



Grade 4
English Language Arts/Literacy
End of Year M/L Informational
Text Set

2017 Released Items

2017 Released Items: Grade 4 End of Year M/L Informational Text Set

The End-of-Year medium/long (M/L) informational text set requires students to read an informational text and answer questions.

The 2017 blueprint for the grade 4 End-of-Year M/L informational text set includes Evidence-Based Selected Response/Technology-Enhanced Constructed Response items.

Included in this document:

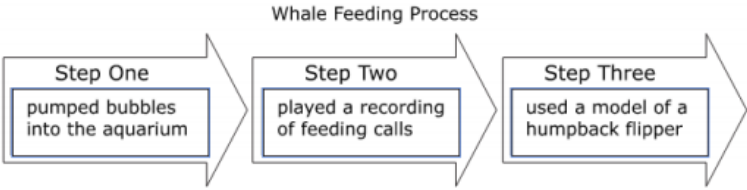
- Answer key and standards alignment
- PDFs of each item with the associated text

Additional related materials not included in this document:

- PARCC English Language Arts/Literacy Assessment: General Scoring Rules for the 2015 Summative Assessment

PARCC Release Items Answer and Alignment Document
ELA/Literacy: Grade 4

Text Type: M-L Info		
Passage(s): How Humpbacks Go Fishing		
Item Code	Answer(s)	Standards/Evidence Statement Alignment
1051	<p>Item Type: TECR</p> <p style="text-align: center;">Scientific Discoveries</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p>"Then the researchers pumped in air to make a wall of bubbles. The fish would not swim through the bubbles." (paragraph 14)</p> </div> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p>"As the fish are squeezed into a tighter group, the bubble-blowing whale continues to swim in a circle, closing the net and trapping the fish in a bubble corral." (paragraph 17)</p> </div> <div style="background-color: #e0e0e0; width: 30%;"></div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p style="text-align: center;">Cittercam</p> <p>"It showed that the whales waved their huge flippers back and forth as they fed." (paragraph 5)</p> </div> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p style="text-align: center;">Microphone</p> <p>"When the researchers played a recording of feeding calls by humpbacks, the herring dashed away from the sounds. The sounds make it easier to trap the fish in the bubble net." (paragraph 15)</p> </div> <div style="border: 1px solid black; padding: 5px; width: 30%;"> <p style="text-align: center;">Sonar</p> <p>"A single whale swims below the fish, carefully releasing air from its blowhole to create a wall of bubbles." (paragraph 9)</p> </div> </div>	RI 4.1.1 RI 4.3.1
1046_A	<p>Item Type: EBSR</p> <p>Part A: B Part B: D</p>	RI 4.1.1 RI 4.2.1
1498_A	<p>Item Type: EBSR</p> <p>Part A: A Part B: D</p>	RI 4.1.1 RI 4.8.2
1738_A	<p>Item Type: EBSR</p> <p>Part A: B Part B: C</p>	RI 4.1.1 RI 4.3.2
1739_A	<p>Item Type: EBSR</p> <p>Part A: C Part B: A</p>	RI 4.1.1 RI 4.3.1
1740_A	<p>Item Type: EBSR</p> <p>Part A: A Part B: C</p>	RI 4.1.1 RI 4.3.3
1741_A	<p>Item Type: EBSR</p> <p>Part A: A Part B: C</p>	RI 4.1.1 RI 4.4.1 L 4.4.1

<p>1045_A</p>	<p>Item Type: TECR (additional item) Part A:</p>  <p>Part B: C</p>	<p>RI 4.1.1 RI 4.3.2 RI 4.8.1</p>
<p>1044</p>	<p>Item Type: EBSR (additional item) Part A: D, E</p>	<p>RI 4.1.1 RI 4.3.3</p>

Read the article “How Humpbacks Go Fishing.” Then answer the questions.

How Humpbacks Go Fishing

by Linda Brown Anderson

- 1** Humpback whales are known for feeding alone or in pairs. Most of the time, they plow through the ocean with their huge mouths open, scooping up thousands of tiny shrimplike creatures called krill.
- 2** But humpbacks that live near the west coast of North America have a surprising and spectacular way of catching fish. When they spot a school of herring, the humpbacks dive into the depths and close in on the fish from below. A steady flow of bubbles rises to the surface, forming a circle.
- 3** Suddenly, all of the whales explode out of the water at once, right in the middle of the bubblecircle. Their huge mouths are open and full of silver, wriggling fish.
- 4** Scientists wanted to know more about how the whales fed on schools of fish. Using underwater microphones, they listened to humpbacks as they fed. The whales made magnificent trumpetlike sounds as they swept up and ate the fish.
- 5** The researchers also used the Crittercam, a video camera that can be attached harmlessly to the back of a whale. It showed that the whales waved their huge flippers back and forth as they fed.
- 6** Most researchers thought the humpbacks were fighting over the fish. Whales are known to use bubbles and loud calls when they try to chase away other whales. Maybe they also waved their flippers to shoo one another away.

A Deep Mystery

- 7** Dr. Fred Sharpe had a radical idea for the late 1980s, when he began his research. Maybe the whales were working together!

- 8** Dr. Sharpe led a team of researchers. They used sonar to “see” deeper into the water. A sonar device sends out sound waves, then catches the echoes of those waves after they bounce off objects, such as whales, fish, and bubbles. Using the echoes, the sonar creates pictures of the objects.
- 9** The sonar showed that, to a humpback, bubbles are tools. A single whale swims below the fish, carefully releasing air from its blowhole to create a wall of bubbles.
- 10** Also using sonar, the scientists saw other whales moving toward the herring, chasing the fish toward the bubble wall. The herring were reluctant to try to escape through the bubbles. The bubble-blowing whale began to swim in a circle, making the wall of bubbles go all the way around the fish. The fish were trapped in a bubble net!
- 11** Using an underwater microphone, the research team recorded the sounds of the whales. The whales swam under the herring and began their trumpetlike calls. Then the whales swam upward all at once, waving their flippers, and gulped a large number of fish.
- 12** The whales were working together!
- 13** How did the whales use their calls and flippers to help catch their food?
- 14** To find out, Dr. Sharpe and his team placed a school of herring into an aquarium. Then the researchers pumped in air to make a wall of bubbles. The fish would not swim through the bubbles.
- 15** When the researchers played a recording of feeding calls by humpbacks, the herring dashed away from the sounds. The sounds make it easier to trap the fish in the bubble net.
- 16** The scientists also placed a model of a humpback flipper into the aquarium. Like a real humpback flipper, the model was dark on one side and white on the other. As the researchers turned the flipper and flashed the white underside at the school, the fish quickly swam away.

Working as a Team

- 17** Now Dr. Sharpe understood how humpbacks feed together. One whale forms a wall of bubbles around the fish. Other whales approach from the sides and from below. One of the whales, the leader, makes calls from below that send the fish toward the surface and into the ring of bubbles. As the fish are squeezed into a tighter group, the bubble-blowing whale continues to swim in a circle, closing the net and trapping the fish in a bubble corral.
- 18** Finally, all of the whales swim up into the feast of fish, making trumpetlike calls and flashing the white sides of their flippers to keep the trapped fish from escaping between them.
- 19** Over the years, the research group has seen that humpback whales often live and hunt together for years. Each time they go fishing, the same whales play the same roles: bubble blower, first caller, and so on.
- 20** Thanks to Dr. Sharpe and his co-workers, we now know something about humpback intelligence. We also know that these famous “loners” actually can form lifelong relationships with others of their species.

“How Humpbacks Go Fishing” by Linda Brown Anderson from HIGHLIGHTS FOR CHILDREN, INC. Copyright © 2011.

1. Research scientists used a variety of instruments to study the behavior of humpback whales.

Match each important discovery made by the scientists by dragging the discovery to the correct box for each instrument.

Scientific Discoveries

<p>"It showed that the whales waved their huge flippers back and forth as they fed." (paragraph 5)</p>	<p>"When the researchers played a recording of feeding calls by humpbacks, the herring dashed away from the sounds. The sounds make it easier to trap the fish in the bubble net." (paragraph 15)</p>	<p>"Then the researchers pumped in air to make a wall of bubbles. The fish would not swim through the bubbles." (paragraph 14)</p>
<p>"A single whale swims below the fish, carefully releasing air from its blowhole to create a wall of bubbles." (paragraph 9)</p>	<p>"As the fish are squeezed into a tighter group, the bubble-blowing whale continues to swim in a circle, closing the net and trapping the fish in a bubble corral." (paragraph 17)</p>	

Crittercam

Microphone

Sonar

2. Part A

Based on information in the article, what conclusion can be made about humpback whales?

- A. Humpback whales teach their young how to fish.
- B. Humpback whales are smart creatures.
- C. Humpback whales always travel in groups.
- D. Humpback whales must catch a lot of fish quickly in order to survive.

Part B

Which sentence in the article supports the answer to Part A?

- A. "Most of the time, they plow through the ocean with their huge mouths open, scooping up thousands of tiny shrimplike creatures called krill." (paragraph 1)
- B. "When they spot a school of herring, the humpbacks dive into the depths and close in on the fish from below." (paragraph 2)
- C. "Each time they go fishing, the same whales play the same roles: bubble blower, first caller, and so on." (paragraph 19)
- D. "Thanks to Dr. Sharpe and his co-workers, we now know something about humpback intelligence." (paragraph 20)

3. Part A

How does the author of “How Humpbacks Go Fishing” use details to support the idea that whales work together?

- A. She explains the different jobs that whales have while they are feeding.
- B. She describes the tools used by scientists to conduct research on whales.
- C. She explains what scientists used to believe about whale behavior.
- D. She describes the types of fish whales prefer to eat.

Part B

Which sentence from the article provides evidence for the answer to Part A?

- A. “Most of the time, they plow through the ocean with their huge mouths open, scooping up thousands of tiny shrimplike creatures called krill.” (paragraph 1)
- B. “Most researchers thought the humpbacks were fighting over the fish.” (paragraph 6)
- C. “Using an underwater microphone, the research team recorded the sounds of the whales.” (paragraph 11)
- D. “Each time they go fishing, the same whales play the same roles: bubble blower, first caller, and so on.” (paragraph 19)

4. Part A

Researchers conducted several experiments at the aquarium to study whale-feeding behavior. Which is the correct order of the steps used to imitate whales feeding in the wild?

- A. played a recording of feeding calls, pumped bubbles into the aquarium, and used a model of a humpback flipper
- B. pumped bubbles into the aquarium, played a recording of feeding calls, and used a model of a humpback flipper
- C. used a model of a humpback flipper, pumped bubbles into the aquarium, and played a recording of feeding calls
- D. played a recording of feeding calls, used a model of a humpback flipper, and pumped bubbles into the aquarium

Part B

At the aquarium, what was the purpose of conducting research on whale-feeding behaviors?

- A. to identify the reasons that whales blow bubbles and circle the herring
- B. to find out whether herring escape bubble nets blown by whales
- C. to discover the role of whale calls and flippers in catching food
- D. to learn how sound travels in water

5. Part A

How does a sonar device help scientists in their research?

- A. It takes still pictures and videos of objects that are underwater.
- B. It listens and records sounds that are underwater.
- C. It uses echoes of sound waves to discover objects underwater.
- D. It creates bubbles and releases them underwater.

Part B

Which evidence describes the discovery made through the use of sonar?

- A. "A single whale swims below the fish, carefully releasing air from its blowhole to create a wall of bubbles." (paragraph 9)
- B. "Then the researchers pumped in air to make a wall of bubbles." (paragraph 14)
- C. "When the researchers played a recording of feeding calls by humpbacks, the herring dashed away from the sounds." (paragraph 15)
- D. "As the fish are squeezed into a tighter group, the bubble-blowing whale continues to swim in a circle, closing the net and trapping the fish in a bubble corral." (paragraph 17)

6. Part A

Which belief about whales did researchers prove to be false?

- A. Whales often fight one another for food.
- B. Whales make sounds to frighten fish.
- C. Whales wave their flippers when they eat.
- D. Whales only eat shrimplike creatures called krill.

Part B

Which detail from the article supports the answer to Part A?

- A. "Scientists wanted to know more about how the whales fed on schools of fish." (paragraph 4)
- B. "The researchers also used the Crittercam, a video camera that can be attached harmlessly to the back of a whale." (paragraph 5)
- C. "Over the years, the research group has seen that humpback whales often live and hunt together for years." (paragraph 19)
- D. "Thanks to Dr. Sharpe and his co-workers, we now know something about humpback intelligence." (paragraph 20)

7. Part A

Based on information in paragraphs 2 and 3, what is the meaning of the word **spectacular**?

- A. amazing
- B. difficult
- C. exhausting
- D. risky

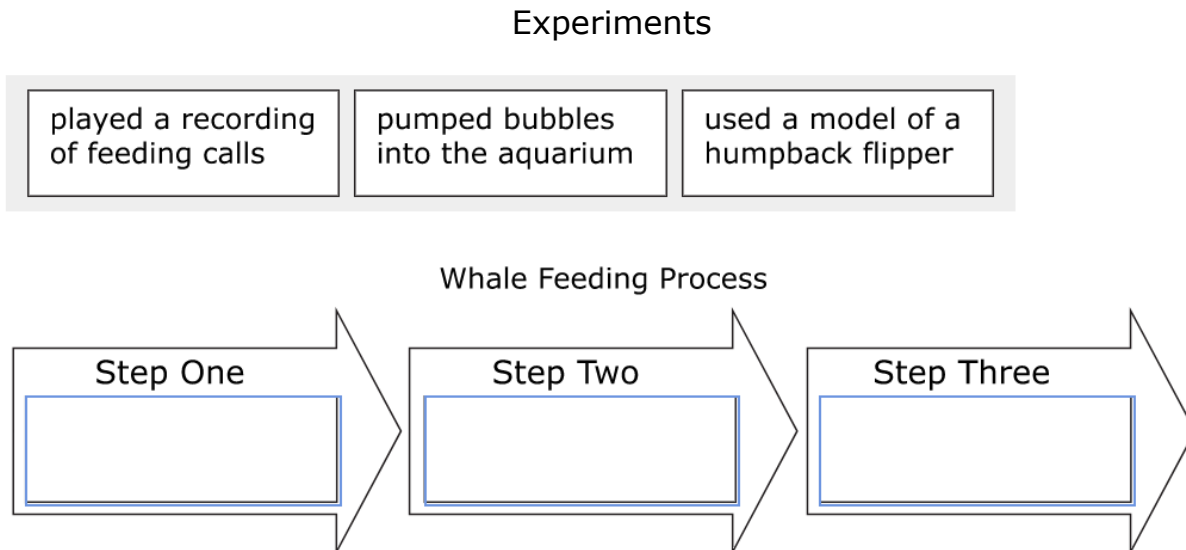
Part B

Which sentence from the article is an example of something else that is **spectacular**?

- A. "Humpback whales are known for feeding alone or in pairs."
(paragraph 1)
- B. "Most of the time, they plow through the ocean with their huge mouths open, scooping up thousands of tiny shrimplike creatures called krill."
(paragraph 1)
- C. "The whales made magnificent trumpetlike sounds as they swept up and ate the fish." (paragraph 4)
- D. "The herring were reluctant to try to escape through the bubbles."
(paragraph 10)

8. According to the article, researchers conducted several experiments at the aquarium to study whale feeding behavior. What was the process used to imitate whales feeding in the wild?

Drag the experiment into the correct step arrow to show the process used to imitate whales feeding in the wild.



Part B

At the aquarium, what was the purpose of conducting research on whale feeding behaviors?

- A. to learn how whales work together when catching food
- B. to find out whether herring escape bubble nets blown by whales
- C. to discover the role of whale calls and flippers in catching food
- D. to learn how sound travels in water

9. Which **two** pieces of evidence in the article support the idea that humpback whales form long-term relationships with each other?
- A. "Humpback whales are known for feeding alone or in pairs." (paragraph 1)
 - B. "Most researchers thought the humpbacks were fighting over the fish." (paragraph 6)
 - C. "Dr. Fred Sharpe had a radical idea for the late 1980s, when he began his research. Maybe the whales were working together!" (paragraph 7)
 - D. "Over the years, the research group has seen that humpback whales often live and hunt together for years." (paragraph 19)
 - E. "Each time they go fishing, the same whales play the same roles: bubble blower, first caller, and so on." (paragraph 19)
 - F. "Thanks to Dr. Sharpe and his co-workers, we now know something about humpback intelligence." (paragraph 20)

