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INTRODUCTION

The 2009–2010 Reading Item and Scoring Sampler Supplement displays released items from the 2009 PSSA operational test. The sampler supplement is to be used in conjunction with the previous year’s sampler. The 2008–2009 Reading Item and Scoring Sampler can be found on the PDE website at http://www.pde.state.pa.us/. Select the “Pre K–12 Schools” tab at the top of the page. Then select “Assessment” in the “Learn About” column to the left. Select “Resource Materials” in the “Learn About” column of the next page, and then scroll down to find the appropriate sampler. Alternately, you may type in or click this link to reach the location of the item samplers:
http://www.pde.state.pa.us/a_and_t/cwp/view.asp?a=108&Q=73314&a_and_tNav=[680]&a_and_tNav=

This item and scoring sampler supplement contains multiple-choice items and an open-ended item. Each item is preceded by the Assessment Anchor and Eligible Content coding. The multiple-choice answer options are followed by an annotation that explains why the correct answer is correct and the other options are incorrect. The correct answer is indicated by an asterisk. The table following each multiple-choice item displays the percentages of students who chose each answer option. The correct answer is also shaded in these tables. The table following the open-ended item indicates the students’ performance at each score point. Sample student responses for each of the scoring levels are also included for the open-ended item.
Meet Ranger Rick Hutchinson. Rick loves his job at Yellowstone National Park. He started out as a ranger and now he’s a scientist. He checks out geysers (GUY-zur). Using a special instrument, Rick can figure out how high the geyser is spouting.

A geyser is one of hundreds of geothermal (JEE-oh-THUR-mul) features that Rick studies in the Yellowstone area of Wyoming. Geo means “earth,” and thermal means “heat.” These “hot spots” form where melted rock deep in the Earth rises toward the surface. The rock heats water in the ground until . . . watch out! Hot water and steam may shoot high into the sky as a geyser.

Great Gushes of Geysers

“Nearly three-quarters of the world’s geysers are in Yellowstone,” Rick explains. “This is the hottest, most active geyser area anywhere.” For 20 years, Rick has been hiking all over the park to study these amazing hot spots.

Once he discovered a new fumarole (FUME-uh-roll). (A fumarole is like a geyser, except it’s mostly steam.) When it blasted off, Rick felt the ground shake and saw trees whip back and forth. The fumarole’s rushing steam roared in his ears like a jet engine.

Sometimes geysers die by blasting apart the earth around them. That’s what happened to Porkchop, one of Rick’s favorite geysers. (It was named for the shape of the pool that formed around it.) Porkchop gushed water and steam regularly for years. Then one day it blew rocks the size of TV sets into the air! After that, it stopped gushing. Rick thinks Porkchop exploded because it got clogged. “Now it’s just a quiet pool of steamy water—a hot spring,” he says.

Winter Wildlife Spa

Rick often sees wild animals near geysers. In winter, the warm ground keeps snow from piling up, so bison, elk, and deer can find plants to eat. And hot water flowing into the Yellowstone River keeps it from freezing over. “That’s good for the ducks, geese, and swans that need open water to survive,” Rick explains.

Bears and other big creatures also live in the park. But Rick has never had any dangerous encounters. “The only animal that ever charged me was a bird—a sage grouse,” Rick recalls. “It stomped its feet and chewed me out in grouse language,” he chuckled. “I guess I got too close to its nest or something.”
**All in a Day’s Work**

Rick’s job is risky because many hot spots are super-heated. That means they’re hotter than boiling! Rick is always careful where he walks. If the crust around a vent broke, he could fall into scalding water or mud and get badly burned or even worse.

“I’ve ruined lots of boots,” Rick says, “and my sense of smell is shot too.” These problems were caused by strong chemicals in the ground and air. But Rick thinks it may be better to have a lousy sense of smell when he’s studying fumaroles. They often smell like rotten eggs.

**Geyser in Trouble**

Yellowstone’s hot spots are sometimes destroyed by natural causes. Earthquakes, for example, can make underground water flow away from a hot spot. And geysers and hot springs may cool down, dry out, or pop up in new places.

Also, some folks just outside the park’s boundaries want to pump out some of the region’s hot water for their own use. But pumping out the water can cause problems too.

“Pools of underground water are usually connected,” explains Rick. “Draining water from one place can take water from another. And without enough water, a geyser will stop spouting.”

Another problem caused by people is litter. Sometimes careless visitors toss trash, coins, sticks, and rocks into the park’s steamy pools. The litter can clog a vent, which can kill a geyser or hot spring. So Rick spends a lot of time scooping out litter.

What Good Are Geysers?

Yellowstone’s geysers are great fun to watch. But they also give scientists important clues about what goes on below the Earth’s surface. And many kinds of wildlife depend on them too.

With Rick’s good work, Yellowstone’s geysers, hot springs, and fumaroles should spout, bubble, and steam for years to come.

**How Geysers Work**

A geyser has three important ingredients: heat, water, and a strong plumbing system. Here’s how it all works:

- Melted rock deep in the Earth rises toward the surface (1). This heats surrounding rocks and underground channels of water.
- Water in the channels (2) becomes super-hot.
- Finally, the super-hot water rises and explodes into steam. This forces a spout of water and steam into the air (3).
- Underground water refills the channels and gets reheated. Then the cycle starts over again.
MULTIPLE-CHOICE ITEMS

Note: All percentages listed in the tables below the items have been rounded.

A.2.1.2

1. According to the passage, what is a geyser?
   A a river that remains unfrozen in winter
   B a special instrument used by park rangers
   C melted rock and water that is underneath the ground
   D a spout of water and steam shooting into the sky *

   The student is asked to identify what a geyser is based on the information in the passage. The passage states that “melted rock deep in the Earth rises toward the surface,” heating the water in the ground until hot water and steam “shoot high into the sky as a geyser,” which leads the student to the correct answer, option D. Options A, B, and C offer details and information not relevant to the word’s meaning.

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A.2.3.2

2. Which detail from the passage best supports the generalization that Yellowstone is “the hottest, most active geyser area anywhere”?
   A “The fumarole’s rushing steam roared in his ears like a jet engine.”
   B “Yellowstone’s hot spots are sometimes destroyed by natural causes.”
   C “Nearly three-quarters of the world’s geysers are in Yellowstone.” *
   D “And hot water flowing into the Yellowstone River keeps it from freezing over.”

   The student is asked to identify a detail from the passage to support the generalization about Yellowstone being the “most active geyser area anywhere.” Option C correctly states that “Nearly three-quarters of the world’s geysers are in Yellowstone.” Options A, B, and D do not support the generalization about Yellowstone since they do not address the geyser activity there.

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A.2.2.2

3. As used in the passage, the word encounters probably means

A illnesses.
B chemicals.
C meetings. *
D explosions.

The student is asked to identify the meaning of “encounters” as the word is used in the passage. The context clues of the surrounding sentences describe the ranger as getting “too close” to wildlife, implying a “meeting,” which is option C. Options A, B, and D are words not supported by the context of the passage.

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B.3.3.2

4. Under which subheading can the reader find information about how hot spots are sometimes destroyed?

A “Great Gushes of Geysers”
B “Winter Wildlife Spa”
C “All in a Day’s Work”
D “Geysers in Trouble” *

The student is asked to identify the place in text that the reader would find information “about how hot spots are sometimes destroyed” by identifying the subheading under which to find the information. Option D, “Geysers in Trouble,” is the correct answer. Options A, B, and C refer to other subheadings in the passage.

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5. According to the graphic, what happens when underground water becomes very hot?

A. It causes rocks deep in the Earth to melt.
B. It heats the underground channels.
C. It explodes into steam. *
D. It causes the cycle to start over.

The student is asked to interpret the graphic by identifying what happens when underground water becomes very hot. Information given in the graphic, such as “water rises and explodes into steam,” supports option C as the correct answer. Options A, B, and D contain ideas that are not supported by the graphic.

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6. Which best describes the text organization used in the section titled “Geysers in Trouble”?

A. cause and effect *
B. sequence of events
C. question and answer
D. compare and contrast

The student is asked to interpret the text organization used for the section “Geysers in Trouble.” The correct answer is option A, which is “cause and effect.” In this section, causes of threats to geysers are identified, such as people pumping water for “their own use,” with the ultimate effect described as “a geyser will stop spouting.” Options B, C, and D describe text organization methods not used in this section.

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7. Explain why Rick’s job is dangerous, using at least three examples from the passage.
ITEM-SPECIFIC SCORING GUIDELINE

Item #7

This item is reported under Category A, Comprehension and Reading Skills.

Assessment Anchor:

A.2– Understand nonfiction appropriate to grade level.

Specific Eligible Content addressed by this item:

A.2.4.1– Identify and/or explain stated or implied main ideas and relevant details from text.

Scoring Guide:

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<td>3</td>
<td>demonstrates complete knowledge of understanding main ideas by explaining why Rick’s job is dangerous, using at least three examples from the passage.</td>
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<tr>
<td>2</td>
<td>demonstrates partial knowledge of understanding main ideas by explaining why Rick’s job is dangerous. (Example: Student describes why Rick’s job is dangerous, using two examples from the passage.)</td>
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<td>demonstrates incomplete knowledge of understanding main ideas by explaining why Rick’s job is dangerous. (Example: Student describes why Rick’s job is dangerous, using one example from the passage.)</td>
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<td>gives a response that provides insufficient material for scoring or is inaccurate in all aspects.</td>
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Non-scorable

- BLK (blank)...No response or written refusal to respond or too brief to determine response
- OT....................Off task/topic
- LOE..................Response in a language other than English
- IL.....................Illegible

Example—Top Scoring Response (3 Points):

**Explanations with Examples**

Rick has a dangerous job. The geysers, fumaroles, and hot springs Rick studies are all very hot, and he could get burned by the hot water or steam without warning. Also, the ground can shake so much when a geyser or fumarole blasts off that the trees whip back and forth. This may cause Rick to get hurt if a tree hits him. Finally, many wild animals, like bears, live near geysers and can be dangerous, too.
7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

Rick job is pretty dangerous. If Rick didn’t watch were he walked, the crust around
vents could break and he would fall into
scalding water and get badly burned. Rick
could get attacked by big animals like
bears living in the park. There are
strong chemicals in the air that made
his sense of smell shot. His job doesn’t
sound to safe.

The student has given a complete answer to the task by using three examples from the
passage to explain why Rick’s job is dangerous (“ . . . the crust around vents could break
and he would fall into scalding water . . . ” “Rick could get attacked by big animals . . . ,”
and “There are strong chemicals in the air that made his sense of smell shot”).
7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

The student has given a partial answer to the task by using two examples from the passage (“. . . he culd get burned by mud or water . . .” and “The smell of geysers hurt your sense of smell frome the celmicals”) to explain why Rick’s job is dangerous.
A.2.4.1 Response Score: 2

7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

Rick’s job is so dangerous because of many things. One reason would be he would have to watch out for eruptions. Another reason would be he would have to watch out for the geyser to die and blast a part that part of the earth around him. Last but not least, he will have to watch out for charging animals like the Sage Grouse. That’s why Rick’s job is so dangerous.

The student has given a partial answer to the task by using two examples from the passage to explain why Rick’s job is dangerous (“...he would have to watch out for the geyser to die and blast a part that part of the earth around him” and “...he will have to watch out for charging animals like the Sage Grouse”).
7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

There are many reasons why Rick’s job is dangerous. Rick is a ranger who checks out geysers. He does know the dangers of getting too close to a geyser, so he’s really careful. If he’s not careful enough, he could get burned by the geyser while its erupting. He should know that if the ground is shaking near a geyser, then he must step away from it. Rick also has to make sure that people who like to visit a geyser don’t get too close either. That’s why Rick’s job is dangerous.

The student has given an incomplete answer to the task by using one example from the passage to explain why Rick’s job is dangerous (“...he could get burned by the geyser while its erupting”).
7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

Rick’s job is dangerous because
The geyser steams out super hot water. If you fall in it you will get burned or worse and Yellowstone’s hot spots are sometimes destroyed by natural cause. Earthquakes for example can make underground water flow away from a hot spot. And geysers and hot springs may cool down, dry out, or pop up in new places.

The student has given an incomplete answer to the task by using one example from the passage to explain why Rick’s job is dangerous (“...The geyser steams out super hot water. If you fall in it you will get burned...”).
7. Explain why Rick’s job is dangerous, using at least three examples from the passage.

Rick’s job is very dangerous, because he works with volcano’s, try’s to get it to stop it with litter, and try’s to help animals and people live.

The student has given an insufficient answer to the task.
**SUMMATIVE DATA TABLE**

### Multiple-Choice Items

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Acknowledgements

“Geyser Watching Is Hot Stuff” reprinted from the February 1996 issue of Ranger Rick® magazine, with the permission of the publisher, the National Wildlife Federation®.