



Union High School District

MINUTES

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SAN DIEGUITO UNION HIGH SCHOOL DISTRICT
BOARD OF TRUSTEES
STUDENT ACHIEVEMENT UPDATE
BOARD WORKSHOP

THURSDAY, SEPTEMBER 19, 2013
4:45 PM

DISTRICT OFFICE BOARD ROOM 101
710 ENCINITAS BLVD., ENCINITAS, CA. 92024

The Governing Board of the San Dieguito Union High School District held a Board Workshop on Thursday, September 19, 2013, at the above location, in the Board Room.

Attendance / Board:

Joyce Dalessandro
Barbara Groth
Beth Hergesheimer
Amy Herman
John Salazar

Attendance / District Management:

Rick Schmitt, Superintendent
Eric Dill, Associate Superintendent, Business Services
Michael Grove, Ed.D, Associate Superintendent, Educational Services
Torrie Norton, Associate Superintendent, Human Resources
Jason Vilorio, Executive Director, Educational Services
Guen Butler, Teacher on Special Assignment (TOSA)
Brian Shay, Teacher on Special Assignment (TOSA)
Becky Banning, Executive Assistant to the Superintendent / Recording Secretary

1. CALL TO ORDER

President Groth called the meeting to order at 4:45 PM

INFORMATION ITEMS

2. UPDATE, SDUHSD STUDENT ACHIEVEMENTMIKE GROVE, ASSOCIATE SUPERINTENDENT

Superintendent Schmitt gave opening comments, and introduced Dr. Grove and Dr. Vioria who provided an overview of student achievement on a variety of measures in the 2012-13 school year and discussed plans for improving student achievement and our transition to the Common Core State Standards during the 2013-14 school year. TOSAs, Guen Butler and Brian Shea gave demonstrations of various teaching / assessment concepts.

3. ADJOURNMENT

The meeting was adjourned at 5:45 PM

Beth Hergesheimer
Beth Hergesheimer, Board Clerk

10-3-13
Date

Rick Schmitt
Rick Schmitt, Superintendent

10-3-13
Date

APPROVED IN PUBLIC MEETING OF THE
BOARD OF TRUSTEES OF THE SAN DIEGUITO
UNION HIGH SCHOOL DISTRICT 10-3-13
Becky Banning
BECKY BANNING RECORDING SECRETARY
BOARD OF TRUSTEES

ITEM 6

Board Workshop - Student Achievement

Thursday, Sept. 19, 2013

4:45 - 5:45 p.m. - Small Board Room

Intro--Jason Vilorio & Mike Grove:

- Intro's & Preview of Workshop
- Overview of Webb's Depth of Knowledge (DOK)

Literacy--Guen Butler:

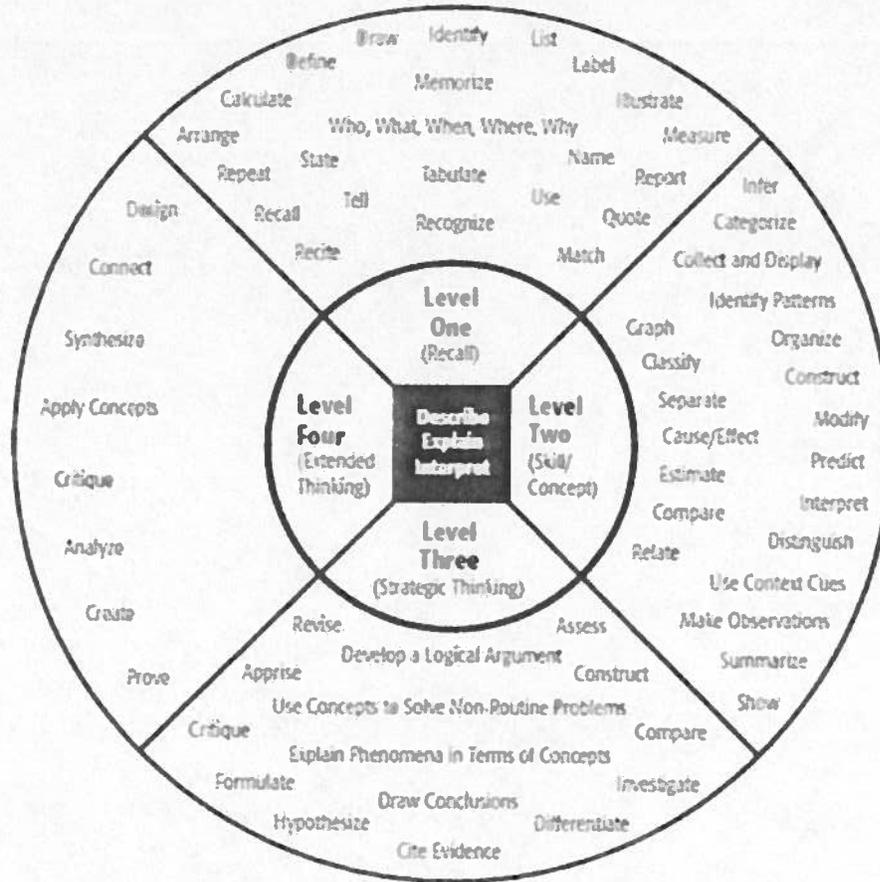
1. What do the DOK Levels look like in ELA/Literacy?
 - DOK in practice
2. MAPP ELA experience
 - MAPP ELA sample questions from a variety of grade levels
 - Performance task
3. Closure: Discuss--what does this mean for the classroom? How does teaching LOOK different?

Math--Brian Shay:

1. What do the DOK levels look like in math?
2. MAPP experience: both selected response & performance task
3. Closure - What are the implications of this shift for classroom instruction? Discuss.

Q & A (5 Min) - All

Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
<p>Recall elements and details of story structure, such as sequence of events, character, plot and setting.</p> <p>Conduct basic mathematical calculations.</p> <p>Label locations on a map.</p> <p>Represent in words or diagrams a scientific concept or relationship.</p> <p>Perform routine procedures like measuring length or using punctuation marks correctly.</p> <p>Describe the features of a place or people.</p>	<p>Identify and summarize the major events in a narrative.</p> <p>Use context cues to identify the meaning of unfamiliar words.</p> <p>Solve routine multiple-step problems.</p> <p>Describe the cause/effect of a particular event.</p> <p>Identify patterns in events or behavior.</p> <p>Formulate a routine problem given data and conditions.</p> <p>Organize, represent and interpret data.</p>	<p>Support ideas with details and examples.</p> <p>Use voice appropriate to the purpose and audience.</p> <p>Identify research questions and design investigations for a scientific problem.</p> <p>Develop a scientific model for a complex situation.</p> <p>Determine the author's purpose and describe how it affects the interpretation of a reading selection.</p> <p>Apply a concept in other contexts.</p>	<p>Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/solutions.</p> <p>Apply mathematical model to illuminate a problem or situation.</p> <p>Analyze and synthesize information from multiple sources.</p> <p>Describe and illustrate how common themes are found across texts from different cultures.</p> <p>Design a mathematical model to inform and solve a practical or abstract situation.</p>

West, Norman J. and others. "The Assessment Tool" 24 July 2005. <http://www.assessment-tool.org/> University of Wisconsin-Madison. 2 Feb. 2006. <http://www.assessment-tool.org/>

DOK Levels Defined

DOK 1 (Recall)

DOK 1 includes the recall of information such as a fact, definition, term, or simple procedure, as well as performing a simple algorithm or applying a formula. Key words that signify Level 1 include “identify,” “recall,” “recognize,” “use,” “measure”. Verbs such as “describe” or “explain” could be classified at different levels depending on what is to be described or explained. DOK 1 can be difficult without requiring reasoning. At DOK 1, students find “the right answer,” and there is no debating the “correctness,” it is either right or wrong.

DOK 2 (Skill/Concept)

DOK Level 2 includes the engagement of some mental processing beyond a habitual response. A Level 2 assessment item requires students to make some decisions about how to approach a problem or activity, whereas DOK 1 requires students to demonstrate a rote response, perform a well-known algorithm, follow a set procedure (like a recipe) or perform a clearly defined series of steps. Keywords that generally distinguish a Level 2 item include “classify,” “organize,” “estimate,” “make observations,” “collect and display data” and “compare data.” These actions imply more than one step.

DOK 3 (Strategic thinking)

DOK 3 requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. In most instances, requiring students to explain their thinking is at DOK 3. Activities that require students to make conjectures are also at this level. The cognitive demands at DOK level 3 are complex and abstract. The complexity does not result from the fact that there are multiple answers, a possibility for both DOK 1 and DOK 2, but because the task requires more demanding reasoning.

DOK 4 (Extended thinking)

DOK 4 requires complex reasoning planning developing and thinking, most likely over an extended period of time. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. At DOK 4, the cognitive demands of the task should be high and the work should be very complex. Students should be required to make several connections— relate ideas within the content area or among content areas—and have to select one approach among many alternatives on how the situation should be solved, in order to be at this highest level.

From a presentation by Dr. Shannon Coulter, San Diego County Office of Education, “Getting Smarter About Common Core Assessment”, August 13, 2013.

ITEM 6

Smarter Balanced Assessment Consortium (SBAC)

Sample Questions from the practice SBAC Assessment, now called
MAPP (Measure of Academic Performance & Progress)

English Language Arts (ELA)

995



Read the sentences from the text on the left. Then match the underlined word in each sentence to its closest definition on the right.

"I think she could generate enough power to light up a small city."

She was a 30-pound ball of fur, claws, and teeth with an uncanny ability to jump, dig, and chew.

Despite the distraction of having four potential playmates in the room, Libby breezed through her first class because we had already taught her to sit, lie down, and recognize her name.

brilliant

produce

keen

possible

original

fabulous

To receive the full-credit score of 1 point, the student must correctly match all three options. The correct responses are generate matched with "produce," uncanny matched with "keen," and potential matched with "possible."

946

Tammy wrote a narrative for a creative writing contest. Her teacher suggested she add a transition sentence to connect the paragraphs below. Read the paragraphs from the narrative and the directions that follow.

On the first day of middle school, Grace marched onto the school bus and slid into an empty seat. She wondered how many more times she would have to ride the bus without her best friend Alex. The noisy bus filled with laughter and the chirping sounds of chatter. The bus driver started the old, tired engine and, with a grumpy tone, told all the students to find a seat. Grace opened her book bag in search of her library book. Unable to locate the book, she sat back in her seat and tried to relax.

Her kindergarten teacher had a bright smile and sang songs to the class every morning. He made school exciting and Grace remembered enjoying every minute of her time in the bright, colorful classroom. She thought about meeting Alex the first day of kindergarten during lunch. They had the same lunch box and, after a brief introduction, they decided to swap sandwiches.

Select the sentence that **best** adds a transition between the two paragraphs.

- (A) Grace began to daydream about her other teachers, friends, and favorite subjects.
- (B) Grace felt a sense of relief as she thought about all the books she had read.
- (C) Grace's mind began to focus on her lunch as her stomach grumbled loudly.
- (D) Grace's thoughts slowly led her back to another, happier first day of school.

The correct response, option D, receives a score of 1 point.

LIFE in the Food Chain

What Do You Have in Common with Corn, Mushrooms, Cows, and Grass?

by Ellen R. Braaf

Like all living things, you need energy. The energy you use to live every day travels from one living thing to another, in a chain that starts with the sun.

The energy in all your food comes from the sun, 93 million miles away. How did the sun's energy end up in the things you eat? You can thank green plants. They contain chlorophyll--a substance that traps the energy in sunlight. This energy then helps plants change water from the soil and carbon dioxide from the air into oxygen and carbohydrates that power their cells. This process is called photosynthesis.

Most plants make more food than they need. They store the extra in their roots, leaves, stems, flowers, fruit, and seeds. So, when you eat carrots, spinach, celery, cauliflower, bananas, or walnuts, some of the energy stored in plants passes on to you.

Certain bacteria also make their own food. So do most algae. Found just about everywhere on Earth--in lakes, streams, oceans, deserts, soil, boiling hot springs, snow, and ice--algae range from 200-foot-long kelp to tiny ocean plants called phytoplankton. Living things that make their own food are called producers. All others--including humans--are consumers. They need to eat other living things to survive.

Living Links

Food chains link producers and consumers together. When scientists talk about food chains, they're not talking about the E-Z Burger restaurant chain. They mean the paths along which energy and nutrients pass from one living thing to another in our "eat-or-be-eaten" world. Food chains everywhere--in grasslands and deserts, oceans and tropical rainforests--begin with the producers. They are the first link.

The consumers come next, starting with the plant eaters, or herbivores, the vegetarians of the animal kingdom. Elephants grazing on grass, caterpillars munching leaves, and pandas chomping bamboo get energy

directly from producers. So do the shrimplike krill that dine on one-celled plants in the ocean.

Carnivores, who consume other animals, come next. These predators get energy from plants indirectly. When an owl eats a mouse that nibbled seeds, it tops a three-link chain. But if its prey is a snake that ate a mouse that nibbled seeds, the snake becomes the third link, and the owl, the fourth.

Because all organisms use the energy they get from food to live, grow, and reproduce, only small amounts remain to pass between the living links in a food chain. That's why most chains are short--usually about two to five links--and why it takes a lot of producers at the bottom of a food chain to support a few supercarnivores at the top. It's also why life on Earth depends on a constant supply of sunlight.

Isle Royale: Predators, Prey, and Producers

On Isle Royale--a small, remote island in Lake Superior--wolves, moose, and balsam fir trees are bound together in a three-link food chain. Moose came to the island around 1900. These long-legged herbivores probably swam 15 miles to the island from Canada. There they found moose heaven--lots of plants and no large predators. As a result, they thrived, and their numbers grew. Many lived a long time for moose, about 17 years.

In summer, moose eat a variety of ferns, shrubs, wildflowers, leaves, and water plants. An 800-pound moose can scarf down 40 pounds of vegetation a day, packing on an extra 200 pounds in just a couple of months. That's like an 80-pound kid gaining 20 pounds over summer vacation by eating 4 pounds of salad every day.

But in winter when food is scarce, moose eat mostly the twigs and needles of balsam fir trees. These meals are much less nutritious than their summer fare, and the moose use up lots of energy plodding through deep snow to feed. They lose all the weight they gained in summer.

Wolves came to Isle Royale around 1950. Scientists think a mated pair probably walked across an ice bridge between the island and Canada. Wolves are the island's only big predators. Their arrival changed the lives of Isle Royale's moose forever.

Ups and Downs

Scientists have been studying this isolated food chain for 50 years to understand how changes in one link can cause changes in another. As more

moose are born on the island, they eat more balsam fir. The more they consume, the more they damage the trees. Stunted trees mean less food. Eventually, there's not enough food to support all the moose. Many starve, and their numbers decrease. With fewer moose dining on them, fir trees gradually recover.

A similar boom-and-bust cycle occurs between predator and prey. Ten times the size of a wolf, a moose has long, strong legs and a dangerous kick. So wolves prey mainly on old and weak animals. Good hunting means food for the whole pack. Wolves then raise lots of pups, and their numbers increase. More wolves mean more mouths to feed and more moose get eaten. However, when the moose population decreases, wolves starve.

With fewer predators stalking the moose, more survive to old age. The moose population increases, and the cycle begins again.

"Life in the Food Chain" by Ellen R. Braaf from *Ask Magazine's* September 2008 issue, copyright © 2008 by Carus Publishing Company. Reprinted by permission.

834

This question has two parts. First, answer part A. Then, answer part B.

Part A

Click on the sentence that explains what might happen to the food chain if there were no sun.

- A) More producers would be needed to support the food chain.
- B) Carnivores in the food chain would have to find new things to eat.
- C) Some animals in the food chain would die while others would thrive.
- D) Almost all living things in the food chain would not get enough energy.

Part B

Now, click on the sentence from the text that supports your answer in part A.

- A) Food chains everywhere—in grasslands and deserts, oceans and tropical rainforests—begin with the producers.
- B) Elephants grazing on grass, caterpillars munching leaves, and pandas chomping bamboo get energy directly from producers.
- C) When an owl eats a mouse that nibbled seeds, it tops a three-link chain.
- D) Because all organisms use the energy they get from food to live, grow, and reproduce, only small amounts remain to pass between the living links in a food chain.

This item includes two parts, part A and part B. To receive the full-credit score of 1 point, the student must correctly answer both parts. The correct responses are option D in part A and option A in part B.

836



This question has two parts. First, answer part A. Then, answer part B.

Read the sentence from the text and the directions that follow.

A similar boom-and-bust cycle occurs between predator and prey.

Part A

Click on the phrase that **best** matches the meaning of boom-and-bust in the sentence above.

- A) a measurement that rises and falls
- B) a cause that has two separate effects
- C) a competition between two organisms
- D) a relationship that benefits both groups

Part B

Click on an example of boom-and-bust from the text that matches your definition in part A.

- A) These predators get energy from plants indirectly.
- B) In summer, moose eat a variety of ferns, shrubs, wildflowers, leaves, and water plants.
- C) Scientists think a mated pair probably walked across an ice bridge between the island and Canada.
- D) With fewer moose dining on them, fir trees gradually recover.

This item includes two parts, part A and part B. To receive the full-credit score of 1 point, the student must correctly answer both parts. The correct responses are option A in part A and option D in part B.

1053

Suzanne has written a narrative story for her creative writing class about her favorite moment at school. Her teacher suggested she use narrative strategies such as dialogue to improve the story. Read the story and the directions that follow.

Most of the students filling into the auditorium were dreading the long assembly, but I was excitedly chomping on my fingernails. Our teacher, Mrs. Jones, stopped in the aisle to look back and scan her finger along our class row. After which, she put her closed fist to her lips, turned it like a key, and then threw it away over her shoulder. Weren't we too old for that gesture? Evidently, Mrs. Jones was serious; she waited until every student nodded a personal promise of silence.

As Mrs. Jones read the name of the fourth-grade winner in the illustrated short story category, I knew there had to be some mistake. Kristin squealed and ran up to the stage. I tried to clap, but my hands suddenly wouldn't work. I wanted to run out screaming, but I sulked quietly, biting my lip to keep from crying.

Then I heard Mrs. Jones's clear voice breaking through my anger. She was reading my story aloud to the whole school, and my front cover was up on a screen at the back of the stage. When she finished, she called me to the stage and gave me a big hug. She had sent my story to a national contest. That was my favorite moment at school.

Which of the following examples provides the **strongest** option to strengthen the narrative strategies in the underlined text by inserting dialogue?

- A I heard Mrs. Jones's clear voice reading my story aloud to the whole school. When I looked up, my front cover was projected on the screen at the back of the stage. "See what a wonderful writer Suzanne has become. Let's give her a big hand." I was so happy!
- B I heard Mrs. Jones's clear voice breaking through my anger. She was reading my story aloud to the whole school. When she finished, I ran onto the stage and gave her a big hug. "I am sending your story to a national contest." That was my favorite moment in school.
- C Mrs. Jones's clear voice read my story aloud to the whole school. She even projected my front cover on the screen at the back of the stage. "Suzanne, come on up." Mrs. Jones hugged me and told me she had sent my book to a national contest. "Wow, Mrs. Jones, this is truly a surprising day!"
- D Mrs. Jones's clear voice rang out: "...the princess took her rightful place on the throne beside the little man who saved her life." Those were my words, and that was my story. Why on earth was she not reading Kristin's? "Suzanne, come on up to the stage to take your rightful place as finalist in a national contest."

The correct response, option D, receives a score of 1 point.

1045



One sentence in the paragraph contains an error in grammar usage. Read the paragraph and the directions that follow.

Sheila and Desmond began their new jobs at a local bakery. After showing them around the store, the owner told them not to eat while working behind the counter. Sheila, with a cupcake frosted with vanilla icing, watched Desmond stuff his mouth. Just then, the owner came in, saw what had happened, and fired Desmond.

Type the incorrect sentence below, correcting the error in grammar usage.

A two-point response identifies the incorrect sentence and corrects the error in grammar usage.

Sample two-point response:

Sentence 3: Sheila watched Desmond stuff his mouth with a cupcake frosted with vanilla icing.

A one-point response identifies the incorrect sentence, but includes a partial or incorrect revision of the sentence.

Sample one-point response:

Sentence 3: With a cupcake frosted with vanilla icing, Sheila watched Desmond stuff his mouth.

A response that does not identify the incorrect sentence receives no credit.

Sample zero-point response:

Sentence 1: At the local bakery, they began their new jobs.

1054



Choose the sentence that does **not** contain any errors in grammar usage or punctuation.

- Ⓐ John chose to bring his own homemade, bagged lunch to school.
- Ⓑ Every Friday, the cafeteria serves pizza to students on paper plates.
- Ⓒ The pizza, with pepperoni and sausage, was the one I wanted for lunch.
- Ⓓ Topped with hot fudge sauce, John could not believe I ate the entire sundae.

The correct response, option A, receives a score of 1 point.

Much Ado About *Much Ado About Nothing*

It was the first day back at school after the holiday break. Our drama teacher, Mrs. Kent, handed out our next assignment: an in-depth study of a scene from one of Shakespeare's plays. I was so excited to see that I had been assigned a scene from *Much Ado About Nothing*. Finally, here was my long-awaited opportunity to act out a comedy scene from Shakespeare! My joy was short-lived, however, because moments later I saw Luke shuffling my way with that mocking grin on his face that I find so infuriating. Of course Mrs. Kent had assigned Luke to be my partner! Even worse, we were to play Beatrice and Benedick, two of Shakespeare's most famous lovers. Where was Macbeth's dagger when you needed it?

Our partnership started out just as I thought it would. As soon as we sat down to look at the scene, Luke was pompously proclaiming himself an expert.

"Beatrice and Benedick are obviously in love here at the beginning of the play. Anyone with a brain could see that, Kate," he said.

"I have brain enough for both of us, Luke, which is good, since you seem to be in need. Beatrice and Benedick only fall in love because they're tricked into it. They would never have fallen in love otherwise—that much is obvious to anyone with a pulse."

"Oh really? I'll speak slowly so you can understand," Luke said. "In Beatrice's very first line in the play, she asks about Benedick. Why else would she do that? Clearly she's infatuated with him."

"Luke, your interpretation is as interesting as it is correct—which is not at all," I said. "Notice, please, that Beatrice is mocking Benedick in that line, and she continues to do so for the rest of the scene."

"It's because she loves him! Don't you remember that line from *Hamlet*? 'The lady doth protest too much, methinks.' In so many of Shakespeare's plays, when people are trying to conceal their feelings, they emphatically say the opposite. Beatrice and Benedick insult each other because they *like* each other. Any fool can see that!"

"Well, I guess that explains why *you* can see it."

We were getting nowhere. Luke got up to sharpen his pencil (and to complain about me to his friends, no doubt), and I took the opportunity to review my notes from Mrs. Kent's lecture about the play. *Much Ado About Nothing* is a comedy set in Italy a long time ago. At the beginning of the play, Benedick is just returning from a battle when he is reunited with Beatrice. They apparently have this long-running but friendly feud between them, but nobody in the play says why. All they ever do is insult each other, as wittily as possible—they engage in a "merry war betwixt" them, in Shakespeare's words. Their friends devise a plan to trick Beatrice and Benedick into falling in love with each other. Benedick's friends arrange for him to overhear a conversation in which they say how much Beatrice is secretly in love with him. Beatrice's friends pull the same trick on her. The scheme works and the two fall in love and get married, riding off into the sunset and living happily ever after.

Luke sauntered back, so I tried to restart the conversation in a more constructive direction. "In the party scene, Benedick is wearing a mask so Beatrice doesn't know who he is," I explained. "Even so, Beatrice calls Benedick 'the prince's jester: a very dull fool.' It seems painfully obvious to me that she does not love him."

"She's just messing with his mind, Kate! Beatrice knows it's Benedick behind the mask, so she's having a little fun—because she loves him! Isn't that what women do to the men they like?"

"Nowhere in the text does it say that, and you obviously know nothing about women."

"Not everything is written on the page, Kate. Some things are written between the lines."

"This is Shakespeare we're talking about here! The greatest writer in, like, ever! If he had meant for us to read between the lines, he would have written between the lines."

"That's just silly. He wrote for real live actors, not for robots. Actors interpret the playwright's words and make them their own. That's why a character can be completely different depending on the actor who's playing it."

"Well, Luke, I happen to trust Shakespeare's words—the ones he actually wrote. I think that if he had wanted us to imagine that Beatrice and Benedick are in love at the beginning of the play, he would have had someone say it."

"Aha! Right here in the play, the prince, Don John, says that Beatrice would make 'an excellent wife for Benedick.' That's someone saying they're in love, don't you think?"

"But in the very next line, the governor, Leonato, says, 'If they were but a week married, they would talk themselves mad.' That's someone saying they're not in love, don't you think?"

It was no use; we needed to appeal to a higher authority: Mrs. Kent. She has been teaching theater for over fifty years, and has directed every Shakespeare play, many more than once. If anyone knew how we should play this scene, it was she.

We met with Mrs. Kent in her office. She sat listening quietly as Luke and I pled our cases. We argued as though we were before the Supreme Court, waving our copies of the play, highlighting the lines that supported our interpretations. Finally, we both sat back breathlessly in our chairs, our respective cases closed, and awaited the judge's decision.

Mrs. Kent peered at us with a crinkled grin on her face. "Why can't you both be right? Maybe they're in love with each other at the beginning of the play and they just don't know it. Maybe they need their friends' tricks in order to fully realize their love for one another. We all have thoughts and feelings that we're not entirely conscious of, don't you think?"

Luke and I sheepishly thanked Mrs. Kent and left her office. She was right—we could play our characters with our own interpretations of their feelings, and it would work out just fine.

I was almost ready to forgive Luke, but then he made this suggestion: "Let's practice the scene where Beatrice pretends that she wants Benedick to kill Claudio."

"Pretends?!"

874



Read this excerpt from the text that includes a quotation by William Shakespeare. Then, answer the question that follows.

... they engage in a "merry war betwixt" them, in Shakespeare's words.

What is the effect of the underlined figure of speech in the text?

- Ⓐ It mirrors the exaggeration of the claims made by Luke and Kate as they argue about the play.
- Ⓑ It creates irony because Beatrice and Benedick and Luke and Kate accept each other's feelings.
- Ⓒ It provides a summary of the relationship between Beatrice and Benedick as well as Luke and Kate.
- Ⓓ It makes the bitter anger between Beatrice and Benedick seem less harsh, just as Luke is trying to do.

The correct response, option C, receives a score of 1 point.

880

Explain how the structure of this text creates a parallel with the script of a play. Support your answer using at least **two** details from the text.

Type your answer in the space provided.

A two-point response includes at least two details from the text that support the student's explanation of how the structure of the text creates a parallel with the script of a play. Responses are not scored for grammar usage, conventions, spelling, or punctuation.

Sample two-point response:

Although this is a narrated story, not drama, the bulk of the text is presented as a conversation. The first section of dialogue has very brief lines with very few dialogue tags ("he said"). But in the second section, even these drop out, so that from "She's just messing with his mind" to "don't you think?," the text is very much like an excerpt from a play, the only differences being that this story has quotation marks and no identification of who is speaking.

A one-point response includes one detail from the text that supports the student's explanation of how the structure of the text creates a parallel with the script of a play.

Sample one-point response:

Even though this is a story, not a drama, there is a great deal of dialogue, like the parts where Luke and Kate argue about whether Beatrice and Benedick are in love or not.

A response that does not provide any detail from the text that supports the student's explanation of how the structure of the text creates a parallel with the script of a play receives no credit.

Sample zero-point response:

It's harder to read some of this dialogue than a play because it doesn't tell who is speaking.

882

Click on the sentences from the text that apply not only to Benedick and Beatrice in Shakespeare's play, but also to Luke and Kate.

- A) We were getting nowhere.
- B) Luke got up to sharpen his pencil (and to complain about me to his friends, no doubt), and I took the opportunity to review my notes from Mrs. Kent's lecture about the play.
- C) *Much Ado About Nothing* is a comedy set in Italy a long time ago.
- D) At the beginning of the play, Benedick is just returning from a battle when he is reunited with Beatrice.
- E) They apparently have this long-running but friendly feud between them, but nobody in the play says why.
- F) All they ever do is insult each other, as wittily as possible—they engage in a "merry war betwixt" them, in Shakespeare's words.
- G) Their friends devise a plan to trick Beatrice and Benedick into falling in love with each other.
- H) Benedick's friends arrange for him to overhear a conversation in which they say how much Beatrice is secretly in love with him.
- I) Beatrice's friends pull the same trick on her.
- J) The scheme works and the two fall in love and get married, riding off into the sunset and living happily ever after.

To receive the full-credit score of 1 point, the student must choose both correct responses. The correct responses are options E and F.



Grade 11 Performance Task

Nuclear Power: Friend or Foe?

1. Task Overview
2. Classroom Activity
3. Student Task: Parts 1 and 2
4. Task Specifications and Scoring Rubrics

Task Overview (20 minutes for classroom activity, 120 minutes for performance task = 140 total minutes)

Classroom Activity (20 minutes)

Using visual stimuli (chart and photo), the teacher invites students to share prior knowledge of nuclear power. By way of class discussion, and in order to contextualize the examination of stimuli in Part 1, students are reminded of two basic understandings about nuclear power: 1) that it is one among several ways that societies produce electricity and 2) that its use is controversial.

Part 1 (50 minutes)

Students examine and take notes on the stimuli, a series of internet sources that present both sides of the nuclear debate. Constructed-response questions call upon the students to summarize and evaluate the presented sources.

Part 2 (70 minutes)

Students refer to their notes as needed to compose a full-length argumentative report. Students are allowed access to the stimuli they examined in Part 1. Pre-writing, drafting, and revisions are involved.

Scorable Products

Student responses to the constructed-response research questions at the end of Part 1 and the report completed in Part 2 will be scored. Notes completed in Part 1 and pre-writing and drafting in Part 2 will not be scored.



Grade 11 Performance Task

Teacher Preparation / Resource Requirements

This is a computer-based test that requires an interface for each test-taker. The testing software will include access to spell check, but not to grammar check. The teacher should ensure that sufficient blank paper and writing tools are available for student note-taking. Ideally, the teacher has access to a projector and PowerPoint-like software for presenting images in the Introductory Classroom Activity, but these images can also be distributed as handouts.

Teacher Directions for the Classroom Activity

Introductory Classroom Activity (20 minutes)

- Present on a projector (or distribute a handout of) the pie chart on the production of electricity in the U.S. (see attached).
- After giving students a moment to look at the chart, ask, "What do you think this chart is telling us? What would you guess that its title or caption is?"
- After taking a few responses, affirm or state that the chart provides data on where electricity comes from in the United States.
- Invite students to briefly define the various kinds of energy sources that appear on the chart: hydroelectric, renewables, nuclear, etc.
- Ask, "Which of the sources accounts for just over 19% of America's electricity?"
- After a student has identified nuclear power, ask, "What do you know about nuclear power? How does it produce electricity?"
- While students share what they know about the technology of nuclear power, show them the photograph of the functioning nuclear power plant, the Susquehanna Steam Electric Station in Pennsylvania (see attached). (Explain that the white emissions are steam.)
- If students do not know anything about nuclear power technology, tell them that it comes from a device (a nuclear reactor) that creates a chain reaction that breaks up the nucleus of an atom so that it produces energy. Usually heat from this process is used to generate electricity.
- Say to the students, "In the performance task that you are going to participate in today, you will learn more about nuclear power and the debate over its pros and cons. Eventually, you will need to take a position on whether we should encourage or discourage the use of nuclear power, and you will defend your point of view in an argumentative report. It is important to know that, as the pie chart indicates, nuclear power is one way that our country currently gets its electricity. Some people support it and think it might even be a bigger piece of the pie. Others oppose it and would like to see it disappear from the pie chart altogether."



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Teacher Directions for Parts 1 and 2

Part 1 (50 minutes)

Students should receive the sources, directions, questions, report assignment, and any other material related to the task. They should receive the constructed-response questions in Part 1 and the report assignment in Part 2.

1. Initiate the online testing session.
2. Pass out the note-taking guide, reminding the students that its use is optional and unscored.
3. Alert the students when there are 25 minutes remaining in Part 1.
4. Alert the students when there are 5 minutes remaining in Part 1.
5. Have students write their names on any notes. Collect all student notes.
6. Close the testing session.

Stretch Break

Part 2 (70 minutes)

1. Initiate the testing Part 2.
2. Allow students to access the sources, their notes, and their answers to the constructed-response questions presented in Part 1. They will not be allowed to change their answers.
3. Once 15 minutes have elapsed, suggest students begin writing the report.
4. Alert the students when 30 minutes remain.
5. Alert students when 15 minutes remain and suggest they begin revising their reports.
6. Close the testing session.

Student Directions for Parts 1 and 2

Part 1 (50 minutes)

Your task

You will conduct some research on the pros and cons of nuclear power and then write a report arguing your opinion on the use of nuclear power for generating electricity.

Steps to follow

In order to plan and compose your report, you will do all of the following:

1. Review and evaluate the results of an Internet search on the pros and cons of your topic.
2. Make notes about the information from the sources.



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3. Answer two questions about the sources.

Directions for beginning

You are chief-of-staff for your local congresswoman in the U.S. House of Representatives. She has called you into her office to outline an urgent project.

"I have received advance notice," she says as you sit down, "that a power company is proposing to build a nuclear plant in the southeastern corner of our state. The plan will be announced to the public tomorrow morning, and citizens and journalists will want to know what my position is on this controversial issue. To be honest, I am not sure how I feel about it. We currently don't have any nuclear power plants in this state, so I haven't taken time to consider the issue deeply."

"I need you," she continues, "to conduct a brief survey of the pros and cons of nuclear power. Summarize what you have learned and report back to me this afternoon."

Back in your office, you enter "nuclear power pros and cons" into a Google search engine, and it returns what looks like a promising mix of articles, videos, and data charts. You must review and evaluate these sources and summarize their arguments—both pro and con—before reporting back to the congresswoman.

You have been provided with and are encouraged to use a note-taking guide that will help you gather and process your findings.

Research Questions

After you have reviewed the research sources, answer the questions below. Your answers to these questions will be scored. Also, they will help you think about the sources you have read and viewed, which should help you write your report. Answer the questions in the spaces provided below each question.

- From the sources you have reviewed, summarize 3 major arguments that support, and 3 major arguments that oppose, the use of nuclear power for generating electricity. For each of the arguments, cite at least one source that supports this fact or point of view.

Argument / Fact in Favor of Nuclear Power	Source Supporting This Argument
1.	
2.	
3.	
Argument / Fact in Opposition to Nuclear Power	Source Supporting This Argument
1.	
2.	
3.	

- Evaluate the credibility of the arguments and evidence presented by these sources. Which of the sources are more trustworthy and why? Which of the sources warrant some skepticism because of bias



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or Insufficient evidence?

Part 2 (70 minutes)

You will now have 70 minutes to review your notes and sources, plan, draft, and revise your report. You may use your notes and refer to the sources. You may also refer to the answers you wrote to the questions in Part 1, but you cannot change those answers. Now read your assignment and the information about how your report will be scored; then begin your work.

Your Assignment

Back in the congresswoman's office, you start to hand her your notes on the pros and cons of nuclear energy, but she waves away your papers.

"Some emergency meetings have come up and I don't have time to review your research notes," she says. "Instead, go ahead and make a recommendation for our position on this nuclear power plant. **Should we support the building of this nuclear plant in our state, or should we oppose the power company's plan?** Be sure that your recommendation acknowledges both sides of the issue so that people know that we have considered the issue carefully. I'll review your report tonight and use it for the press conference tomorrow morning."

Write an argumentative report that recommends the position that your congresswoman should take on the plan to build a nuclear power plant in your state. Support your claim with evidence from the Internet sources you have read and viewed. You do not need to use all the sources, only the ones that most effectively and credibly support your position and your consideration of the opposing point of view.

Report Scoring

Your report will be scored on the following criteria:

1. **Statement of purpose / focus and organization:** How well did you clearly state your claim on the topic, maintain your focus, and address the alternate and opposing claims? How well did your ideas logically flow from the introduction to conclusion using effective transitions? How well did you stay on topic throughout the report?
2. **Elaboration of evidence:** How well did you elaborate your arguments and discussion of counterarguments, citing evidence from your sources? How well did you effectively express ideas using precise language and vocabulary that were appropriate for the audience and purpose of your report?
3. **Conventions:** How well did you follow the rules of usage, punctuation, capitalization, and spelling?

Now begin work on your report. Manage your time carefully so that you can:

- plan your report
- write your report
- revise and edit for a final draft

ITEM 6



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Word-processing tools and spell check are available to you.

Type your response in the space provided. Write as much as you need to fulfill the requirements of the task; you are not limited by the size of the response area on the screen.



Grade 11 Performance Task

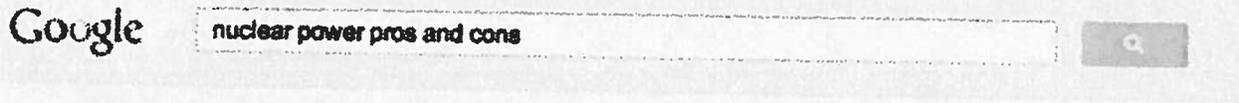
Note-Taking Guide

Research Source	Published by ...	Arguments for Nuclear Power	Arguments against Nuclear Power	How reliable is the evidence from this source?



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Source Information:



Search About 606,000 results (0.18 seconds)

Nuclear power - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Nuclear_power

Nuclear power is the use of sustained nuclear fission to generate heat and electricity. Nuclear power plants provide about 6% of the world's energy and 13- 14% ...

James Hansen on Nuclear Energy - YouTube



www.youtube.com/watch?v=alrxqx_B34s

Nov 16, 2010 - 1 min - Uploaded by Newsweek Magazine

"NASA's premier climate change expert believes that next-generation, safe nuclear power is an option which we need to develop. And it is being ..."

LETTER TO THE EDITOR: Against plans for nuclear power plant

ottumwacourier.com/letters/.../Against-plans-for-nuclear-power-plant

Mar 17, 2012 - I would like to comment on Mid-American Energy's intent to build a nuclear power plant in Iowa. We already have one nuclear plant in Palo, ...

Look Inside Fukushima's meltdown zone a year later - YouTube



www.youtube.com/watch?v=-6oQAYunXqk

Feb 28, 2012 - 3 min - Uploaded by CNN

CNN's Kyung Lah reports from the meltdown zone. ... Look Inside Fukushima's meltdown ...

The Truth About Nuclear Power - Reason.com



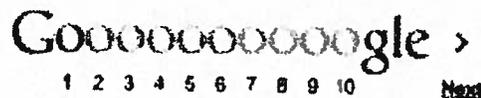
reason.com/archives/2011/03/25/the-truth-about-nuclear-power

The chart here uses data compiled from various sources to compare the deaths per unit of energy produced. Deaths resulting from the production of nuclear power are over 4000 times less than the rate of death resulting from the production of energy from coal....

LETTER TO THE EDITOR: Nuclear a cost-effective energy source ...

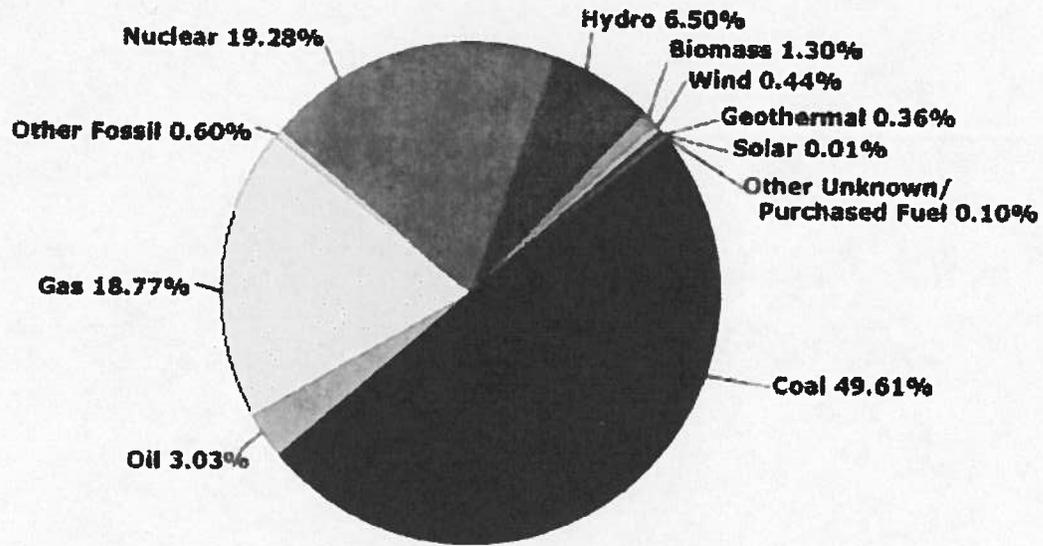
www.washingtontimes.com/.../nuclear-a-cost-effective-energy-source...

Jan 3, 2012 - The truly rational view of Marlo Salazar on nuclear power should be a lesson on dispassionately ... The Washington Times ... LETTER TO THE EDITOR: Nuclear a cost-effective energy source ... to the real alternatives of burning gas, oil and coal, and much more reliably than alternatives like wind and solar.





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Source: U.S. EPA, eGRID, year 2005 data.





"Answer Key"
Grade 11 Performance Task

Task Specifications:

Title:	Nuclear Power: Friend or Foe?
Grade:	10/11
Claim(s):	2: Students can produce effective and well-grounded writing for a range of purposes and audiences. 4: Students can engage in research/inquiry to investigate topics and to analyze, integrate, and present information.
Primary Target(s):	These claims and targets will be measured by scorable evidence collected. Claim 2 7: COMPOSE FULL TEXTS: Write full persuasive pieces/arguments about topics or texts, attending to purpose and audience: establishing and supporting a claim, organizing and citing supporting evidence (from texts when appropriate) from credible sources, and providing a conclusion appropriate to purpose and audience. 8: LANGUAGE & VOCABULARY USE: Strategically use precise language and vocabulary (including academic and domain-specific vocabulary and figurative language) and style appropriate to the purpose and audience when revising or composing texts. 9: EDIT/CLARIFY: Apply or edit grade-appropriate grammar, usage, and mechanics to clarify a message and edit narrative, informational, and persuasive/argument texts. Claim 4 2: ANALYZE/INTEGRATE INFORMATION: Gather, analyze, and integrate multiple sources of information/evidence to support a presentation on a topic. 3: EVALUATE INFORMATION/SOURCES: Evaluate relevancy, accuracy, and completeness of information from multiple sources. 4: USE EVIDENCE: Cite evidence to support arguments or conjectures.
CCSS/Standard(s):	W-1a-e, W-4-9, L-1-3, L-6, RI-7, RLiteracy-7, WLiteracy-8-9
DOK:	4
Difficulty:	Medium
Score Points:	Up to 10
Task Source:	SBAC / Stanford Center for Assessment, Learning, & Equity (SCALE)
Item Type:	Performance Tasks
Target-specific attributes (e.g., accessibility issues):	Students with visual impairments may need alternative formats to access written texts, graphic stimuli, and video or audiovisual material. Students with physical or other impairments may need to be provided with appropriate alternative means to entering lengthy text using a keyboard.
Grade Level of Stimuli:	9-10



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Stimuli:	Authentic Internet sources pre-selected and presented to the students as the top hits of a simulated Google search. Should present a range of media that includes text, video, and data charts. Collectively, the sources must provide an overview of the topic and present both sides of the controversy. Sources must also vary in terms of their credibility and reliance on evidence. See attached PDF for a draft of an example. Links are functioning and open actual Internet sources that could be used for this task.
How this task contributes to sufficient evidence for the claims:	In order to complete the performance task, students 1. Evaluate and select information from a series of sources 2. Write an argumentative report effectively demonstrating • a clearly-established claim about the topic • presentation of relevant supporting evidence, details, and elaboration consistent with the position, sources, purpose, and audience • effective organization of ideas • adherence to conventions and rules of grammar, usage, and mechanics • control of language for purpose and audience
Task Notes:	This task attempts to address the challenge of assessing real-life research skills within the constraints of a standardized, on-demand test. The use of a simulated Internet search result pointing to authentic Internet sources allows the task designer to recreate the challenges posed by research in the real world: namely, most of it is now done on the Internet, which requires vigilance and skill in evaluating the reliability of what you find there. In this way, students are asked not simply to synthesize the stimuli, but to evaluate the credibility and reliability of the stimuli before synthesizing a subset of the presented sources.



Grade 11 Performance Task

Scoring Information for questions:

1. Claim 4, Target 4

2-point Research (Grades 6-11) Use Evidence Rubric (Claim 4, Target 4)	
2	The response gives sufficient evidence of the ability to cite evidence to support arguments and/or ideas.
1	The response gives limited evidence of the ability to cite evidence to support arguments and/or ideas.
0	A response gets no credit if it provides no evidence of the ability to cite evidence to support arguments and/or ideas.

2. Claim 4, Target 3

2-point Research (Grades 6-11) Evaluate Information/Sources Rubric (Claim 4, Target 3)	
2	The response gives sufficient evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.
1	The response gives limited evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.
0	A response gets no credit if it provides no evidence of the ability to evaluate the credibility, completeness, relevancy, and/or accuracy of the information and sources.



Grade 11 Performance Task

Rubric and scoring information for full-write:

4-Point Argumentative Performance Task Writing Rubric (Grades 6–11)					
Score	4	3	2	1	NS
Statement of Purpose/Focus and Organization	<p>The response is fully sustained and consistently and purposefully focused:</p> <ul style="list-style-type: none"> claim is clearly stated, focused, and strongly maintained alternate or opposing claims are clearly addressed claim is introduced and communicated clearly within the purpose, audience, and task <p>The response has a clear and effective organizational structure creating a sense of unity and completeness:</p> <ul style="list-style-type: none"> consistent use of a variety of transitional strategies to clarify the relationships between and among ideas logical progression of ideas from beginning to end effective introduction and conclusion for audience and purpose strong connections among ideas, with some syntactic variety 	<p>The response is adequately sustained and generally focused:</p> <ul style="list-style-type: none"> claim is clear and mostly maintained, though some loosely related material may be present context provided for the claim is adequate within the purpose, audience, and task <p>The response has an evident organizational structure and a sense of completeness, though there may be minor flaws and some ideas may be loosely connected:</p> <ul style="list-style-type: none"> adequate use of transitional strategies with some variety to clarify the relationships between and among ideas adequate progression of ideas from beginning to end adequate introduction and conclusion adequate, if slightly inconsistent, connection among ideas 	<p>The response is somewhat sustained and may have a minor drift in focus:</p> <ul style="list-style-type: none"> may be clearly focused on the claim but is insufficiently sustained, or claim on the issue may be somewhat unclear and/or unfocused <p>The response has an inconsistent organizational structure, and flaws are evident:</p> <ul style="list-style-type: none"> inconsistent use of transitional strategies and/or little variety uneven progression of ideas from beginning to end conclusion and introduction, if present, are weak weak connection among ideas 	<p>The response may be related to the purpose but may provide little or no focus:</p> <ul style="list-style-type: none"> may be very brief may have a major drift claim may be confusing or ambiguous <p>The response has little or no discernible organizational structure:</p> <ul style="list-style-type: none"> few or no transitional strategies are evident frequent extraneous ideas may intrude 	<p>Insufficient, illegible, in a language other than English, incoherent, off-topic, or off-purpose writing</p>



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4-Point Argumentative Performance Task Writing Rubric (Grades 6–11)					
Score	4	3	2	1	NS
Evidence/Elaboration	<p>The response provides thorough and convincing support/evidence for the writer's claim that includes the effective use of sources, facts, and details. The response achieves substantial depth that is specific and relevant:</p> <ul style="list-style-type: none"> • use of evidence from sources is integrated, comprehensive, relevant, and concrete • effective use of a variety of elaborative techniques <p>The response clearly and effectively expresses ideas, using precise language:</p> <ul style="list-style-type: none"> • use of academic and domain-specific vocabulary is clearly appropriate for the audience and purpose 	<p>The response provides adequate support/evidence for the writer's claim that includes the use of sources, facts, and details. The response achieves some depth and specificity but is predominantly general:</p> <ul style="list-style-type: none"> • some evidence from sources is included, though citations may be general or imprecise • adequate use of some elaborative techniques <p>The response adequately expresses ideas, employing a mix of precise with more general language:</p> <ul style="list-style-type: none"> • use of domain-specific vocabulary is generally appropriate for the audience and purpose 	<p>The response provides uneven, cursory support/evidence for the writer's claim that includes partial or uneven use of sources, facts, and details. The response achieves little depth:</p> <ul style="list-style-type: none"> • evidence from sources is weakly integrated, and citations, if present, are uneven • weak or uneven use of elaborative techniques <p>The response expresses ideas unevenly, using simplistic language:</p> <ul style="list-style-type: none"> • use of domain-specific vocabulary may at times be inappropriate for the audience and purpose 	<p>The response provides minimal support/evidence for the writer's claim that includes little or no use of sources, facts, and details:</p> <ul style="list-style-type: none"> • Use of evidence from sources is minimal, absent, incorrect, or irrelevant <p>The response's expression of ideas is vague, lacks clarity, or is confusing:</p> <ul style="list-style-type: none"> • uses limited language or domain-specific vocabulary • may have little sense of audience and purpose 	<p>Insufficient, illegible, in a language other than English, incoherent, off-topic, or off-purpose writing</p>



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2-Point Argumentative Performance Task Writing Rubric (Grades 6-11)			
Score	2	1	NS
Conventions	<p>The response demonstrates an adequate command of conventions:</p> <ul style="list-style-type: none"> errors in usage and sentence formation may be present, but no systematic pattern of errors is displayed and meaning is not obscured adequate use of punctuation, capitalization, and spelling 	<p>The response demonstrates a partial command of conventions:</p> <ul style="list-style-type: none"> errors in usage may obscure meaning inconsistent use of punctuation, capitalization, and spelling 	<p>Insufficient, illegible, in a language other than English, incoherent, off-topic, or off-purpose writing</p>

MAPP (SBAC) Mathematics Selected Response Examples

573



Drag numbers into each section of the area model to complete it.

The first one is done for you.

Then drag the product to complete the equation.

	20	6
30	600	
2		

$26 \times 32 = \square$

8
12
40
50
160
712
802
832

632



An artist is using red, blue, and green tiles to create a mosaic.

- The ratio of red tiles to total tiles should be 2:5.
- For every 2 blue tiles, there should be 1 green tile.

Drag tiles into the space to create a set of tiles the artist could use.

R

B

G

Set of Tiles

ITEM 6

Six friends are going to buy pizza. Their choices are to buy 2 medium 10-inch diameter pizzas for \$7.00 each, or 1 large 14-inch diameter pizza for \$15.00. Both prices include tax and tip.

The friends agree that their best choice is the one that gives them the most pizza for their money.

764



Which is the best choice? Explain your answer.

MAPP (SBAC) Mathematics Selected Response Examples KEY

Grade 4

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573

Drag numbers into each section of the area model to complete it. The first one is done for you.

Then drag the product to complete the equation.

	20	6
30	600	
2		

$26 \times 32 = \square$

6 12 40 50 180 712 902 832

For this item, a full-credit response (1 point) includes:

- the correct table as shown below

	20	6
30	600	180
2	40	12

OR

- the value 832

632



Drag

R

B

G

An artist is using red, blue, and green tiles to create a mosaic.

- The ratio of red tiles to total tiles should be 2:5.
- For every 2 blue tiles, there should be 1 green tile.

Drag tiles into the space to create a set of tiles the artist could use.

Set of Tiles

For this item, a full-credit response (2 points) includes:

- $\frac{2}{5}$ of the total tiles being red
AND
- $\frac{2}{5}$ of the total tiles being blue
AND
- $\frac{1}{5}$ of the total tiles being green

For partial credit (1 point), a student creates a set that satisfies

- the first condition
OR
- the last two conditions

Six friends are going to buy pizza. Their choices are to buy 2 medium 10-inch diameter pizzas for \$7.00 each, or 1 large 14-inch diameter pizza for \$15.00. Both prices include tax and tip.

The friends agree that their best choice is the one that gives them the most pizza for their money.

764

Which is the best choice? Explain your answer.

For this item, a full-credit response (2 points) includes:

- choosing 2 medium pizzas and providing an explanation as to why

For example,

- "The area/ amount of the two choices of pizza is about the same, but the large pizza costs more than the 2 medium ones."
OR
- "The area/amount of the two choices of pizza is about the same, but the 2 medium pizzas are less expensive."

For this item, a partial credit response (1 point) includes:

- 2 medium pizzas with irrelevant, flawed, or missing explanation
OR
- 1 large pizza, but uses a correct process with minor mathematical error for 1 point each

For example,

- "2 medium pizzas because 2 is better than 1"
OR
- "1 large pizza because the area is greater than 2 medium pizzas"

ITEM 6

For this item, an incorrect response (0 points) includes:

- **1 large pizza and an irrelevant or missing explanation**

For example,

- **"1 large pizza"**

This item is not graded for spelling or grammar

ITEM 6

Community Garden

Your class is going to plant vegetables in a section of the local community garden. The garden manager has provided an area to plant the vegetables as follows:

The total area for the class to plant vegetables will be a rectangle 40 feet long and 30 feet wide.

The class has decided to plan four rectangular sections of the class garden with vegetables according to this plan:

1/4 of the garden will be planted with carrots

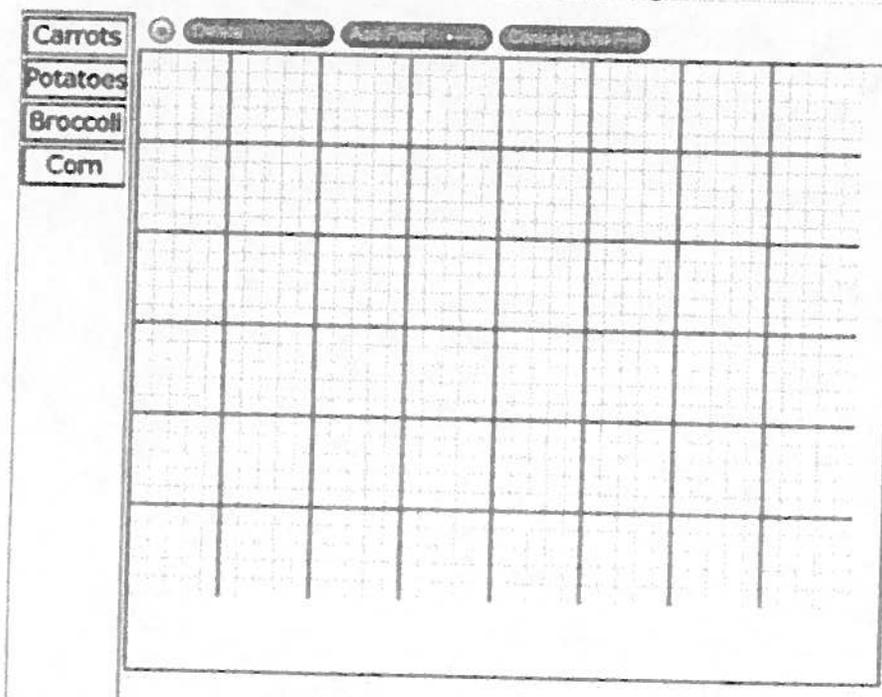
1/6 of the garden will be planted with potatoes

1/8 of the garden will be planted with broccoli

1/12 of the garden will be planted with corn

In this task, you will analyze the class plan and determine an alternate plan that will help make the most use of the available area.

1. Draw rectangles on this model of the garden to represent the four rectangular sections for planting vegetables according to the class plan. Each square represents one 1 square foot. Use only whole number side lengths. Correctly label the vegetables for each section created.





Smarter Balanced Assessment Consortium: Practice Test Scoring Guide Grade 5 Performance Task

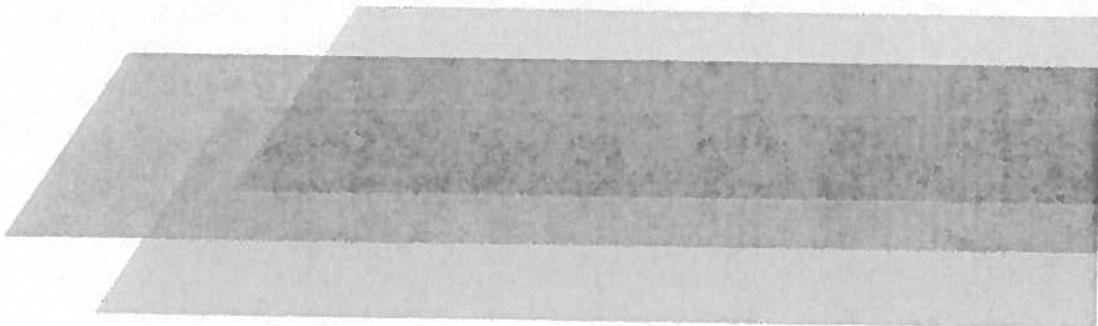
Published August 26, 2013

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COMMUNITY GARDEN

Your class is going to plant vegetables in a section of the local community garden. The garden manager has provided an area to plant the vegetables as follows:

The total area for the class to plant vegetables will be a rectangle 40 feet long and 30 feet wide.

The class has decided to plant four rectangular sections of the class garden with vegetables according to this plan:

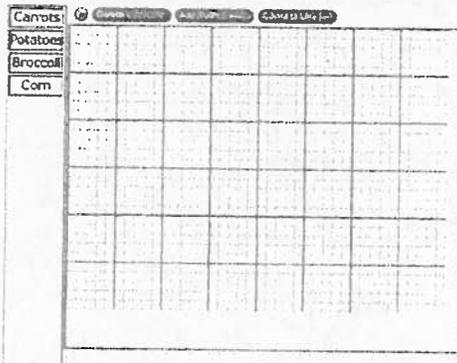
- **1/4 of the garden will be planted with carrots.**
- **1/6 of the garden will be planted with potatoes.**
- **1/8 of the garden will be planted with broccoli.**
- **1/12 of the garden will be planted with corn.**

In this task, you will analyze the class plan and determine an alternate plan that will help make the most use of the available area.

1.

Using the connect line tool, draw rectangles on this model of the garden to represent the four rectangular sections for planting vegetables according to the class plan. The garden model is divided into 5 feet by 5 feet sections.

- Use whole number side lengths.
- Each square on the model represents 1 square foot.
- Drag the correct label that shows the vegetable for each section.



For this item, a full-credit response (1 point) includes

- carrots: 10 x 30 rectangle; potatoes: 5 x 40 rectangle; broccoli: 5 x 30 rectangle; corn: 4 x 25 rectangle
- OR
- any four areas that are correct.

For this item, a no-credit response (0 points) includes none of the features of a full-credit response.

2.

Think about the class plan for the garden plot. What fraction of the garden plot will be left over after the class plants their vegetables?

The image shows a digital math input interface. At the top, there is a large, empty rectangular box for entering a response. Below this box is a toolbar containing several icons: a left arrow, a right arrow, a double left arrow, a double right arrow, and a square with an 'X' (clear). Below the toolbar is a numeric keypad with three rows of buttons. The first row contains buttons for digits 1, 2, 3, a plus sign, a minus sign, a greater-than sign, and a less-than sign. The second row contains buttons for digits 4, 5, 6, a less-than-or-equal sign, an equals sign, a greater-than-or-equal sign, and a greater-than sign. The third row contains buttons for digits 7, 8, 9, and a fraction template icon. The bottom row contains a button for the digit 0 and a decimal point button.

For this item, a full-credit response (1 point) includes

- $\frac{3}{8}$
- OR
- any equivalent fraction.

For this item, a no-credit response (0 points) includes none of the features of a full-credit response.

3.

Your class has decided to plant potatoes in the unused portion of the garden plot.

Part A
What total fraction of the class garden will be planted with potatoes?
Remember that $\frac{1}{6}$ of the garden is already planned for potatoes.

Enter your response in the first response box.

Part B
How many total square feet of the class garden plot will be planted with potatoes?
Enter your response in the second response box.

The image shows a digital response box with two input fields. Below the fields is a calculator interface with a grid of buttons. The buttons include: a row with left and right arrows, a row with 1, 2, 3, a fraction bar, a decimal point, and a negative sign; a row with 4, 5, 6, less than, equals, and greater than signs; a row with 7, 8, 9, and a percent sign; and a row with 0 and a decimal point.

For this item, a full-credit response (2 points) includes

- $\frac{13}{24}$
AND
- 650.

For this item, a partial-credit response (1 point) includes

- $\frac{13}{24}$
OR
- 650 or total square feet consistent with an error in Part A

For this item, a no-credit response (0 points) includes none of the features of a full- or partial-credit response.

4.

Using the new plan with more potatoes, write an equation to show that the **total area** of the class's garden is used to grow vegetables. Make sure the equation shows that the sum of the areas, in square feet, of each section equals the total area of the class's garden.

- Carrots
- Potatoes
- Broccoli
- Corn

← → ↶ ↷ ✖									
1	2	3	+	-	×	÷			
4	5	6	<	≤	=	≥	>		
7	8	9	+	□	()				
0	.								

For this item, a full-credit response (2 points) includes

- writing the correct sum: $300 + 650 + 150 + 100$
AND
- writing the correct sum as an equation.

For example,

- $300 + 650 + 150 + 100 = 1200$

Continued on next page

Grade 5

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For this item, a partial-credit response (1 point) includes

- writing the correct sum without using an equation
OR
- writing an incorrect sum, but using an equation.

For example,

- $300 + 650 + 150 + 100$
OR
- $200 + 300 + 600 = 1100$

For this item, a no-credit response (0 points) includes none of the features of a full- or partial-credit response.

Mathematics | Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).

1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not

just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments. **Students build proofs by induction and proofs by contradiction. CA 3.1** (for higher mathematics only).

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful,

recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well-remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem,

mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.