How the Georgia Formative Item Bank can Tell you What Students Know and are Able to Do

More Formative Items for Classroom Teachers

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Goals of the Session

- Share one of the support tools that are available for all Georgia teachers through GADOE's assessment initiatives AND information on how it has been expanded since 2012.
- Discuss how this assessment initiative facilitates work towards preparing students to achieve proficiency
- Explain how the assessment initiative connects to current educational improvement efforts in Georgia
- Provide information to Georgia educators on how to access and use the assessment initiative tools

Purpose of Georgia's Assessment Initiatives

- To provide assessment resources that reflect the rigor of Georgia's state-mandated content standards
- To balance the use of formative and summative assessments in the classroom
- To promote student learning
- To sustain implementation of Georgia's rigorous content standards

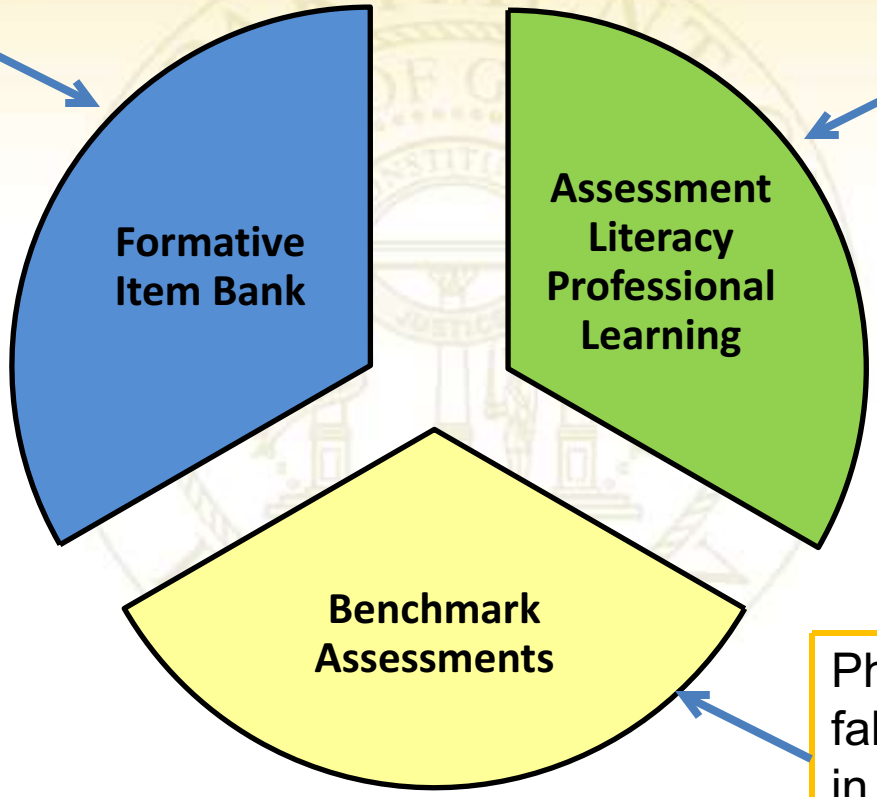
Inside the Formative Assessment Toolbox

- Development of a three-prong toolkit to support teachers and leaders in promoting student learning
  - An expansive bank of formative instructional assessment items/tasks based on CCGPS in ELA and Mathematics as a teacher resource - **Phase I Release Fall 2012; Phase II Release NOW!**
  - A set of benchmark assessments in ELA and Math for grades 1 through HS and selected grades/courses for Science and Social studies – **Initial Pilot Fall 2013; Second Pilot Spring 2014**
  - An assessment literacy professional learning opportunity that focuses on implementation of research-based formative instructional practices (FIP) – **Initial Pilot January/February 2013 with Statewide Launch Summer 2013**

Formative Assessment Initiatives

Bringing a Balanced Assessment Focus to the Classroom

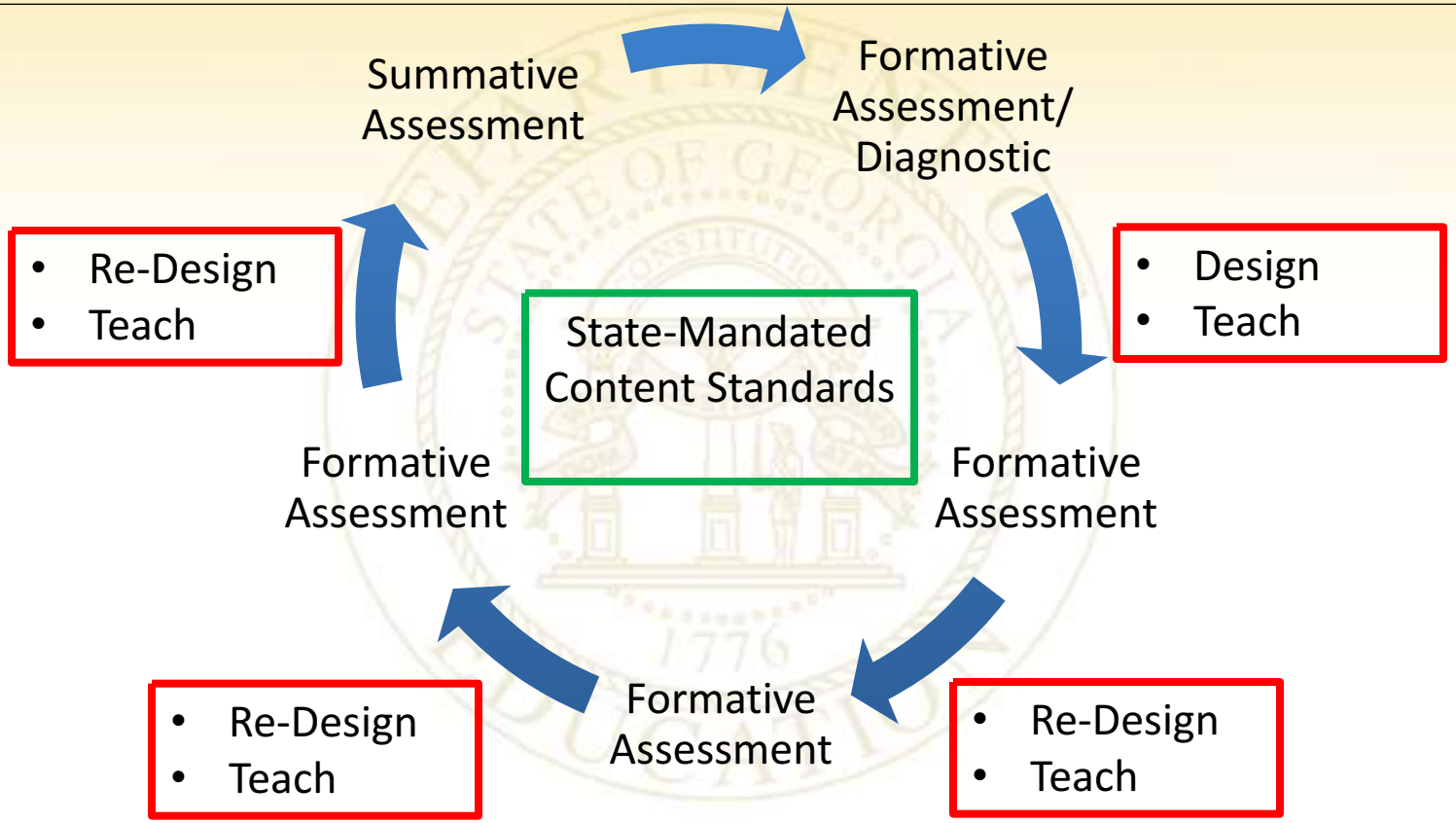
Phase I and Phase II items available in OAS now!



Pilot in winter 2013; Statewide launch in summer 2013

Phase I item pilot in fall 2013; Phase II pilot in winter 2014

Formative Instructional Practices—Formative Assessment in Action



Re-Design might involve changing activities, instructional techniques, assessment methods or content, and/or differentiation based upon student needs.

Major reviews of research on the effects of formative assessment indicate that it might be one of the more powerful weapons in a teacher's arsenal."

(Robert Marzano, 2006)

The Georgia Formative Item Bank

Purpose of the Formative Item Bank

The purpose of the Formative Item Bank is to provide items and tasks used to assess students' knowledge while they are learning the state-mandated standards. The items will provide an opportunity for students to show what they know and show teachers what students do and do not understand.

Formative Item Bank Use

The Georgia Formative Item Bank can be used in order to:

- Prepare students for the more rigorous expectations of the state-mandated standards.
  - To show these expectations, students must engage with a variety of item formats beyond multiple-choice
- Provide students practice with open- ended and constructed-response items
- Provide educators insight and access to evaluating open-ended response items

The Georgia Formative Item Bank

- Bank of over 1600+ classroom assessment items aligned with the state's content standards in ELA and Mathematics
- Created for exclusive use in Georgia classrooms
- Piloted with Georgia students
- Reviewed by Georgia educators
- Housed in the Georgia Online Assessment System (OAS)
- Preponderance of items at DOK 3 and 4
- Item, rubric and scored student sample papers provided
- Available to ALL Georgia Teachers!
  - 1600+ items in OAS right now!!!

The Nature of Georgia's Formative Item Bank

- Items created for Georgia educators as an instructional resource to be used formatively during instruction
  - Provide information about student performance throughout the academic year to inform instruction and interventions
  - Reteach, remediate, move forward, enrich
  - Low stakes; grading discouraged
- Support Georgia educators foster learning with an informative tool that keeps students, parents, administrators and educators themselves informed of students' current position on the pathway to proficiency.

The Nature of Georgia's Formative Item Bank (continued)

- Aligned with state-mandated content standards in English Language Arts (ELA) and Mathematics, grades 3 – HS
- Various formats, but primarily constructed - response, in order to measure the full expectations of what students need to know and be able to do to be on the trajectory of exiting high school college- and career-ready

Item Content

- Georgia's Content Standards
  - Mathematics: Grades 3 – 8; high school Coordinate Algebra, Analytic Geometry and Advanced Algebra
  - English/Language Arts (including Reading): Grades 3 – 8; high school 9th and 10th grade literature and American Literature
- Items aligned to multiple standards
  - One primary standard
  - One or more secondary standards
- Alignment verified by Georgia educators

Item Formats

- Multiple Choice
- Mostly Constructed-Response
  - Extended Response
  - Scaffolded
- Constructed-response items require students to provide explanations/rationales, provide evidence, and/or to show work
- Preponderance of items at DOK 3 and 4
- Provide teachers with evidence of true student understanding of content and process

Multiple Choice Items

- Have four answer options
- Distractors (incorrect answers) should be believable and represent common conceptual and/or application errors
- Distractor rationales should assist teachers to identify specific student misconceptions to inform instruction

Extended Response Items

- May address multiple standards, multiple domains, and/or multiple areas of the curriculum
- May allow for multiple correct responses and/or varying methods of arriving at a correct answer
- Scored through use of a rubric and associated student exemplars

Example of Extended Response Item
ELA—Grades 9 – 10

9th/10th Grade ELA Standards RI.9.8; RI9.1; L9.1; L9.2; DOK 4

Passage Title: Juliette Gordon Lowe

Part A

Identify at least two arguments Juliette Gordon Low used as reasons to begin the Girl Scouts.

Part B

Evaluate whether or not these arguments are valid and whether there is enough evidence in the article to support them.

Be sure to complete ALL parts of the task. Use details from the text to support your answer. Answer with complete sentences, and use correct punctuation and grammar.

Example of Extended Response Item

Math—Advanced Algebra

Advanced Algebra, Standards A.REI.2; A.REI.4; A.APR.6, A.REI.1; DOK 3

Sreeja and Brandon solved the equation shown in different ways.

$$\frac{x^2 - 32}{x - 1} = 2x$$

Part A

Before solving the equation, what solution could Sreeja and Brandon identify as extraneous? Explain your reasoning.

Part B

Sreeja solved the equation by creating the proportion $\frac{x^2 - 32}{x - 1} = \frac{2x}{1}$.

Demonstrate how Sreeja used the proportion to solve the equation. In each step, explain the properties she used to determine the solution.

Part C

Brandon solved the equation by simplifying the left side of the equation first. Demonstrate how Brandon simplified the expression on the left and then solved the equation. In each step, explain the properties he used to determine the solution.

Be sure to complete ALL parts of the task.
Write your answer and show your work on the paper provided.
Do NOT type your answer in the text box below.

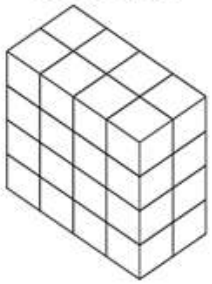
Scaffolded Items

- Include a sequence of items or tasks
- Designed to demonstrate deeper understanding
- May be multi-standard and multi-domain
- May guide a student to mapping out a response to a more extended task
- Scored through use of a rubric and associated student exemplars

Example of Scaffolded Item
Mathematics—Grade 5

40. Juan found the volume of a toy shoebox by stacking a set of 1-inch cubes inside.

Toy Shoebox



Juan completely filled the shoebox with no extra space. He used all of the cubes.

Part A

What is the volume of the shoebox? Explain your answer.Then, Juan took out $\frac{1}{4}$ of the cubes in the shoebox. How many cubes are still inside the shoebox? Show your work.

Part B

A second toy shoebox had different dimensions, but the same volume, as the first shoebox. What could be the dimensions of the second shoebox? Explain your answer using the volume formula of a prism.

Part C

A real shoebox had the following dimensions: 5 inches wide, 5 inches tall, and 14 inches deep. What is the volume of the real shoebox? How many 1-inch cubes would be needed to fill it? Show your work.

Be sure to complete ALL parts of the task.
Write your answer and show your work on the paper provided.
Do NOT type your answer in the text box below.

Rubrics

- Holistic
- 5-point scale (0 – 4)
  - 4: Thoroughly Demonstrated
  - 3: Clearly Demonstrated
  - 2: Basically Demonstrated
  - 1: Minimally Demonstrated
  - 0: Incorrect or Irrelevant

Example of Rubric

Mathematics—Grade 5

Rubric		
Score	**Designation**	**Description**
4	Thoroughly Demonstrated	The student successfully completes all elements of the item by demonstrating knowledge and application of measuring volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units (5.MD.4), applying the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems (5.MD.5b), and adding, subtracting, multiplying, and dividing decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relating the strategy to a written method and explain the reasoning used (5.NBT.7).
3	Clearly Demonstrated	The student shows clear understanding of the standards listed above, but one of the explanations or work shown is insufficient or weak Or All parts of the item are correctly done except for a minor computational error Or The student successfully completes two of the three parts of the item and partially completes the other part.
2	Basically Demonstrated	The student shows basic understanding of the standards listed above, but two of the explanations or work shown are insufficient or weak Or The student successfully completes one of the three parts of the item and partially completes the other parts.
1	Minimally Demonstrated	The student shows minimal understanding of the standards listed above and completes only one of the three parts Or The student partially completes two of the three parts.
0	Incorrect or irrelevant	The response is incorrect or irrelevant to the skill or concept being measured.

Exemplar Papers

- Prototype answer – the "ideal" response
- Set of responses from actual Georgia students, collected during item pilots
- Samples scored by trained raters using rubric
- Papers allow teachers to review and compare their own students' work to the sample responses for each score point
  - Helps standardize expectations of the standards
- Score point and annotations provided for each sample item response

Note: The pilot was conducted using standard administration procedures in order to ensure that results were comparable across the state. When items/tasks are used during instruction, these administration rules do not have to apply and student results may vary; thus, teachers may want to modify the rubrics and even raise expectations. ***Rubrics and exemplars should remain focused on high expectations.***

Exemplar Paper

Mathematics—Grade 5

Exemplar

Part A

32 cubic inches.

24 cubes; $\frac{33}{4} = 32$ $\frac{}{1\cancel{4}} \times \frac{\cancel{32}^{8}}{11} = \frac{24}{}$ 24 or $\frac{1}{4} = 32832824$

Part B

First shoebox: $V = lwh = $,so44232; 32 is the volume of the first shoebox.

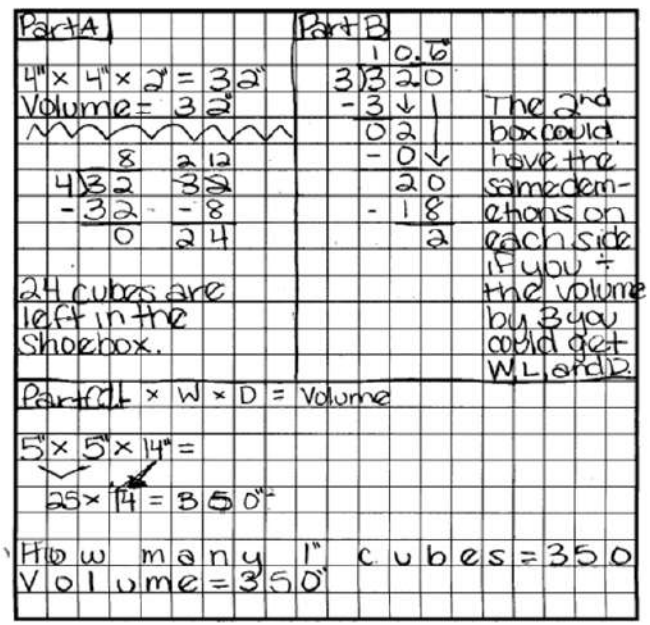
Possible dimensions for the second shoebox are 8 by 2 by 2 OR 16 by 2 by 1.

82232;162132.

Part C

55142514350 cubic inches. A total of 350 inch cubes would be needed to fill a real shoebox.

Student Anchor Papers



Student Response

The student demonstrates basic understanding of the standards by performing correct work and getting correct totals on Parts A and C. Both parts are missing the designation of "cubic inches", however this does not lower this response to a 1. Part B has no correct work, and therefore does not add to the score.

Scorer's Annotation

Score 2

Score based upon rubric

Example Item Set
Grade 5 Mathematics

Sample Item
Mathematics--Grade 5

5th Grade Mathematics Standards: 5.NBT.2; 5.NBT.5; DOK 2 (UIN: M0513126)

A car-sized robot named "Curiosity" is exploring the surface of Mars. It beamed a song from Mars back to Earth over a distance of approximately 3.3×10^8 miles. The robot also took pictures of a mountain that is approximately 3 miles high.

Part A
How many million miles did the song have to go from Mars back to Earth? Explain your work.

Part B
There are 5,280 feet in a mile. How many feet are equal to 3 miles? Show your work.

Be sure to complete ALL parts of the task.
Write your answer and show your work on the paper provided.
Do NOT type your answer in the text box below.

Rubric

Rubric		
Score	**Designation**	**Description**
4	Thoroughly Demonstrated	The student successfully completes all elements of the item by demonstrating knowledge and application of explaining patterns in the placement of the decimal point when a decimal is multiplied by a power of 10 (5.NBT.2) and fluently multiplying multi-digit whole numbers using the standard algorithm (5.NBT.5).
3	Clearly Demonstrated	The student demonstrates clear understanding of the standards listed, but required work or explanation for one part is insufficient or missing.
2	Basically Demonstrated	The student demonstrates basic understanding of the standards listed by completing one of the two parts correctly with required work or explanation Or The student answers both parts correctly, but required work for both is insufficient or missing.
1	Minimally Demonstrated	The student demonstrates minimal understanding of the standards but answers only one part correctly without work or explanation Or The student shows the appropriate work for both parts but is not able to get a correct answer for either part.
0	Incorrect or irrelevant	The response is incorrect or irrelevant to the skill or concept being measured.

Exemplar

Exemplar

Part A

$3.3 \times 10^8 = 330{,}000{,}000$

I moved the decimal point 8 places to the right.

330 million miles

I found millions place, and it has a 0, 10 millions place has 3, and hundred millions place has 3. So the number has 330 millions.

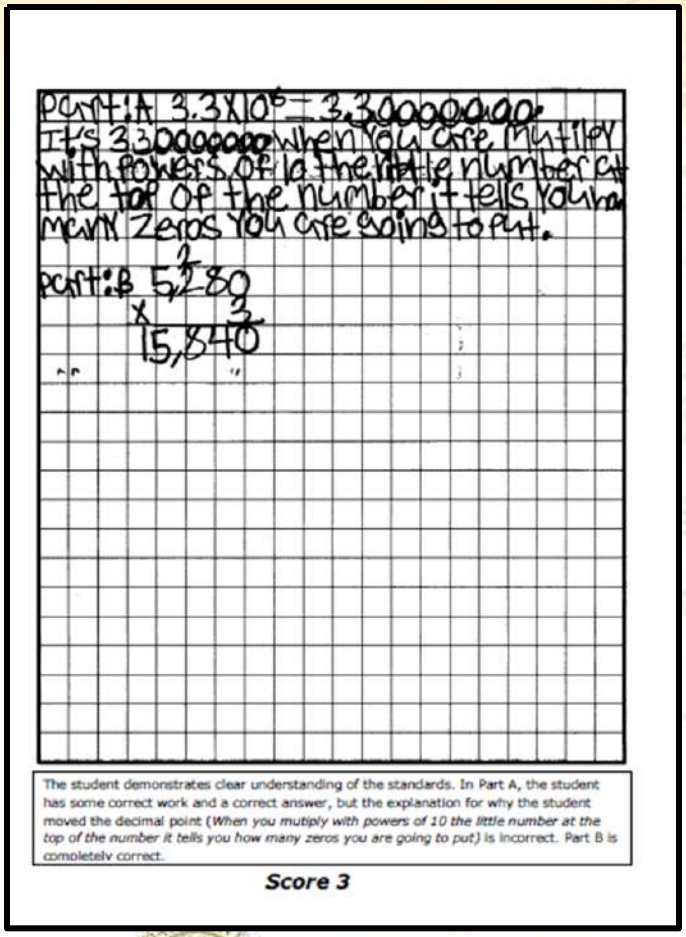
Part B

15,840 feet

$$\begin{array}{r} 5{,}280 \\ \times \quad 3 \\ \hline 15{,}840 \end{array}$$

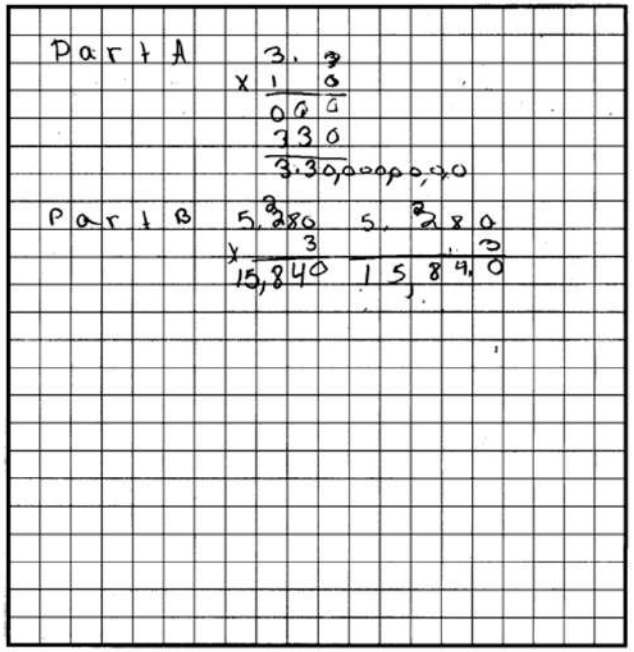
Score 4

Student Anchor Papers



The student demonstrates clear understanding of the standards. In Part A, the student has some correct work and a correct answer, but the explanation for why the student moved the decimal point (*When you mutiply with powers of 10 the little number at the top of the number it tells you how many zeros you are going to put)* is incorrect. Part B is completely correct.

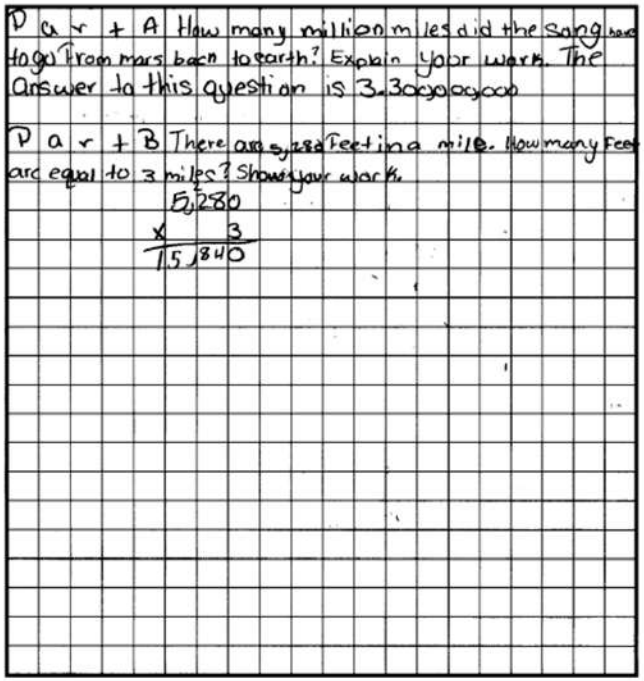
Score 3



The student has a basic understanding of the standards. Only Part B has correct work with a correct answer.

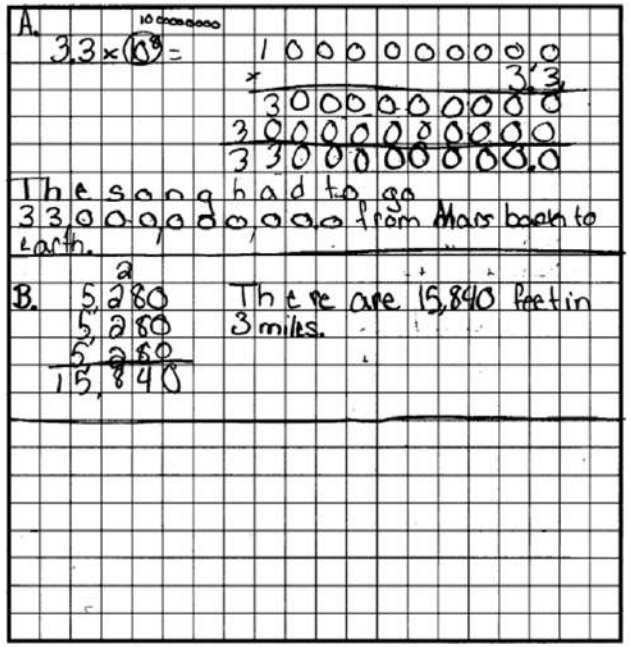
Score 2

Student Anchor Papers



The student has a basic understanding of the standards. Only Part B has correct work with a correct answer.

Score 2



The student has a basic understanding of the standards. Only Part B has correct work with a correct answer.

Score 2

Valuable Features of Formative Items – Mathematics

- Items include intentional focus on assessing processes used by students as well as the required content
- Items applied in a real-world context
- Writing requirements, such as explanations and reasoning
- Student responses on constructed-response items/tasks
  - make student knowledge and skills transparent to teachers
  - illuminate student misconceptions

Example Item Set
Grade 8 English/Language Arts

Paired Passages
Passage #1—Persuasive Essay

Stimulus: **If the stimulus is to contain art, complete the art page provided. In the stimulus box below place the art where applicable**

Please read both selections below and then answer the questions that follow.

Bacterial Warfare

We are at war with bacteria! We are using antibacterial sprays to disinfect surfaces, antibacterial soaps to wash our dishes, clothes, and bodies, and now we even carry little bottles of antibacterial gel called hand sanitizer so that we can clean our hands when soap and water are not available! We are so determined to kill the bacteria in our environment because they are germs and germs are bad, right? Well, that is not entirely true. While some bacteria can be harmful, others are actually helpful. Bacteria are unicellular organisms that can enter and reproduce inside of other organisms, called host organisms. Some bacteria infect their host organism by attacking cells or producing toxins that make the host sick. Bacteria are responsible for causing illnesses and diseases such as strep throat, ear infections, and food poisoning in humans and other animals. Disease-causing bacteria are the true germs, and they are the bacteria we are attempting to kill with all of our antibacterial cleaning products and antibiotic medications.

However, some of these cleaning products are killing bacteria that are beneficial to the environment in which they live. The anti-bacterial cleaning products we use can enter our water systems and can seep into the ground. Even the medications we take can kill helpful bacteria that we need in order to keep our bodies functioning properly. There are bacteria that live in our bodies and help us to digest our food. Scientists have found many ways to use bacteria for helping people and the environment. Medical experts make medicines and vaccines from bacteria. They even use some types of bacteria to make antibiotics that help kill harmful bacteria. We also use bacteria to help clean up oil spills and to purify dirty water.

Nitrogen-fixing bacteria live in the soil and in the roots of some plants where they create a kind of nitrogen that the plants can use for nourishment. These plants then make proteins that we can eat. Other beneficial types of bacteria that live in the soil are decomposers, meaning that they get their food by decomposing or breaking down dead organisms. Without decomposers like bacteria, the Earth would be covered with piles of dead plant and animal matter. Knowing that there are so many good, helpful bacteria living among us, maybe we should reconsider the war we are waging against these so-called germs.

Paired Passages
Passage #2—Informational Essay

Irradiated Food

"I am afraid that the experiments you quote, M. Pasteur, will turn against you. The world into which you wish to take us is really too fantastic."

—La Presse, 1860

Keeping food fresh for long periods of time has been a goal of mankind for thousands of years. In early history, salt was the most effective method of keeping food from spoiling. Food spoilage is caused by bacteria that eat the food and leave waste products. Those waste products are the cause of spoiled food's funny smells and tastes.

After Louis Pasteur's work with bacteria in the 1800s, scientists quickly determined that killing the microorganisms that cause spoilage would be the most effective way of preserving food. Techniques such as canning and pasteurization all killed the bacteria, allowing the food to stay fresh longer. Pickling involves using a liquid that is edible, but is also anti-microbial. Canning and pasteurization use high heat to kill bacteria in foods.

A recent addition to these techniques is that of irradiation. By passing high-energy, ionizing radiation through the food, many types of bacteria, parasites, and even insects are killed. The radiation can come from high-energy electrons or X-rays from a particle accelerator. Also, gamma rays from radioactive materials can be used. These types of radiation can easily pass through packaging. The food can be sealed and then irradiated. This prevents recontamination after the sterilization process.

An important advantage to irradiation is that the process does not generate any heat. So food is not "cooked" as during canning or pasteurization processes. Fresh fruits and vegetables can be processed without damaging them. Another advantage to this process is that it reduces the speed of ripening in fruits. This helps them stay fresh and sellable for a longer period of time.

Research has shown that the bacteria commonly associated with food-borne illness (such as Salmonella and E. coli) are very sensitive to radiation. Relatively little radiation can destroy them. However, these are not the same bacteria that cause food to spoil. The bacteria that cause food spoilage must be destroyed with higher doses of radiation. At the highest amount of radiation, packaged meat and poultry can be shelf-stable even without refrigeration.

The safety of irradiated food for human (and pet) consumption is very important. Many concerns have led to the banning of this useful process in several countries. However, current research has shown that those concerns are unfounded.

Scientific investigations of irradiated food have been ongoing since 1905. So far, there is no evidence that irradiation produces any form of toxicity in foods. The radiation level is low enough that it is physically impossible to make food radioactive. There is some minor loss of certain vitamins in the process. But the loss only affects approximately 10 percent of the total amount of vitamins in the food and is similar to the effect of cooking the food.

The irradiation of foods to extend shelf-life, kill micro- and macro-organisms, and slow the ripening process has a long and safe history. Hospitals, overseas transportation companies, and even the National Aeronautics and Space Administration routinely use irradiation to preserve foods and prevent disease from spreading by food.

Example Item

English Language Arts—Grade 8

8th Grade ELA Standards: RI.8.1; W.8.2; W.8.4; L.8.1; L.8.2; DOK 4

Consider the topic of protecting people from harmful bacteria. Select ideas from both "Bacterial Warfare" and "Irradiated Food" to organize into a multiple-paragraph essay that identifies and argues for the best ways to protect people from harmful bacteria.

Be sure to complete ALL parts of the task. Use details from the text to support your answer. Answer with complete sentences, and use correct punctuation and grammar.

Rubric

Rubric		
Score	**Designation**	**Description**
4	Thoroughly Demonstrated	The student demonstrates a thorough understanding of writing an informative text by selecting specific ideas and details from both "Bacterial Warfare" and "Irradiated Food" and organizing them into a well-developed multiple-paragraph essay on the topic of protecting people from harmful bacteria. The student uses complete sentences and correct punctuation and grammar.
3	Clearly Demonstrated	The student demonstrates a clear understanding of writing an informative text by using details from both "Bacterial Warfare" and "Irradiated Food" and organizing them into two or more detailed paragraphs on the topic of protecting people from harmful bacteria. The student uses complete sentences and correct punctuation and grammar in most of the writing.
2	Basically Demonstrated	The student demonstrates basic understanding of writing an informative text by discussing some details from "Bacterial Warfare" and "Irradiated Food" but the response may be limited to two paragraphs or less and may offer only general statements on the topic of protecting people from harmful bacteria. The student uses complete sentences and correct punctuation and grammar in some of the writing.
1	Minimally Demonstrated	The student demonstrates minimal understanding of writing an informative text by writing only general statements discussing "Bacterial Warfare" and "Irradiated Food." The response may be limited to one paragraph, and it lacks organization and extension of ideas. The response may also have significant errors in sentence construction, grammar, and punctuation.
0	Incorrect or irrelevant	The student response is incorrect or irrelevant.

Sample Student Anchors

Both of the selections have the same central concept; keeping people safe from harmful bacteria. "Bacterial Warfare" explains how people try too hard to stay safe from bacteria, and that all of these anti-bacterial products we use are actually hurting the helpful bacteria as well. "Irradiated Food" explains a way of keeping food preserved so bacteria cannot infect it and spoil it, and how people view this method.

"Bacterial Warfare" says that humans are using too many anti-bacterial products. I don't agree with this. I say that humas are using just enough products as of today. The products we use do kill harmful bacteria and are preventing people from geeting sick, or reduce the chances of them getting sick. Yes, some of these products do kill helpful bacteria, but based on what I've heard in school, it kills very few helpful bacterias, and the few they do kill end up being replaced because of reproduction. All of the anti-bacterial products listed in "Bacterial Warfare" are much more helpful than they are harmful, and I disagree with the fact that this selection makes them out to be bad.

"Irradiated Food" explains the food preserving method of irradiation. Irradiation is where they take a radioactive material and has gamma-rays come off of said material, through packaging, and into the food. This, evidently, prevents food from spoiling and lengthens food's shelf-life. There are people who are concerned with the fact radioactive waves are being sent into the food when, according to the selection, the food doesn't even come out toxic. I agree with the author of this selection. This is mainly due to the fact that they were quite convincing in their writing. The author gave good reasons as to why irradiation is a good technique, and they were hard to challenge since they were backed up with evidence from scientists.

Yes, both of these slections have similar concepts, but "Bacterial Warfare" isn't neccessarily agreeable seeing as it doesn't provide very many reasons to back up the ideas. "Irradiated Food", on the other hand, is extremely agreeable, and provides reasons as to why someone should agree.

The student demonstrates a thorough understanding of writing an informative text by selecting many specific ideas and details from both "Bacterial Warfare" *(. . . that all of these anti-bacterial products we use are actually hurting the helpful bacteria)* and "Irradiated Food" *(Irradiation is where they take a radioactive material and has gamma-rays come off of said material, through packaging, and into the food. This, evidently, prevents food from spoiling and lengthens food's shelf-life)* and organizing them into a well-developed multiple-paragraph essay on the topic of protecting people from harmful bacteria. The response demonstrates a thorough command of the conventions of standard English. Though there are a few minor errors, the meaning is clear throughout the response.

Score 4

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Bacteria is probably one of the most dangerous things in the world. It can cause severe sickness and all kinds of diseases. They can basically enter your body and attack cells which causes you to get sick. And we all know, getting sick is not on our schedules. There are soooo many ways to kill these evil, disgusting germs, but the main ways are using antibacterial products and irradiation.

Antibacterial objects are my favortite things to kill bacteria. There are many differents products, like antibacterial cream and hand sanitizer(most common). Most people use soap and water, but soap and water does not kill ALL germs especially your hands. Your hands are the most nastiest things. Think about it. Everyday you have to touch doorknobs, rails, and every other single object. When we touch these, we gain bacteria that were on other people. The worse part is that as we touch those items, we touch our faces, arms, and eyes, which spread around our body. That is why it better to use antibacterial products. Irradiated food helps a lot too. Don't you hate it when you are ready to eat your food, and when you go get it, it has food spoilage. The reason for this is because the bacteria consumes the food and leaves the waste products inside of it. Ew, right? One way to stop food from spoiling was using salt. Irradiation is the most common way, though. It kills the bacteria and can keep fruits and vegetables fresh. It reduces spoilage in the global food supply. It also decreases the incidence of food-bourne illness. It also helps the nutritional of the food get preserved.

The student demonstrates a thorough understanding of writing an informative text by selecting many specific ideas and details from both "Bacterial Warfare" *(Bacteria is probably one of the most dangerous things in the world. It can cause severe sickness and all kinds of diseases. . . . Antibacterial objects are my favortite things to kill bacteria)* and "Irradiated Food" *(. . . bacteria consumes the food and leaves the waste products inside of it. . . . One way to stop food from spoiling was using salt. Irradiation is the most common way, though. It kills the bacteria)* and organizing them into a well-developed multiple-paragraph essay on the topic of protecting people from harmful bacteria. The response demonstrates a thorough command of the conventions of standard English. Though there are a few minor errors, the meaning is clear throughout the response.

Score 4

Sample Student Anchors

There are many ways to protect us from bacteria. You can spray your house with anti-bacterial spray, or you can irrdate your food to keep the bacteria out of it. You can wash your hands all you want, but bacteria will find a way back to you. There are many harmful bacteris, but there are also helpful ones, like what the passage "Bacterial Warefare" sugest. Bacteria can help us in ways we don't even think about. digesting our food, and overall keeping our boadies going. The things that we spray in our houses or what we use to clean our hands kill the harmful bacteris along with the helpful ones. Remember, there such thing as being to clean. Of course we don't want to get sick, but if we don't have the helpful bacteria in our bodies then what's the point? "Bacerial Warfare" sugest taht we cut down a little on the anti'bacterial things. It kills the kind of bacteria we want along with the ones we don't want.

In "irradiated Food," they explain that even our food has bacteria that can make us sick. They use the technique of irradiation to get rid of those bacteria. The rotten meat sitting in the back of your refergatior is only going to stink more. The more it smells, the greater chance you have of becoming sick. Eating it will givr you food posioning, but ust smelling it as it rots can have quite an effect too. The smell radiates from the food into you so the very wif of it will make you sick to your stomach. Bacteria is all over the place. In the food we eat, on the things we touch, even in our very bodies. Some are helpful, some are harmful. We should work to keep the helpful bacteris in our bodies where they belong, and keep the harmful ones as far away from us as possible. Though sometimes we just can't help it. When we get sick the helpful bacteris helps to fight off the harmful ones. Another reason why we need them. So maybe we should cut donw on all the spry in our homes. We need to stay helathy, but there we don't want to overdo it.

The student demonstrates a clear understanding of writing an informative text by using relevant details from both "Bacterial Warfare" *(Bacteria can help us in ways we don't even think about. digesting our food, and overall keeping our boadies going)* and "Irradiated Food" *(. . . our food has bacteria that can make us sick. They use the technique of irradiation to get rid of those bacteria)* and organizing them into two detailed paragraphs on the topic of protecting people from harmful bacteria. Some of the supporting details are general, particularly those from "Irradiated Food." The response demonstrates command of the conventions of standard English. There are a few distracting errors, but meaning is clear. In order to earn a higher score, the student would need to provide a few more details from the "Irradiated Food" text.

Score 3

When you are trying to protect people from harmful bacteria and getting sick you will do whatever it takes. When it comes to people protecting themselves I think that using hand sanitizer and constantly washing you hands is a good idea. I mean if you wash your hands and teach your faimily to get clean, well thats a lot less sickness and bad germs going around.

Then when it comes to protecting the food that we all eat is when irradiated foods come in. It kills the germs that make people sick. It helps it stay on the shelf longer. So thats even less dieasese going around. So the best ways to protect people from harmful bacteria is to do what it takes. Learn what to do to help prevet getting sick. Then teach it to your family and your kids. Not only would that stop them from getting sick but it would stop their friends and alot more people. So honestly, your not just helping your self your helping other faimilys. Other familys who can learn what your doing who can teach it to their familys. It could become a cycle, to where it could effect the world. To where theres not as much sickness as there was.

The student demonstrates a clear understanding of writing an informative text by using relevant details from both "Bacterial Warfare" *(. . . I think that using hand sanitizer and constantly washing you hands is a good idea)* and "Irradiated Food" *(Then when it comes to protecting the food that we all eat is when irradiated foods come in. It kills the germs that make people sick. It helps it stay on the shelf longer)* and organizing them into two detailed paragraphs on the topic of protecting people from harmful bacteria. Some of the supporting details are general, particularly those from "Bacterial Warfare." The response demonstrates command of the conventions of standard English. There are a few distracting errors, but meaning is clear.

Score 3

Student Sample Anchors

I believe that the the best way(s) to protect people from harmful bacteria is by using both external germ killers and by proventing germs form spreading from our food. The way we can do this is by washing your hands and using hand sanitizer and to reduce the spread of germs from our food. Using both articles provied above you will learn that these benefits have their percks but overall they help us greatly.

They keep our food from getting contaminated and reducing the spread of bacteria. They also help preserve food we need for shipping across seas and long-jevitey for long term preserving. Some may think that radation is very harmful to the body but researchers have found that there is so little radation used that there is no need to worry. So imbrace the new ways to preserve food and keeping hands clean because it has helped alot of people so far.

The student demonstrates a clear understanding of writing an informative text by using relevant details from both "Bacterial Warfare" *(The way we can do this is by washing your hands and using hand sanitizer and to reduce the spread of germs from our food)* and "Irradiated Food" *(. . . help preserve food we need for shipping across seas and long-jevitey for long term preserving. Some may think that radation is very harmful to the body)* and organizing them into two detailed paragraphs on the topic of protecting people from harmful bacteria. Some of the supporting details are general, particularly those from "Bacterial Warfare." The response demonstrates command of the conventions of standard English. There are a few spelling errors, but meaning is clear.

Score 3

Families all around the world are desperate to protect there children from the horrible outcome of bacteria. But do you know the best ways to protect your family from it? In this article I will give you some handy tips on makeing your home a more more welcomeing anti-bacterial place to live. First thing you need to know is that not all bacterias are bad for you,there are many bacterais that help supprot and funtion your bodies organs such as the bacteria that helps break down food or the bacteria you eat with your hot wings- blue cheese.But sometimes people aren't aware of these bacterias and so when they take medicines and pills they are killing the useful bacteria that is why you have to be very precautious about the medicines you give to your family because they may kill the good bacterias in your body. You can also try irradiated foods, In this process scientists use a small amount of radiation in order to kill harmful bacteria that lies within the food this causes the food to last longer. . In this process Irradiating food helps slow down the growth of ripening fruit meaning the fruit lasts longer it also helps with packaged food such as beef, chicken, fish and other poultry products that you and your family love.

The student demonstrates basic understanding of writing an informative text. While the student provides some detailed and general support from both "Bacterial Warfare" *(. . . not all bacterias are bad for you,there are many bacterais that help supprot and funtion your bodies organs such as the bacteria that helps break down food)* and "Irradiated Food" *(In this process scientists use a small amount of radiation in order to kill harmful bacteria that lies within the food,this causes the food to last longer)*, the response is not organized into multiple paragraphs. The response demonstrates an inconsistent command of the conventions of standard English. There are a few patterns of errors, particularly run-on sentences and punctuation, that occasionally impede understanding. In order to earn a higher score, the student would need multiple paragraphs and a better command of the conventions of standard English.

Score 2

Valuable Features of Formative Items & Passages -- ELA

- Primary standard for each item is reading (either Informational or Literary)
- Increased focus on informational reading
- Paired passages
  - Literary with Literary
  - Informational with Informational
  - Literary with Informational
- Alignment to grade appropriate Lexiles (a mixture of upper, middle and lower range reading passages based upon the Lexile bands for each grade level)
- Integration of reading content knowledge and skills with writing skills

Formative Item Bank Pilot Findings

Overall ELA Phase I Pilot (Spring 2012) Summary Data

Grade	Number of students and percent falling into each score point					Total student N/ %
	0	1	2	3	4	
3	475	1613	713	202	45	3048
	15.60%	52.90%	23.40%	6.60%	1.50%	100%
4	323	1518	814	199	83	2937
	11.00%	51.70%	27.70%	6.80%	2.80%	100%
5	367	1100	901	518	125	3011
	12.20%	36.50%	29.90%	17.20%	4.20%	100%
6	155	960	811	418	111	2455
	6.30%	39.10%	33.00%	17.00%	4.50%	100%
7	218	1387	1275	617	146	3643
	6.00%	38.10%	35.00%	16.90%	4.00%	100%
8	264	1140	1029	338	89	2860
	9.20%	39.90%	36.00%	11.80%	3.10%	100%
9 - 10	175	1016	783	361	81	2416
	7.20%	42.10%	32.40%	14.90%	3.40%	100%
11 - 12	376	1018	763	196	46	2399
	15.70%	42.40%	31.80%	8.20%	1.90%	100%

Overall ELA Phase II Pilot (Spring 2013) Summary Data

Grade	Number and Percent of Students Achieving Each Score Point					Total Student N/ %
	0	1	2	3	4	
3	812	1107	762	174	26	2881
	28.18%	38.42%	26.45%	6.04%	0.90%	100%
4	906	1145	765	168	63	3047
	29.73%	37.58%	25.11%	5.51%	2.07%	100%
5	839	948	1294	537	183	3801
	22.07%	24.94%	34.04%	14.13%	4.81%	100%
6	626	1467	1028	408	86	3615
	17.32%	40.58%	28.44%	11.29%	2.38%	100%
7	695	1002	1035	515	140	3387
	20.52%	29.58%	30.56%	15.21%	4.13%	100%
8	1116	1534	827	391	80	3948
	28.27%	38.86%	20.95%	9.90%	2.03%	100%
9 - 10	1262	1816	559	106	9	3752
	33.64%	48.40%	14.90%	2.83%	0.24%	100%
11 - 12	739	1389	1175	388	131	3822
	19.34%	36.34%	30.74%	10.15%	3.43%	100%

Overall Mathematics Phase I Pilot (Spring 2012) Summary Data

Grade	Number of students and percent falling into each score point					Total student N/ %
	0	1	2	3	4	
3	771	667	373	81	36	1928
	40.00%	34.60%	19.30%	4.20%	1.90%	100%
4	795	800	360	87	58	2100
	37.90%	38.10%	17.10%	4.10%	2.80%	100%
5	548	513	252	124	44	1481
	37.00%	34.60%	17.00%	8.40%	3.00%	100%
6	927	768	269	65	14	2043
	45.40%	37.60%	13.20%	3.20%	0.70%	100%
7	896	632	243	62	11	1844
	48.60%	34.30%	13.20%	3.40%	0.60%	100%
8	984	791	314	100	51	2240
	43.90%	35.30%	14.00%	4.50%	2.30%	100%
9-10	798	697	186	45	27	1753
	45.50%	39.80%	10.60%	2.60%	1.50%	100%
11-12	690	602	178	63	9	1542
	44.70%	39.00%	11.50%	4.10%	0.60%	100%

Overall Mathematics Pilot II (Spring 2013) Summary Data

Grade	Number and Percent of Students Achieving Each Score Point					Total Student N / %
	0	1	2	3	4	
3	1378	1152	539	121	47	3237
	42.57%	35.59%	16.65%	3.74%	1.45%	100%
4	1323	1264	325	83	25	3020
	43.81%	41.85%	10.76%	2.75%	0.83%	100%
5	1351	1049	391	64	15	2870
	47.07%	36.55%	13.62%	2.23%	0.52%	100%
6	1579	1171	370	135	53	3308
	47.73%	35.40%	11.19%	4.08%	1.60%	100%
7	1602	856	219	72	36	2785
	57.52%	30.74%	7.86%	2.59%	1.29%	100%
8	1529	1049	619	217	88	3502
	43.66%	29.95%	17.68%	6.20%	2.51%	100%
9 - 12	2570	1435	299	59	23	4386
	58.60%	32.72%	6.82%	1.35%	0.52%	100%

Using Formative Item Bank Items in the Classroom

Classroom Implementation Suggestions for he Formative Constructed Response Items

- Whole class instruction/direct instruction
- Demonstration lesson with active discussion
- Small, cooperative group activity
- Individual formative assessment (feedback provided by teacher)
- Inclusion classes with multiple adult supervisors/coaching
- Homework (ONLY following extensive explanation and experience with open-ended items provided by the teacher in the classroom)
- Parent Night activity where parents and their children work together
- No grades----rubric score accompanied by written and/or oral feedback highly suggested

Recommended Uses of the Georgia Formative Assessment Item Bank

The Georgia Formative Assessment Item Bank was designed to be used by TEACHERS to:

- Determine students' readiness for future state assessments that will include items in an open-ended format
- Provide students with oral and written feedback specific to the standard, student standing in regards to the standard, and what the student needs to do to demonstrate proficiency
- Design instructional next steps, which includes re-teaching, remediation, and differentiation
- Assess their own professional growth needs, such as professional learning, collaboration, classroom materials and resources

Determine students' readiness for the future open-ended state assessments

- Assess students' ability to:
  - demonstrate mastery of the rigorous state standards
  - respond to items written at DOK levels of 3 or 4 which require strategic and extended thinking
  - show work in mathematics, use appropriate processes and provide complete explanations
  - write effectively in both ELA and math, using grade level appropriate vocabulary and writing conventions
  - use textual information from passages to support and or defend responses
  - demonstrate thinking and reasoning skills

Determine Next Steps Based Upon Student Performance on Formative Assessment Item(s)

Whole Group Instruction

- Continue forward with instruction if students achieve mastery of standards as demonstrated on the formative assessment item
- Whole Class Re-teaching
  - Hold a class discussion about the item using the rubric and the student anchor papers
  - Design and implement a new lesson that addresses students' weaknesses
  - Provide remediation activities that address specific skills or topics as needed
  - Address common misconceptions
  - Demonstrate, step-by-step, how students can accurately construct a response to the item prompt(s)

Determine Next Steps Based Upon Student Performance on Formative Assessment Item(s) (continued)
Small Group Instruction

- Needs-Based Small Group Differentiation
  - Alter instruction based upon the common needs of small groups of students
    - Utilize alternate tasks that address the same standards
    - Adjust content delivery (perhaps break content into smaller, more concrete parts)
    - Assign students to small groups (like- or unlike abilities) that work collaboratively either with or without an adult on the formative item or other related activities
    - Alter pacing based upon student readiness to progress
    - Provide more/different level of teacher support (small group instruction by the teacher, parapro , inclusion/support teachers, and/or adult volunteers)
- Continuous use of formative instructional practices to continually understand and respond to the strengths and weaknesses of students

Determine Next Steps Based Upon Student Performance on Formative Assessment Item(s)
Individualized Instruction

- Allow time and opportunity for more one-on- one teacher-student dialogue
- Provide oral and/or written feedback to individual students
  - Explain the standard. (Where are you going?)
  - Explain their performance in regards to the standard. (Where are you?)
  - Explain what the student needs to do next. (Where to next?)
- Alter instruction based upon the individual needs of the student
    - Utilize alternate tasks that address the same standards (varied assignments)
    - Adjust content delivery (perhaps break content into smaller, more concrete parts)
    - Alter pacing based upon student readiness to progress
    - Provide tutoring inside or outside of class time

Differentiation

Whole Group, Small Group, and Individualized Instruction

What is differentiation?

"It means teachers proactively plan varied approaches to ***what*** students need to learn, ***how*** they will learn it, and/or how they will ***show what they have learned*** in order to increase the likelihood that each student will learn as much as he or she can, as efficiently as possible."

Carol Ann Tomlinson, Presentation to the American School in London Learning Institute, 2013

http://www.caroltomlinson.com/Presentations/Tomlinson%20ASL%20Institute%206-13%20V2.pdf

Formative Instructional Practices—Formative Assessment in Action

- Re-Design
- Teach

State-Mandated Content Standards

- Design
- Teach

- Re-Design
- Teach

- Re-Design
- Teach

Re-Design might involve changing activities, instructional techniques, assessment methods or content, and/or differentiation based upon student needs.

Determine Teacher Needs

- Resources (such as access to technology, textbooks, online content, and hands-on materials)
- Professional Learning
  - Subject Area Content
  - Literacy
    - Reading
    - Writing
    - Communication
  - Formative Instructional Practices
  - Standards-Based Instructional Practices
  - Up-to-date Technology Integration
  - Professional Learning Communities/Professional Learning Teams
  - Providing quality feedback
- Collaboration Opportunities

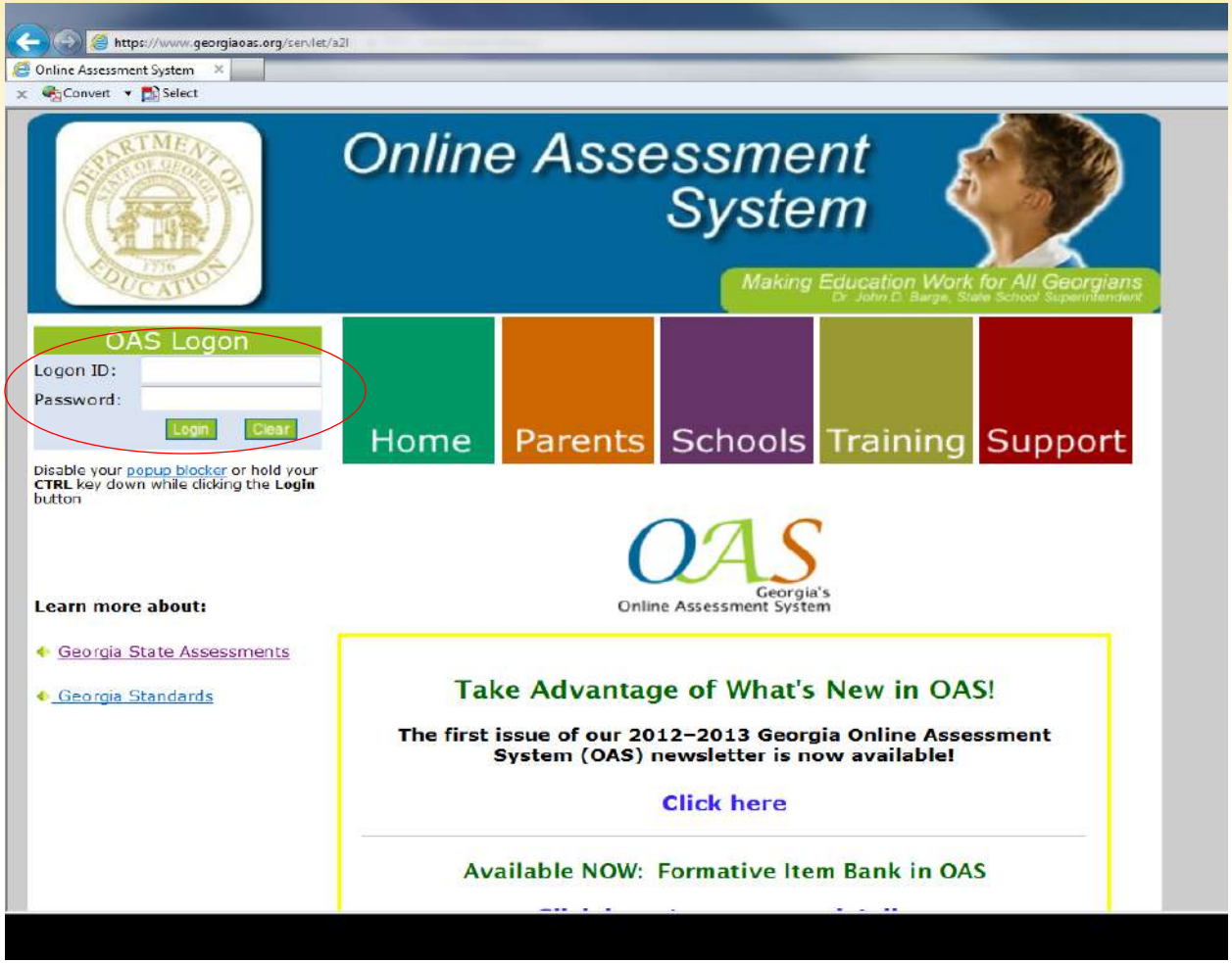
Finding Formative Item Bank Items in the Online Assessment System (OAS)

FIB Items in OAS

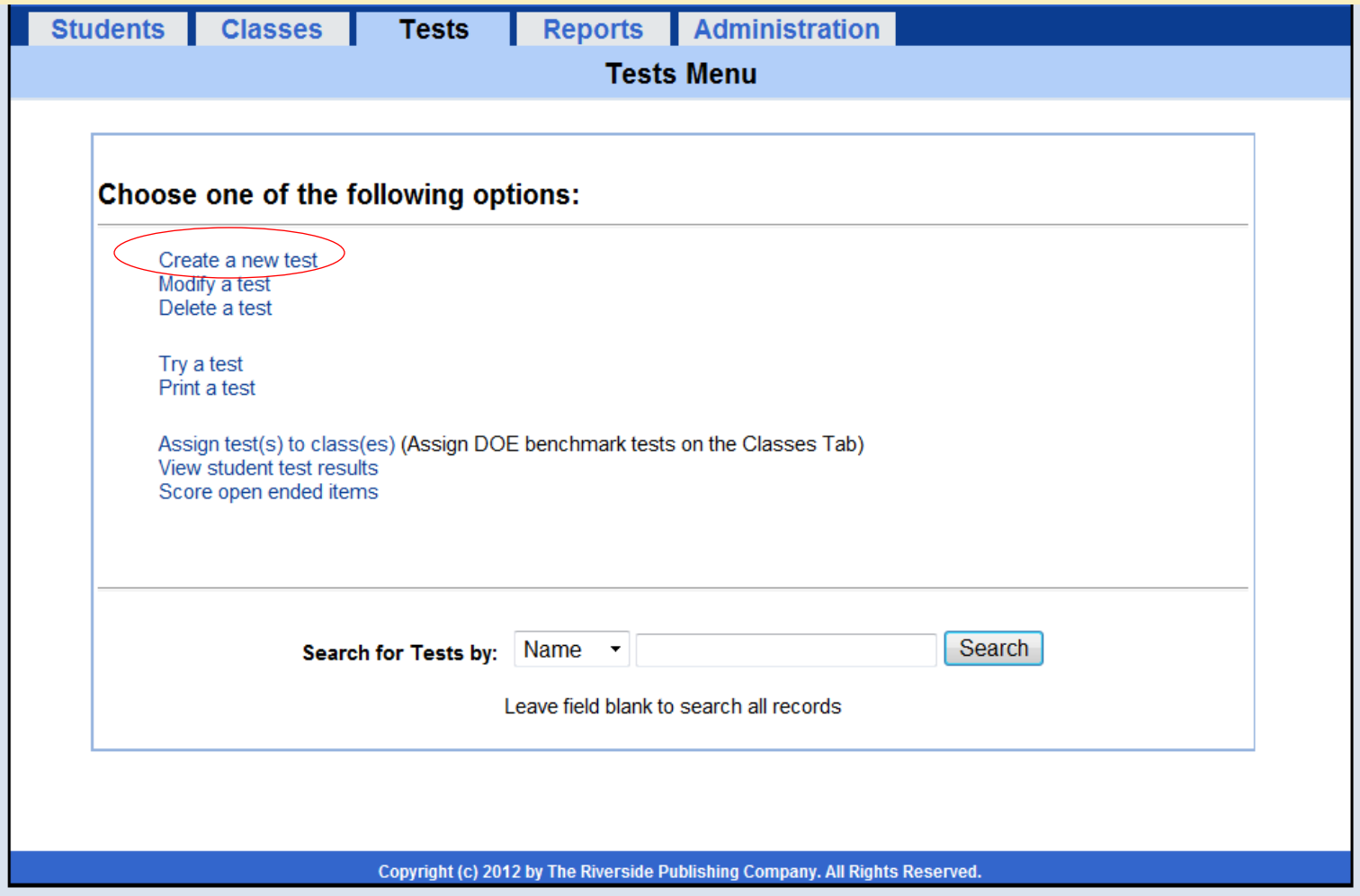
- 1600+ Formative Items Available in OAS
- If you need an OAS log-in access code,
  - Contact your School Administrator for OAS log-in access code
  - School Administrators should contact their system test coordinator for assistance if needed
  - System Test Coordinators can find their system and school logins on the MyGaDOE portal in the “Custom” folder..

Where do you Find the Items?

www.georgiaoas.org



Searching in the OAS



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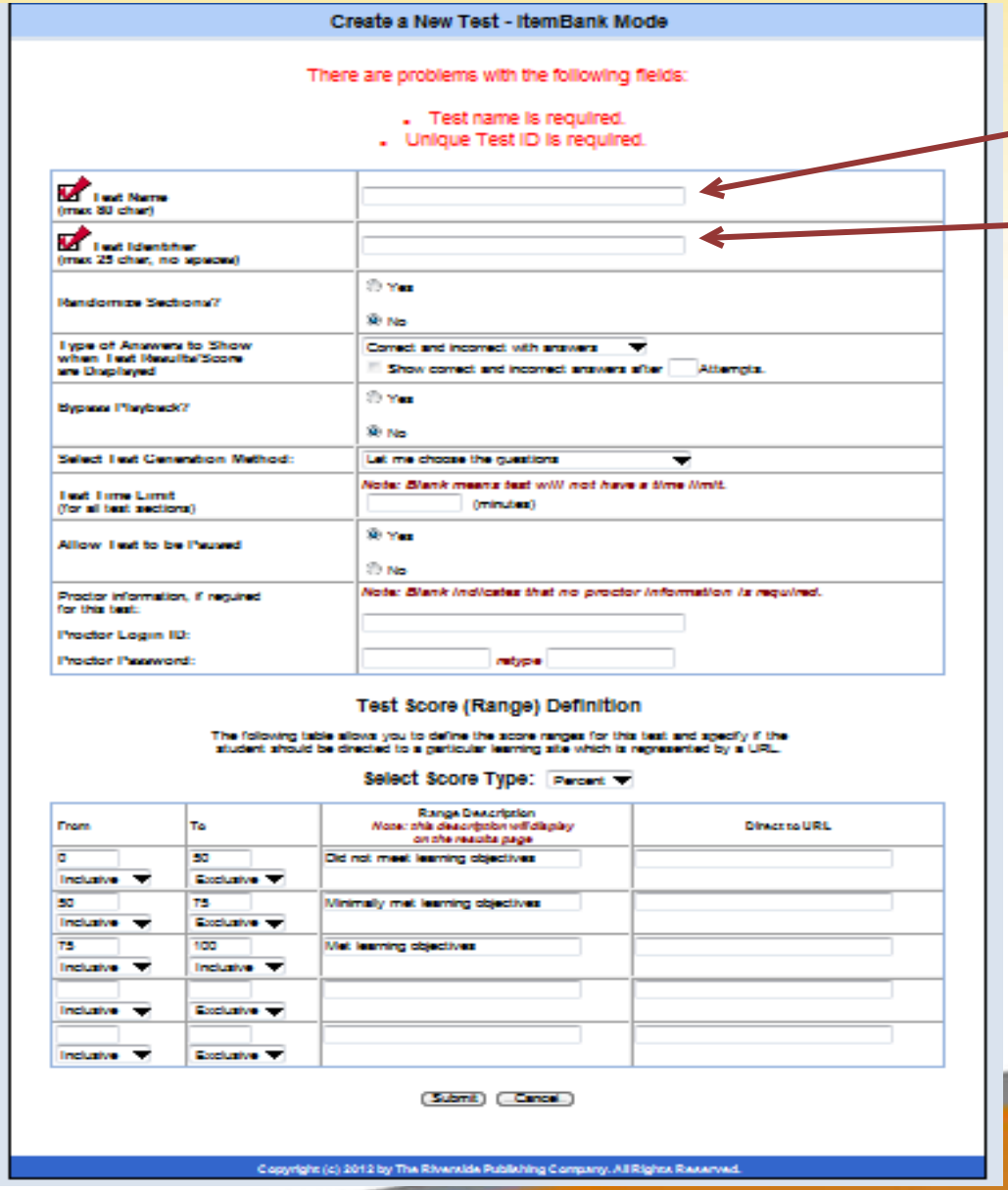
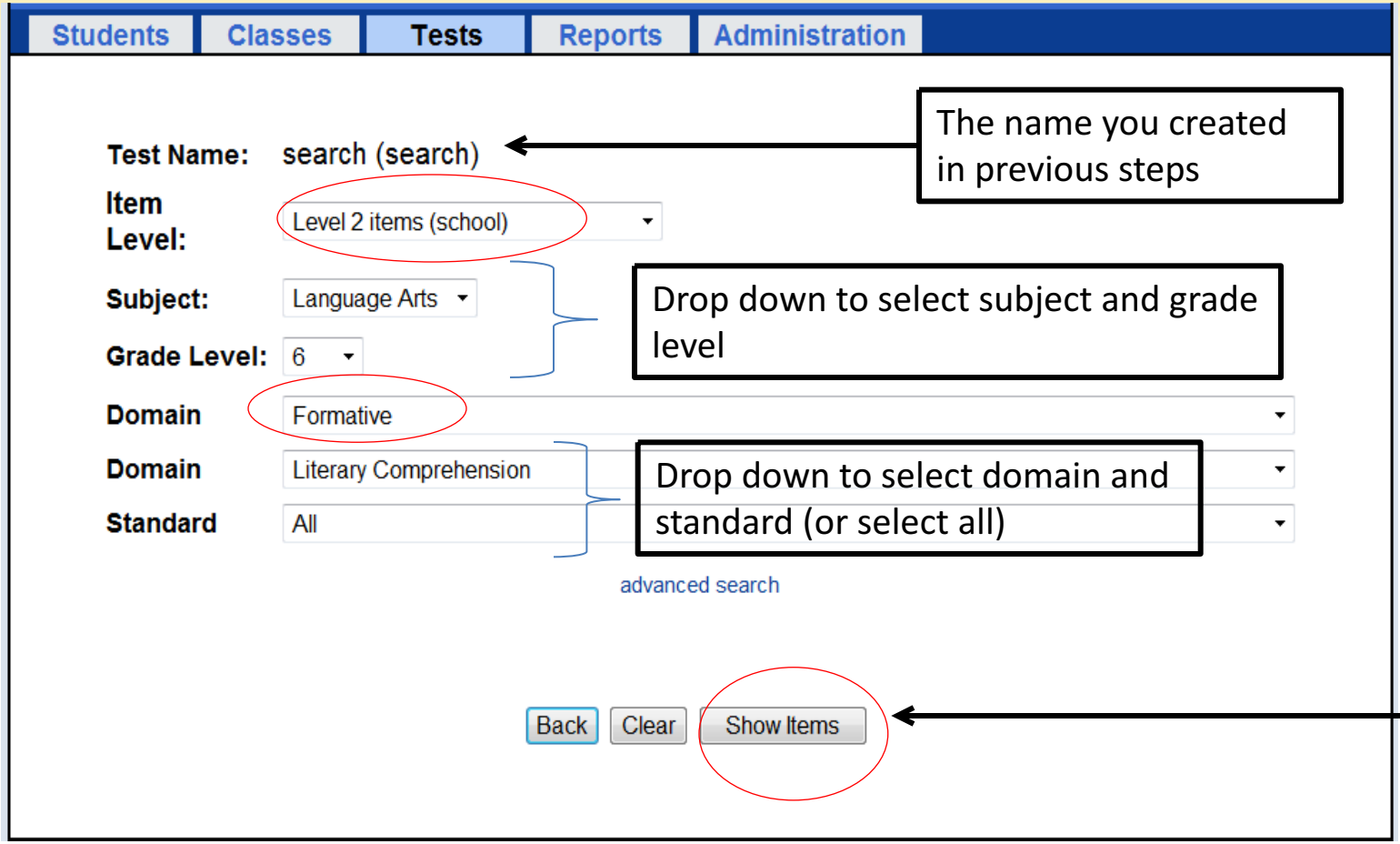


You create test name and ID that are unique and meaningful to you.

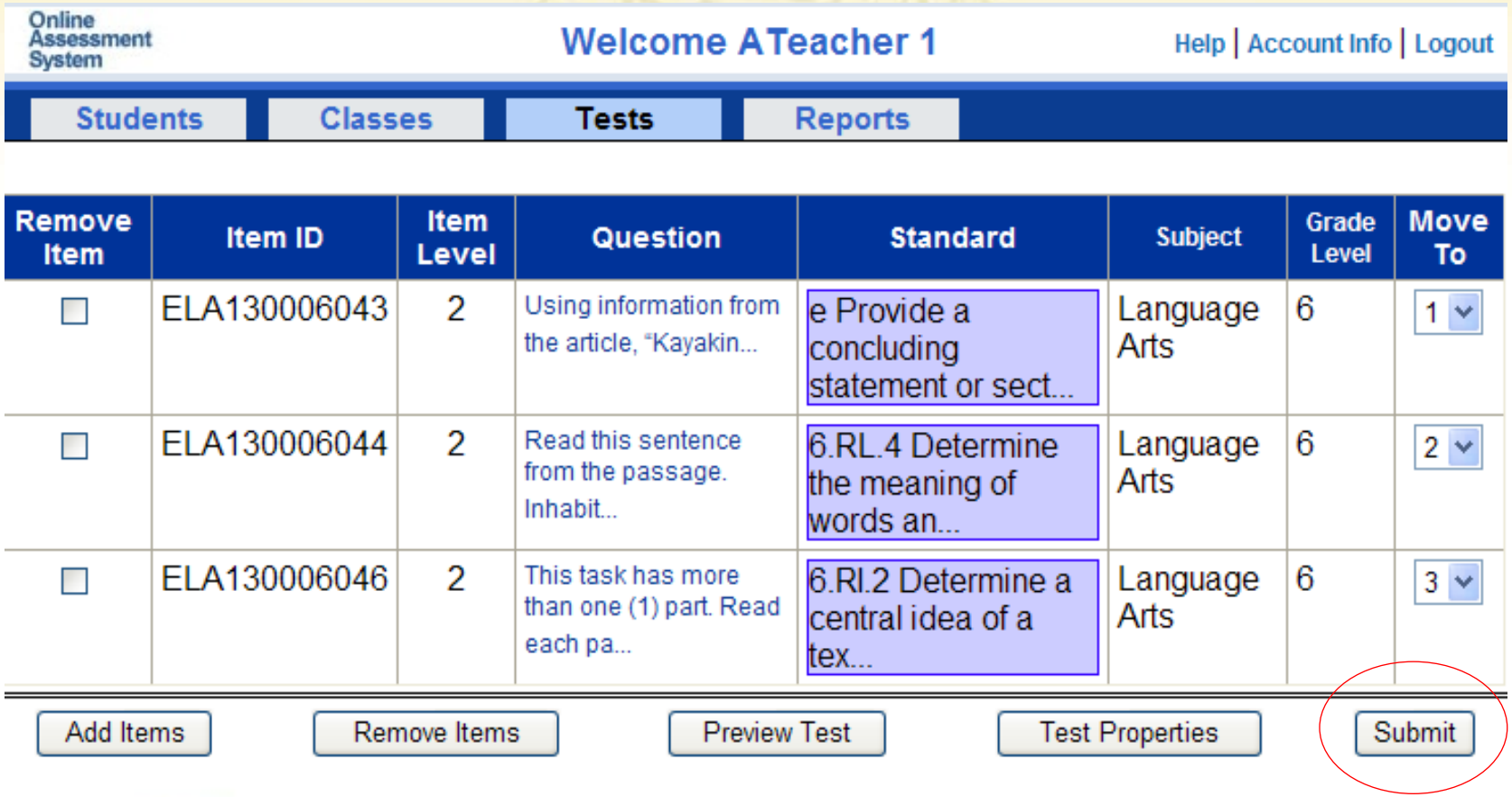
Naming Idea: "Formative" and Domain Name, such as literary comprehension

Searching the OAS for Formative Items Example Search

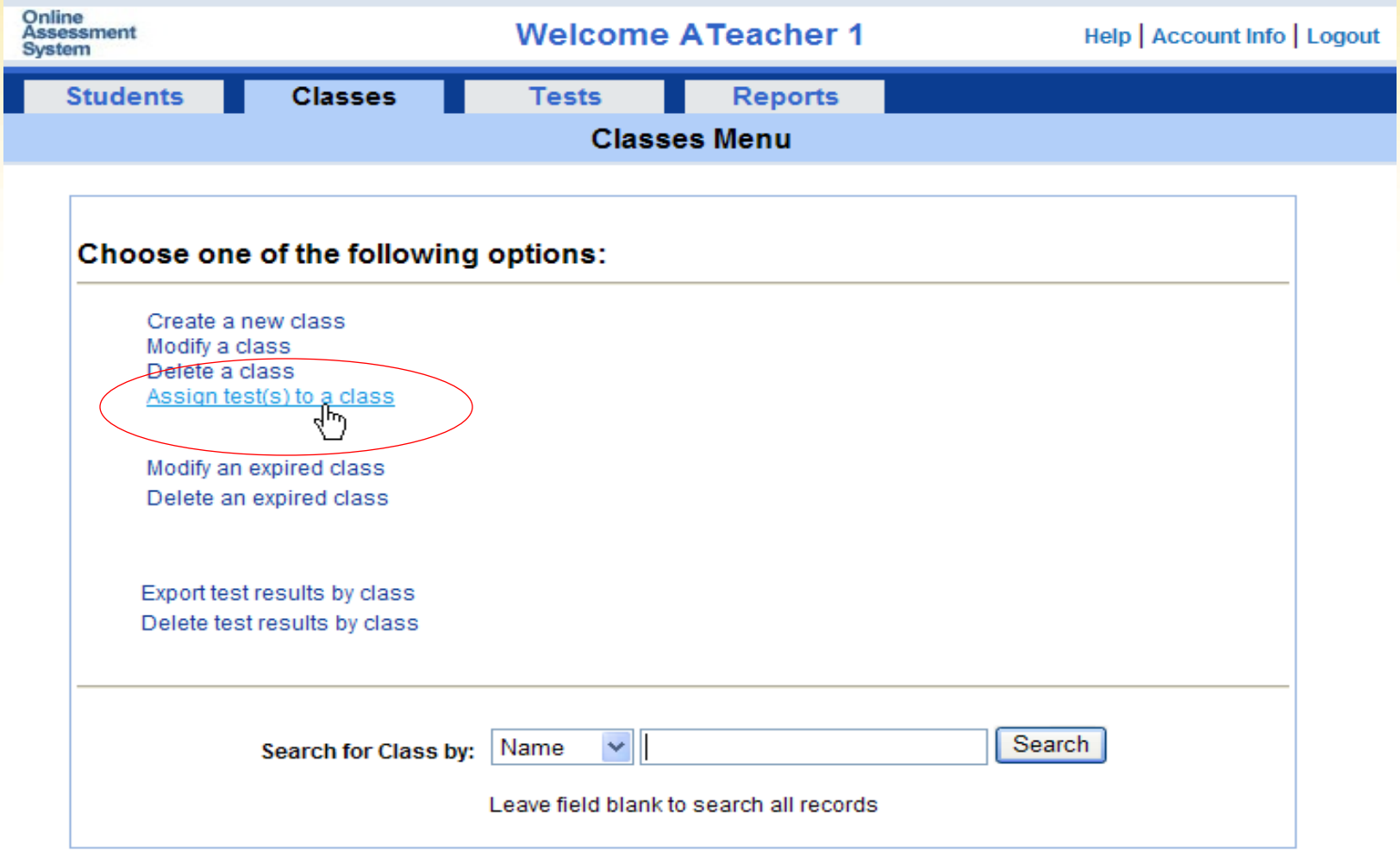


All of the formative items are in Level 2 of the OAS which means all teachers have access.

Create your test with the Formative Items



Assign your test to a class



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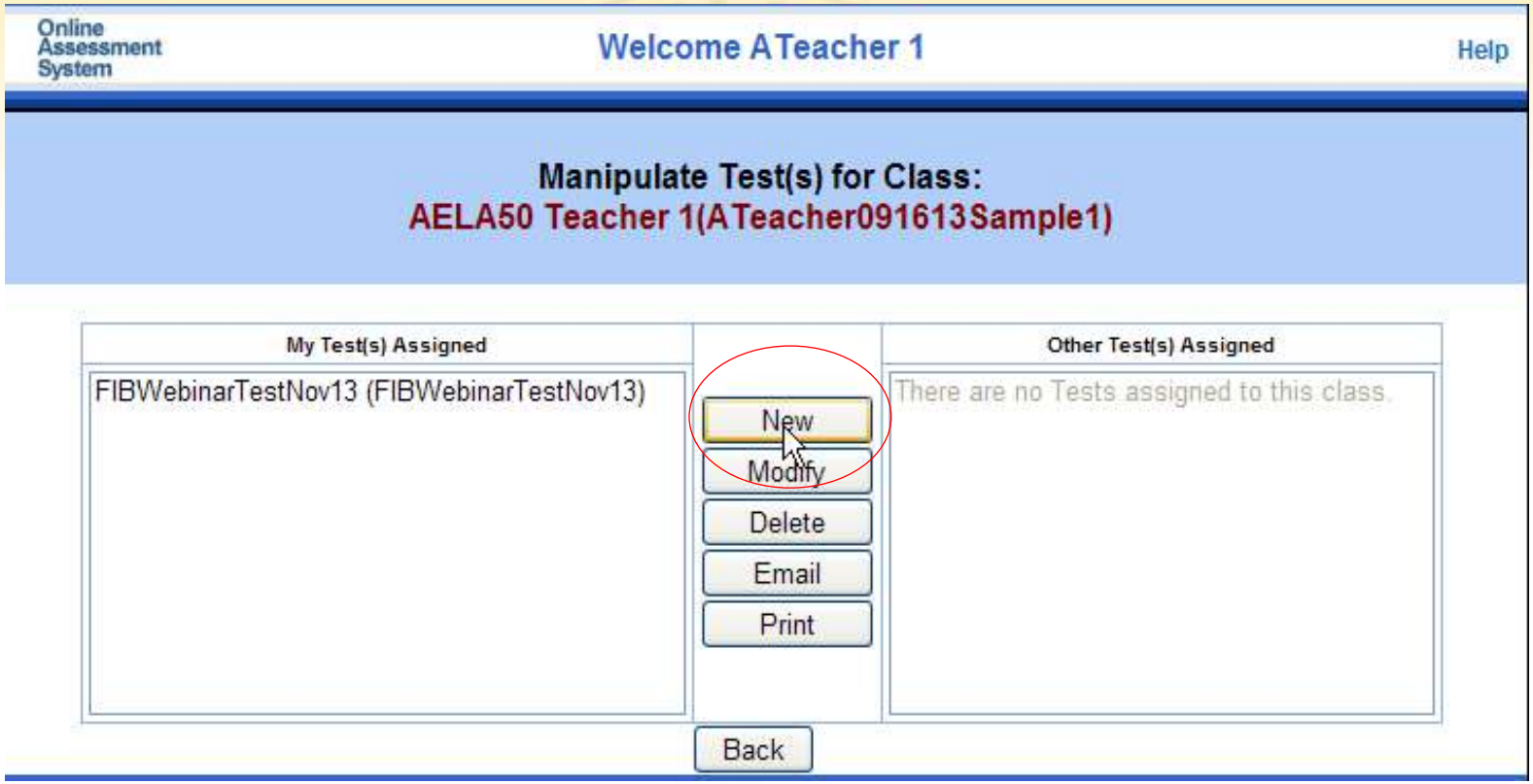
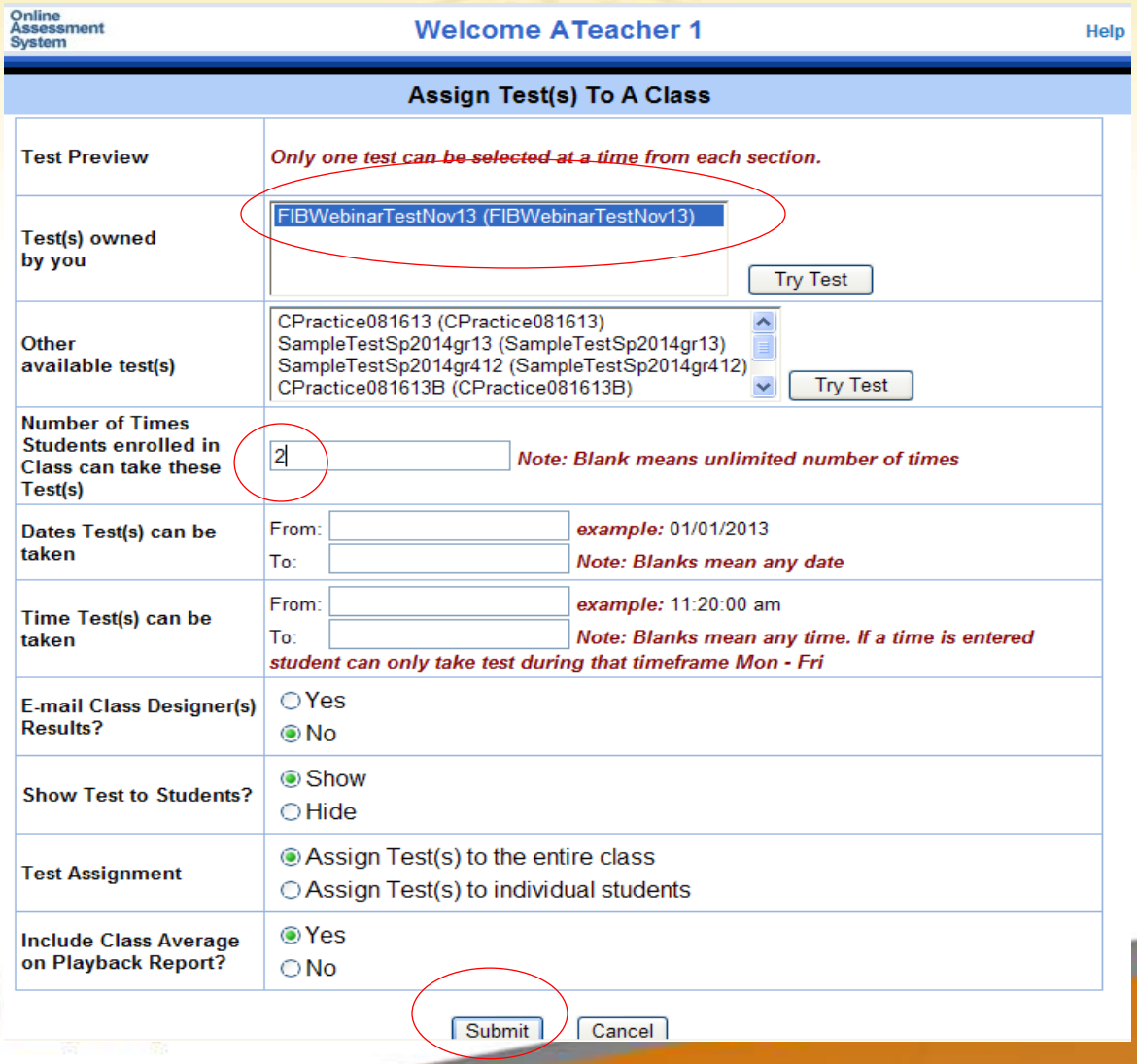
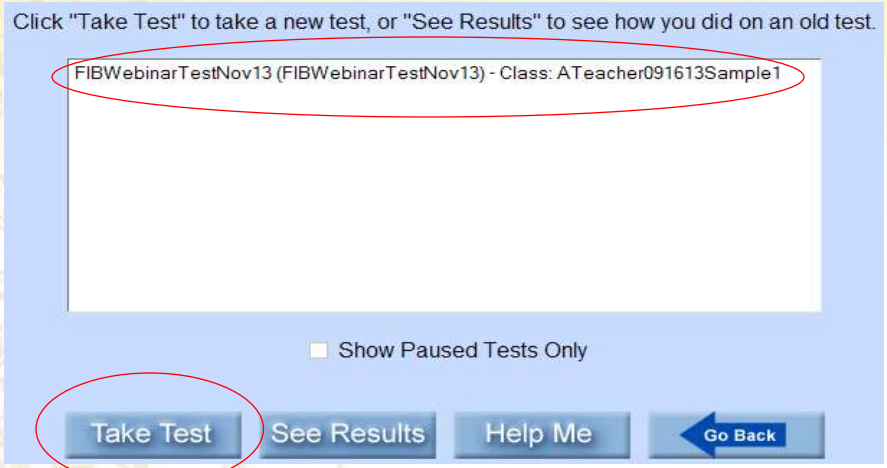


Assign your test to a class



Students take the test



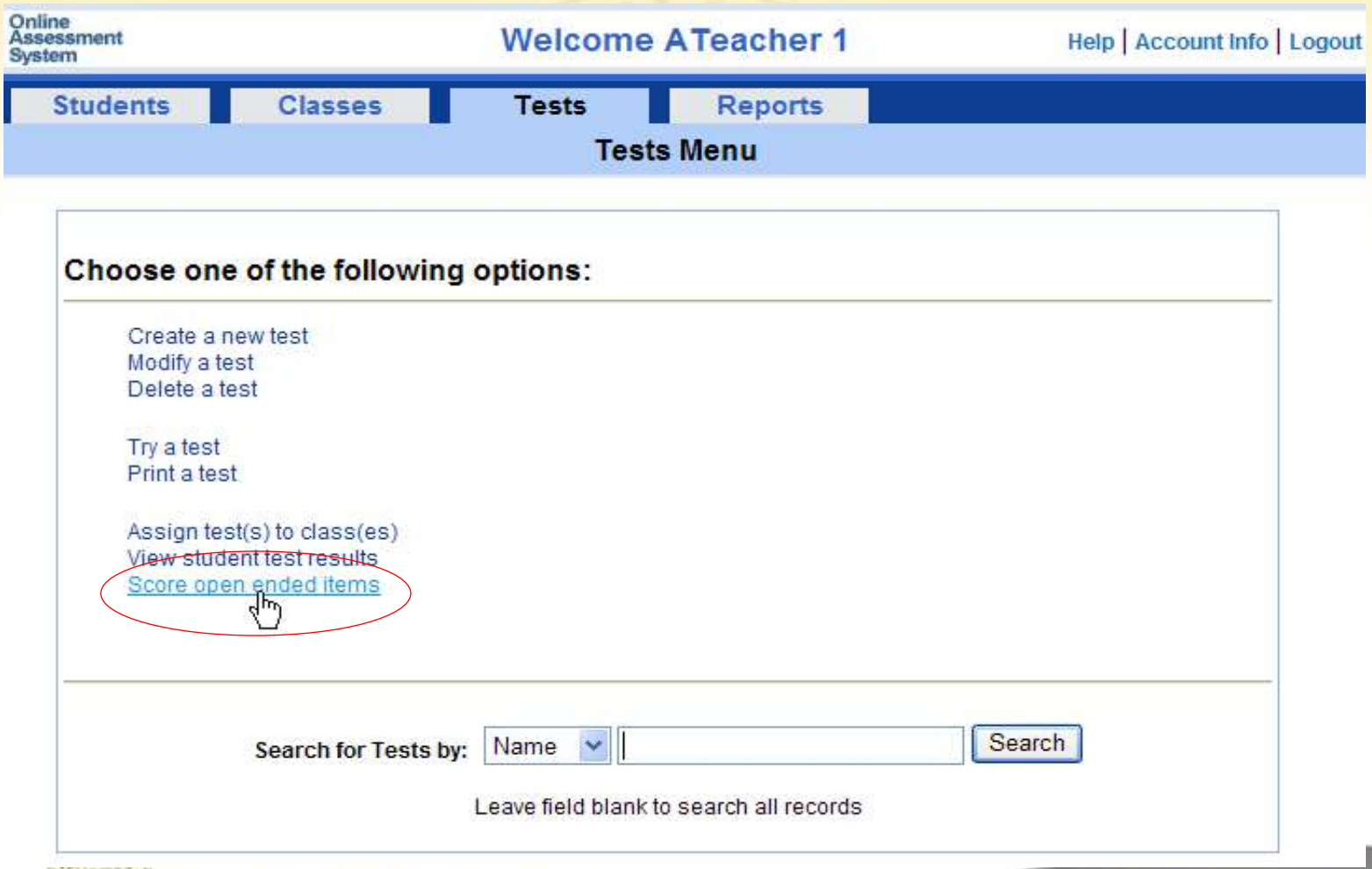
Test Results Page

1234567890fa16(Astudent Webinar 1)
FIBWebinarTestNov13 (FIBWebinarTestNov13)

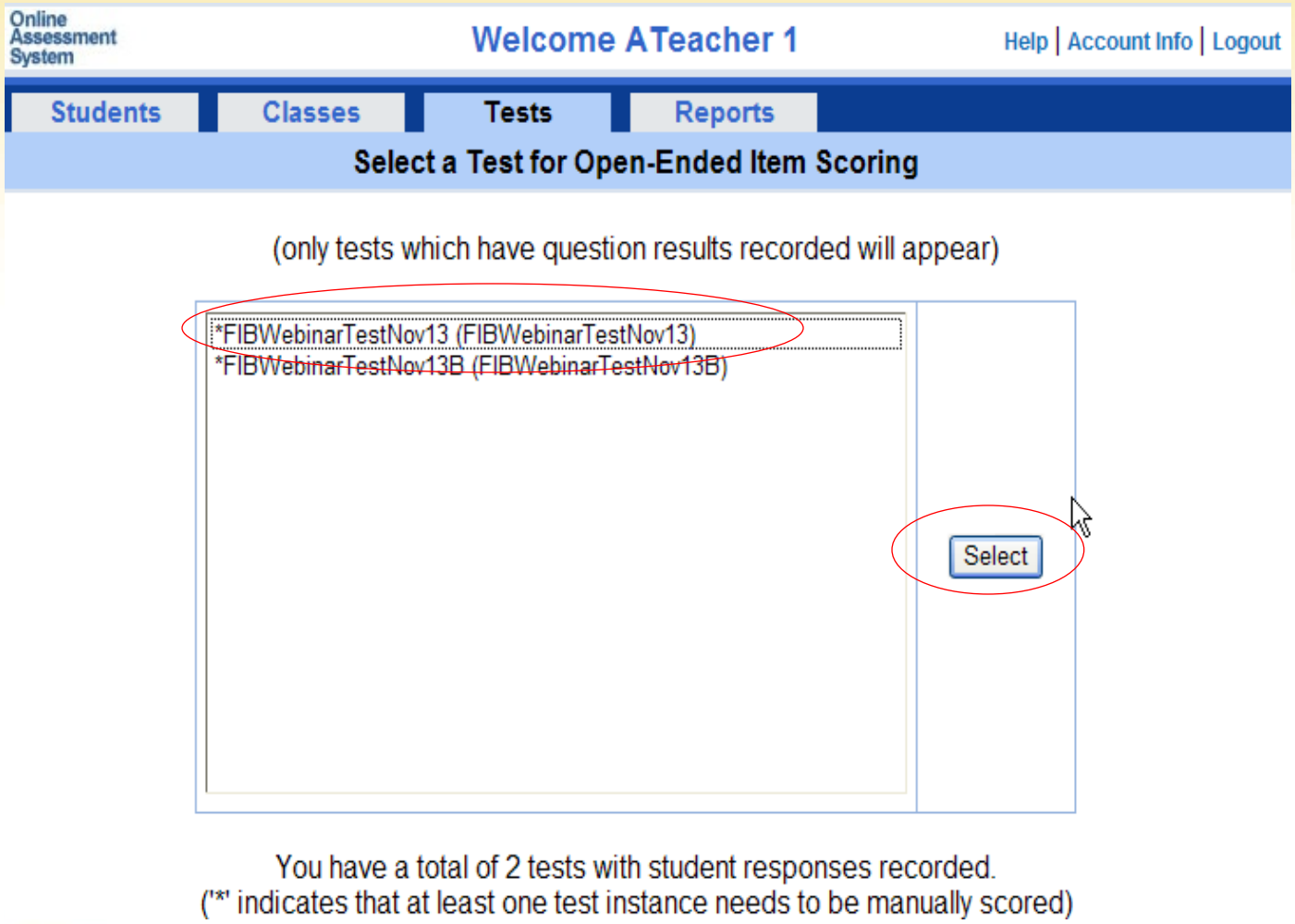
Georgia Online Assessment System Results

Your test has questions that need to be manually graded.
Your score will be available once this test has been graded.

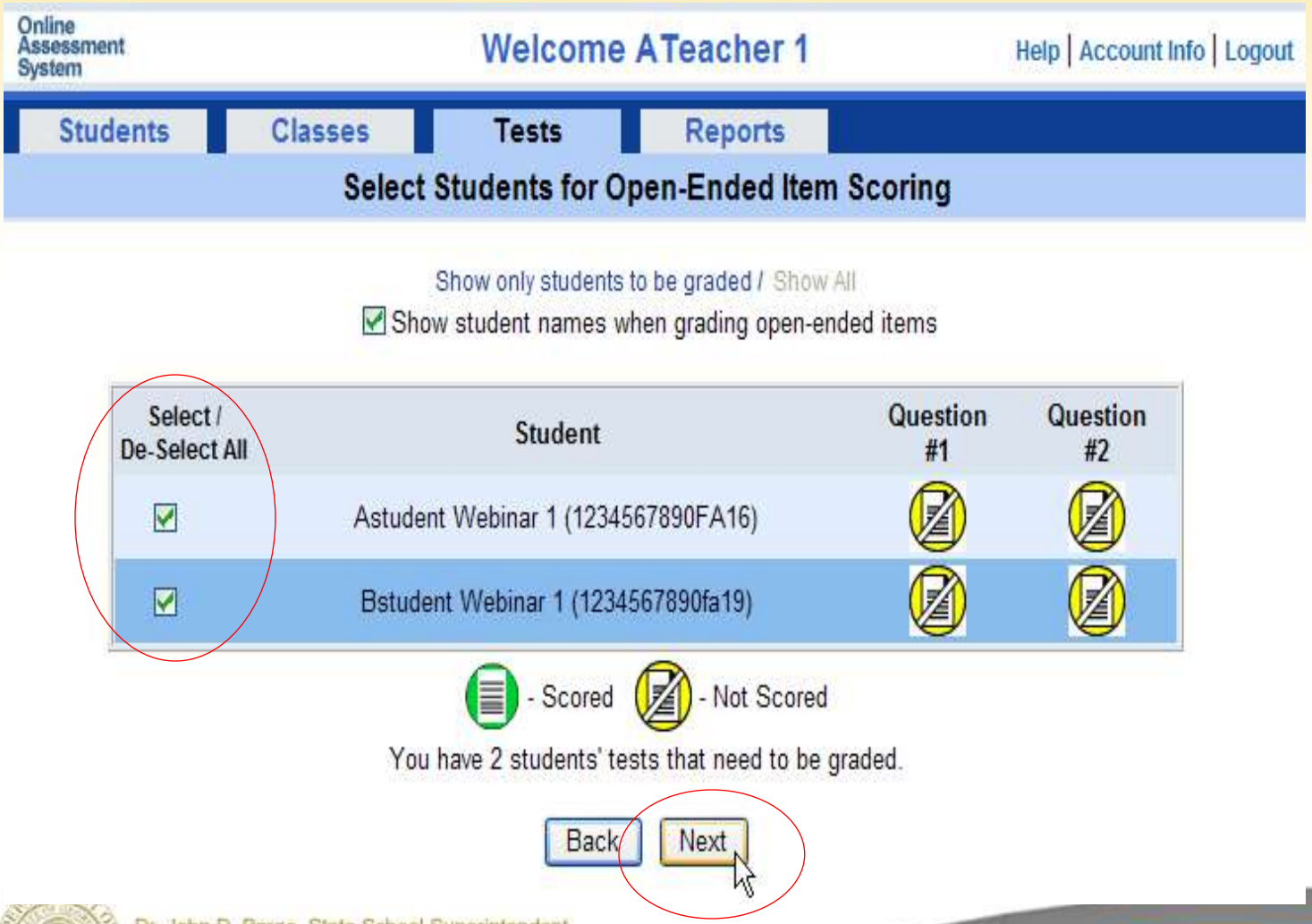
Score open ended items



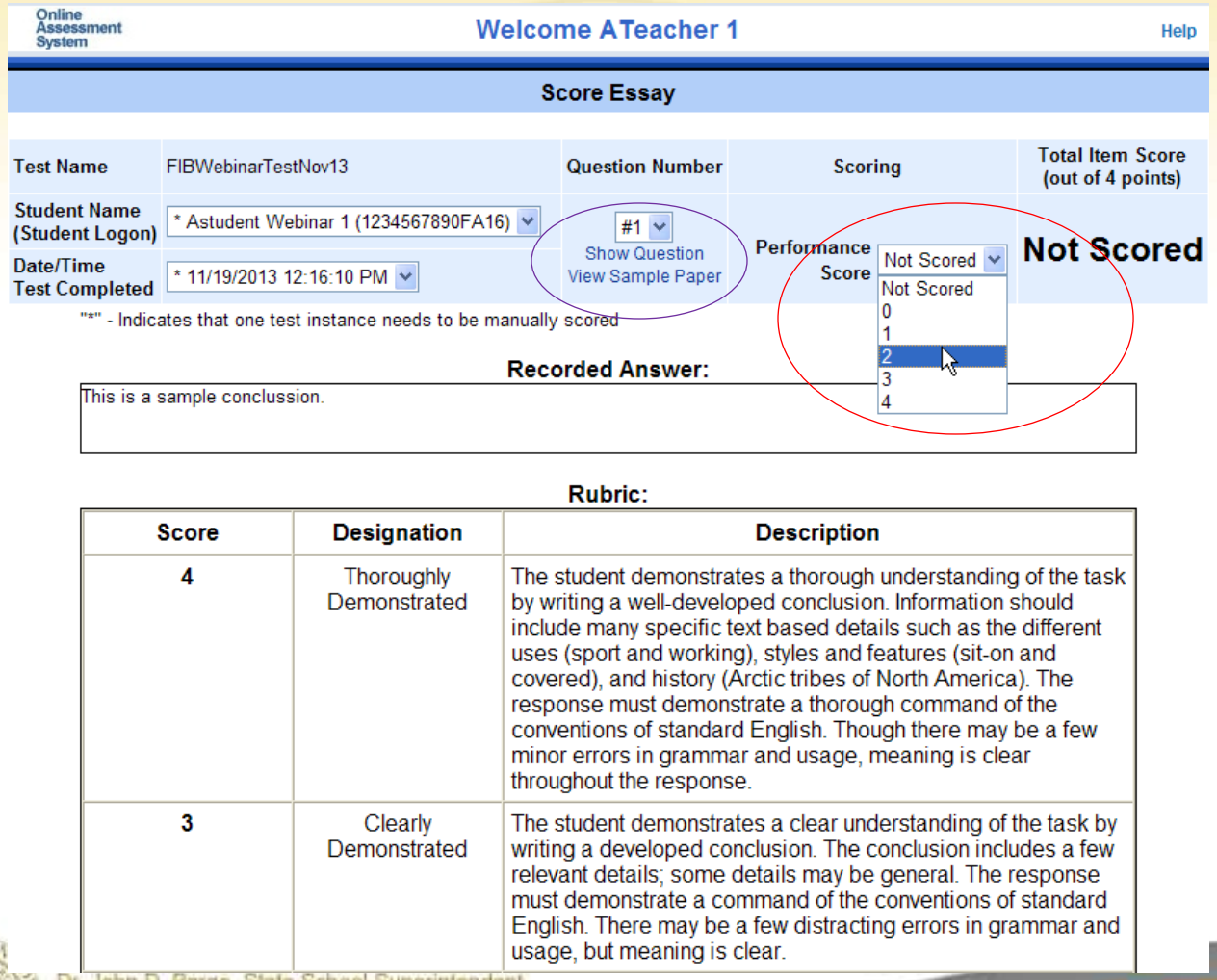
Score open ended items



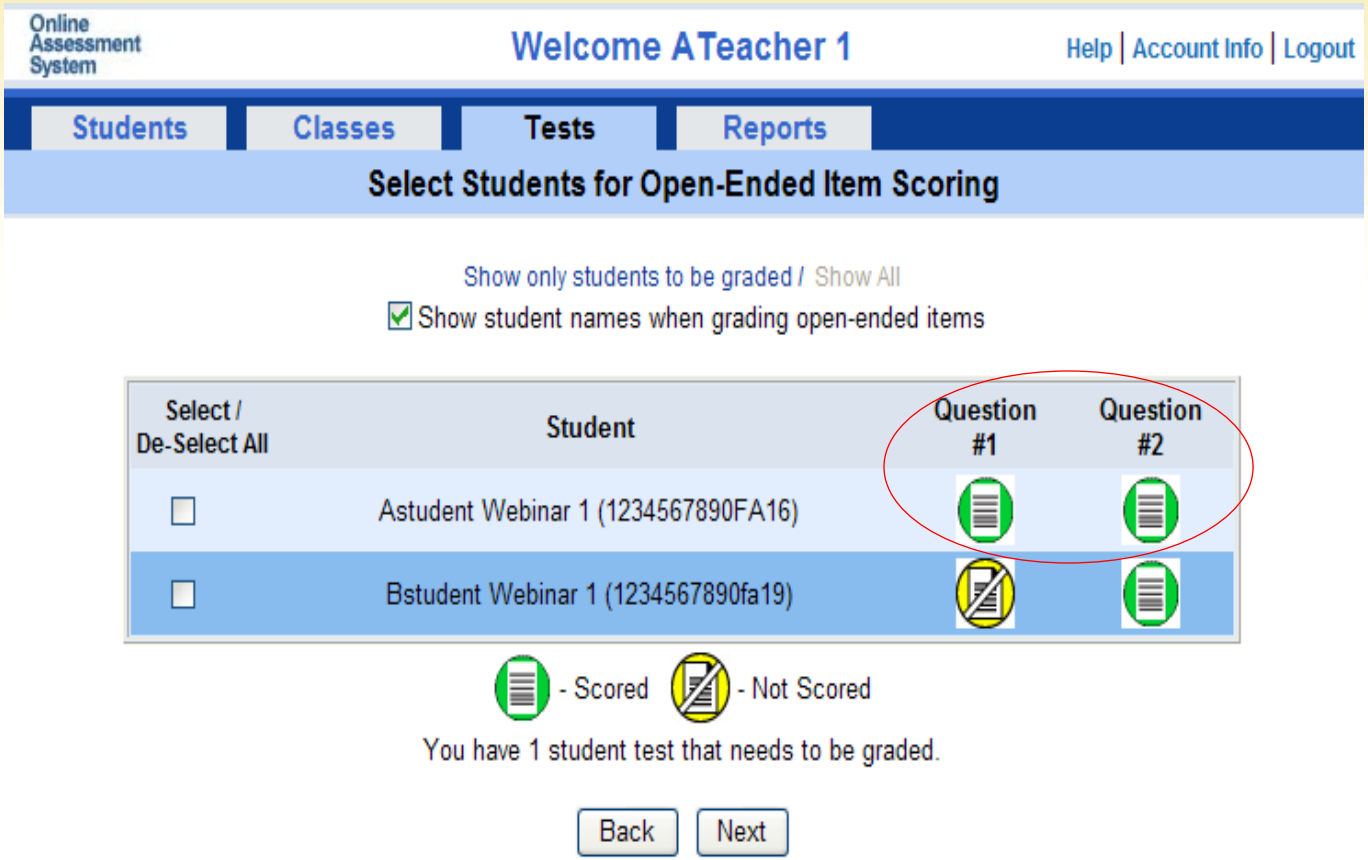
Score open ended items



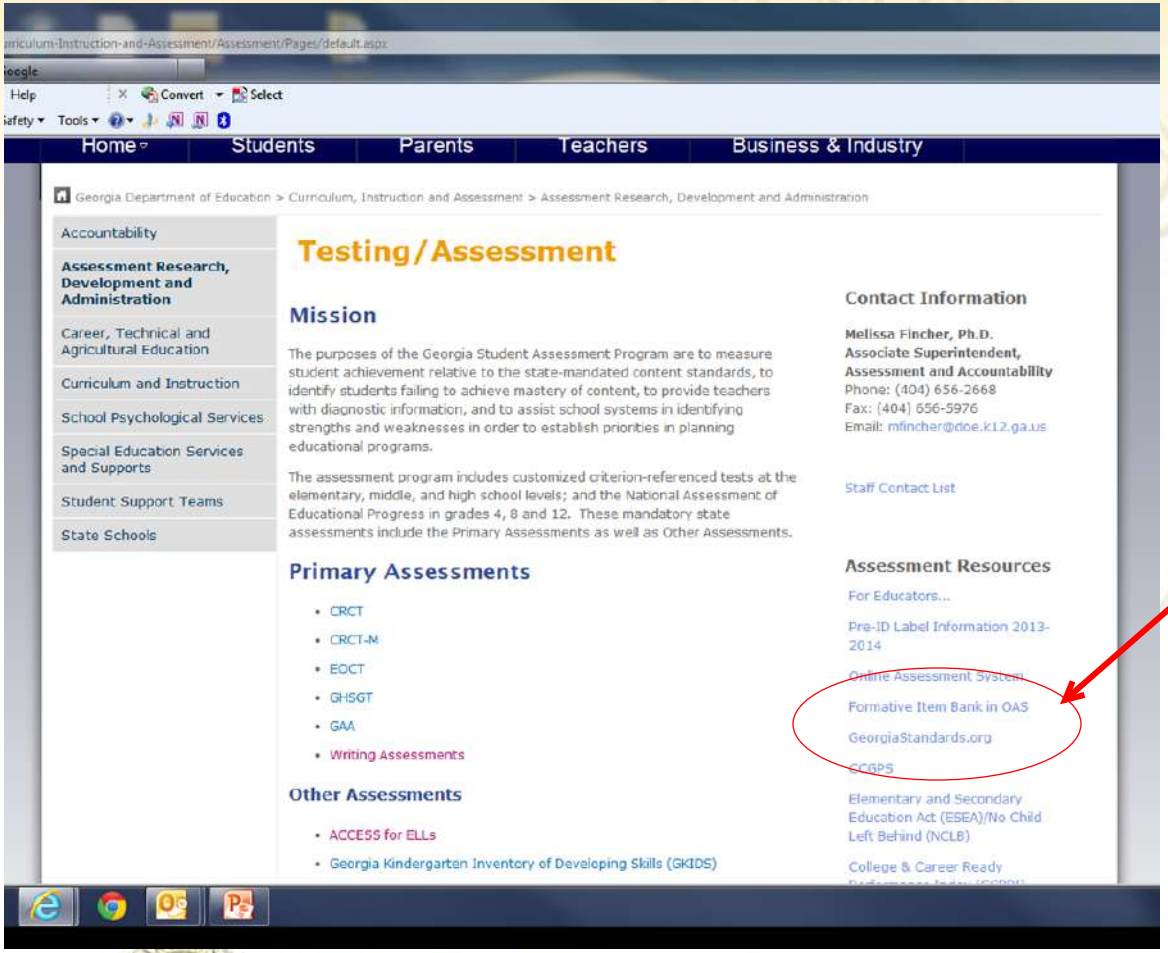
Score open ended items



Score open ended items



Formative Item Bank Information On-line

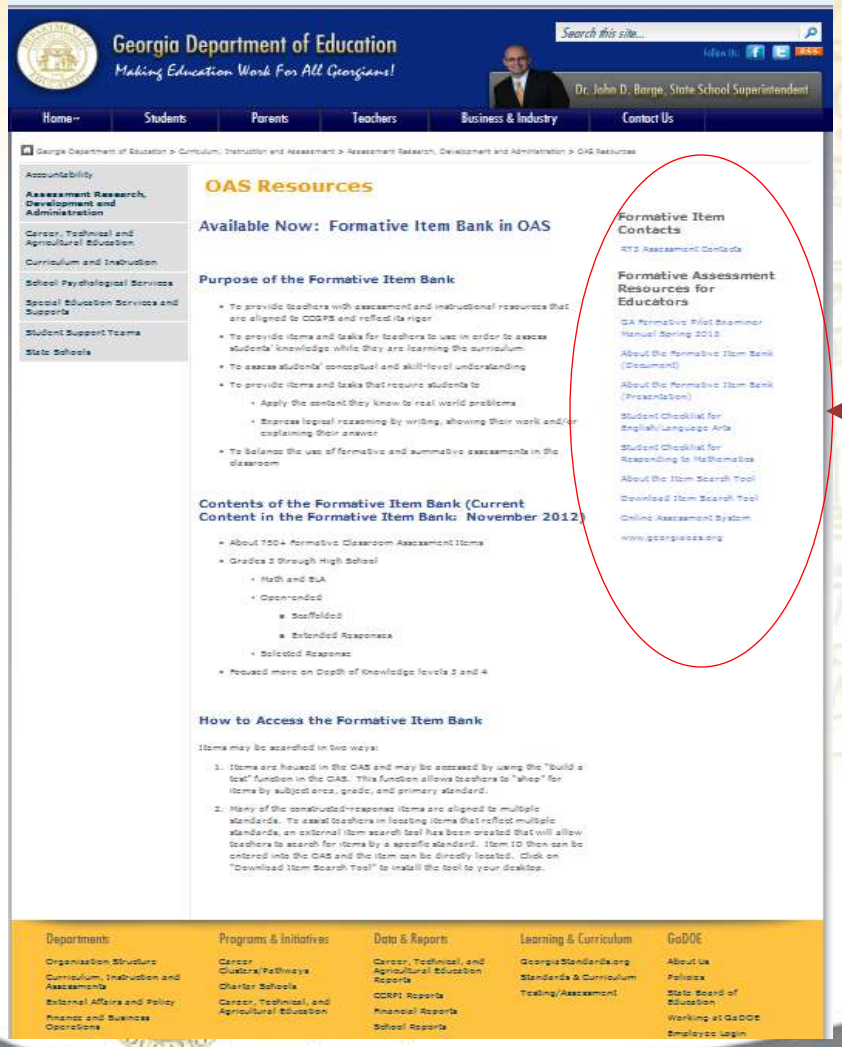


For more information about the Formative Item Bank Project

http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/default.aspx

Formative Item Bank Information On-line

http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/OAS-Resources.aspx



Includes:

- About the Formative Item Bank (document)
- About the Formative Item Bank (presentation)
- Student Checklist for ELA
- Students Checklist for Mathematics
- Link to the OAS
- Link to Georgia Standards.org

Georgia's Formative Assessment Initiatives

Bringing a Balanced Assessment Focus to the Classroom

Formative Item Bank

Assessment Literacy Professional Learning

Benchmark Assessments

"Quality assessment is a system of assessing what students know and are able to do in a manner that garners accurate information from students for the purpose of improving learning." (Rick Stiggins, 2008)

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