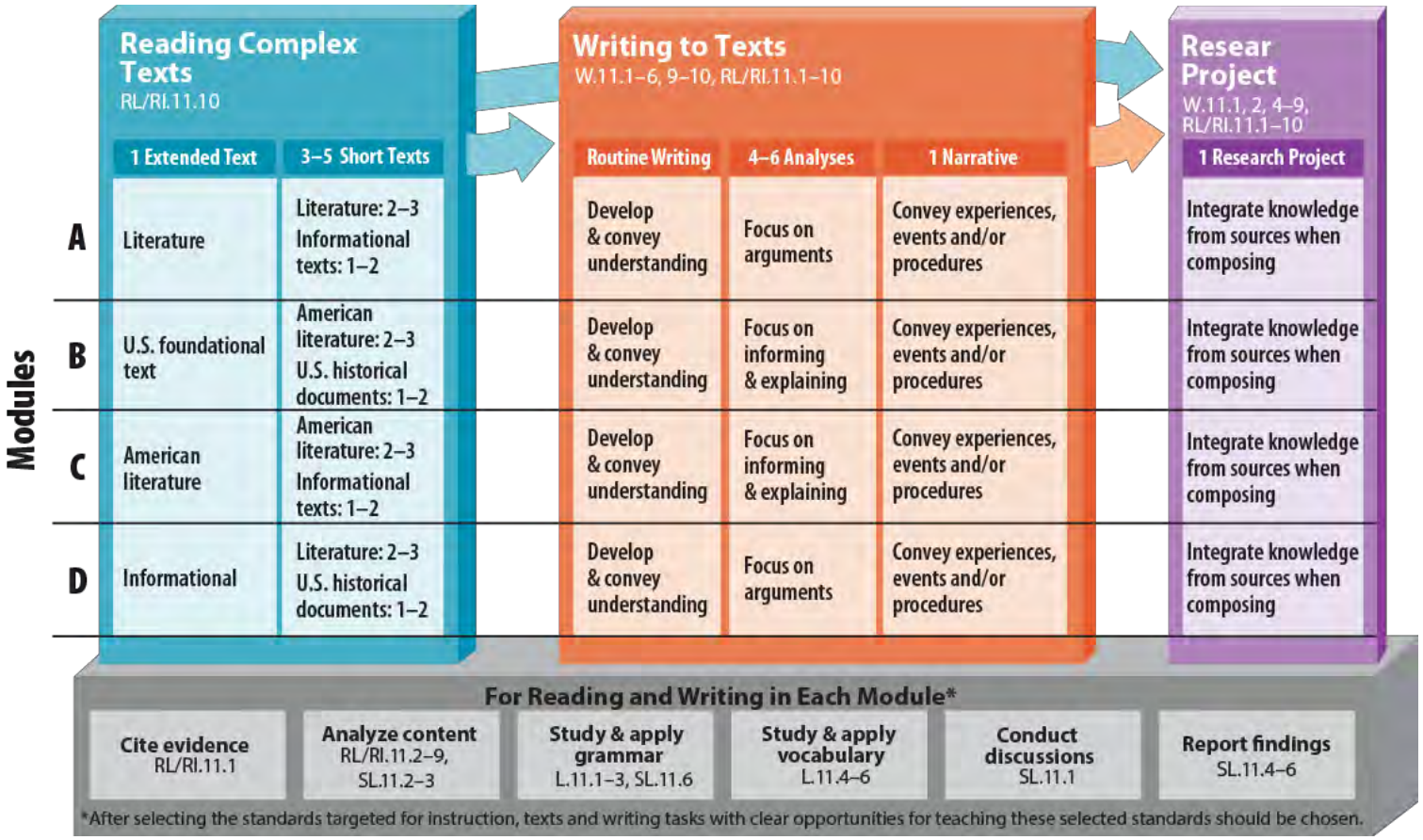
g. "Wherefore Daedalus/enraged and envious, sought to slay the youth "

h. "The Partridge hides/in shaded places by the leafy trees? for it is mindful of its former fall "

ELA/Literacy Performance-based Assessment Item Set

- Students read extended literature text
- Students respond to 1 item measuring reading subclaim for vocabulary
- Students respond to 2 Evidence-based Selected Response (EBSR) or Technology-enhanced (TECR) items
- Students read 1 additional literature text
- Students respond to 1 item measuring reading subclaim for vocabulary
- Students respond to 2 EBSR or TECR items
- Students respond to 1 Prose Constructed Response (PCR)

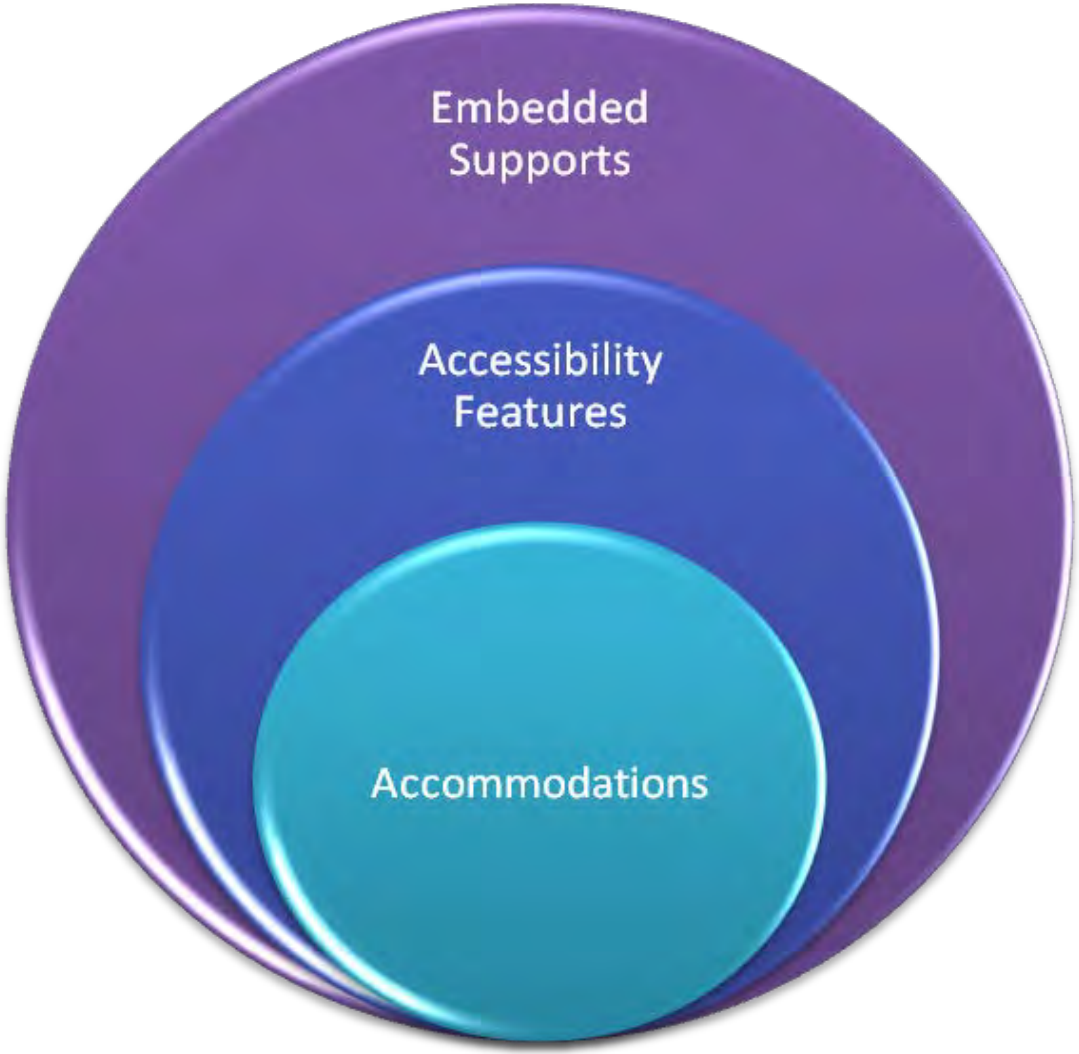
ELA Content Frameworks



ELA/Literacy End-of-Year Test Set

- 4 EBSR/TECR items tied to 1 short/medium literary text
- 6 EBSR/TECR items tied to 1 medium/long length literary text
- 5 EBSR/TECR items tied to 1 short/medium length informational text
- 5 EBSR/TECR items tied to 1 short/medium informational text
- 6 EBSR/TECR items tied to 1 medium/long information text
  - 1 informational text is literary nonfiction
  - 1 informational text is history/social science OR science/technical
  - 1 informational text is any one of the above

PARCC Comprehensive Accessibility Policies



Accessibility Features for All Students

- Answer Masking
- Audio Amplification
- Background/Font Color (Color Contrast)
- Eliminate Answer Choices
- Flag Items for Review
- General Masking
- Highlight Tool
- Headphones or Noise Buffers
- Line Reader Tool
- Magnification/Enlargement Device
- NotePad
- Pop-up Glossary
- Text-to-Speech for the Mathematics Assessments
- Writing Tools

Accommodations

- Presentation accommodations
  - Assistive technology
  - Closed captioning of multimedia
  - Text to speech on ELA/literacy items
- Response accommodations
  - Braille note taker
  - Speech to text
  - Calculation device (outside the tools provided in technology platform)
- Timing and setting accommodations