

Name: \_\_\_\_\_

Date: November 30, 2020

BCCS-Girls

Howard University

### Module 2: Unit 2: Lesson 5

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| <b>Learning Targets</b>     | I can organize my research into categories. (W.4.8) |
| <b>Assignment to Submit</b> | KWEL Chart  |

#### Input

**Focus Questions:** What does your expert group animal look like? What is its habitat? What are its predators? How does it use its body and behaviors to help it survive?

| K: I think I know . . . | W: I want to know . . . | E: Evidence, and<br>L: I Learned . . . | Source |
|-------------------------|-------------------------|--|--------|
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| <b>Source</b> | <b>General Information<br/>(How It Looks, Habitat,<br/>Predators)</b> | <b>Defense Mechanisms<br/>(and How They Help It to Survive)</b> |
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Name: \_\_\_\_\_

Date: December 1, 2020

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## Module 2: Unit 2: Lesson 6

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| <b>Learning Targets</b>     | N/A (Mid-Unit Assessment)              |
| <b>Assignment to Submit</b> | Mid-Unit Assessment (Google Classroom) |

In this assessment, you will read two new texts about puffer fish. Read both texts carefully, and answer the questions that follow.

**Directions:** Read Text 1, “**Puffer Fish**,” and answer the questions below (RI.4.10):

### Text 1: **Puffer Fish**

There are more than 120 different species of puffer fish found all over the world. They can be one inch to more than three feet long. The puffer fish has small fins and bulging eyes. Some are brightly colored to show predators they are poisonous. Puffy lips cover strong teeth and jaws, like a beak. This beak helps the puffer fish eat snails, hermit crabs, and other small animals with hard shells.

The puffer fish usually hides to escape predators. When it cannot escape, the puffer fish quickly swallows air or water until it is completely full and round. Pointed spines stick out of the body when it is inflated.

Most puffer fish contain a dangerous poison. If a predator swallows a puffer fish, it could be lethal. One puffer fish has enough poison to kill thirty humans! In Japan, certain species of pufferfish are a rare and expensive food for humans. It can be deadly to eat if you don't know how to prepare it. Chefs have to be trained to remove the poisonous parts of this fish before they serve it.

Written by EL Education for Instructional Purposes. 820L.

### **Glossary:**

**bulging:** sticking out

**inflated:** filled with air or water

**lethal:** cause death

**rare:** not very common

Sources:

"Pufferfish." *National Geographic*. National Geographic Society. Web. 31 Apr 15.

<http://animals.nationalgeographic.com/animals/fish/pufferfish/>.

"Puffer." *Encyclopedia Britannica*. Encyclopedia Britannica, Inc. Web. 31 Apr 15.

<http://www.britannica.com/EBchecked/topic/482954/puffer>.

1. Which explanation is most appropriate for how the puffer fish inflates? (RI.4.1)
  - A. The puffer fish fills up its body with air.
  - B. The puffer fish fills up its body with air or water.
  - C. The puffer fish fills up its eyes with air.
  - D. The puffer fish fills up its eyes with water.
  
2. Which line from the text "Puffer Fish" best supports your answer for Question 1? (RI.4.1)
  - . "The puffer fish usually hides to escape predators."
  - A. "Some are brightly colored to show predators they are poisonous."
  - B. "The puffer fish quickly swallows air or water until it is completely full and round."
  - C. "Pointed spines stick out of the body when it is inflated."
  
3. Once the puffer fish is inflated, what other defense mechanism does it have? (RI.4.1)
  - . It squirts poison.
  - A. It has bulging eyes.
  - B. Spines stick out from the skin.
  - C. It swims faster.
  
4. Which line from the text "Puffer Fish" best supports your answer for Question 3? (RI.4.1)
  - . "Pointed spines stick out of the body when it is inflated."
  - A. "Some are brightly colored to show predators they are poisonous."
  - B. "The puffer fish quickly swallows air or water until it is completely full and round."
  - C. "The puffer fish usually hides to escape predators."
  
5. According to the text, what danger does a predator face if it swallows the puffer fish? (RI.4.1)
  - . It would get bigger as the puffer fish filled up its stomach with water inside the predator.
  - A. It would swim slower.
  - B. It would be poisoned.
  - C. It would be unable to move.
  
6. Which line from the text "Puffer Fish" best supports your answer for Question 5? (RI.4.1)
  - . "Most puffer fish contain a dangerous poison."
  - A. "One puffer fish has enough poison to kill thirty humans!"
  - B. "It can be deadly to eat if you don't know how to prepare it."
  - C. "If a predator swallows a puffer fish, it could be lethal."

Read Text 2, “**Spiky Surprise**,” and answer the questions below (RI.4.10):

### Text 2: **Spiky Surprise**

Things aren’t always what they seem. In the warm tropical ocean, there are fish of many shapes and sizes. Some are harmless vegetarians, like the parrotfish. Others are dangerous predators, like the tiger shark. But beware—some fish that seem harmless are really quite dangerous!

One such fish swims slowly along. The puffer fish looks innocent as he glides silently through the ocean. He looks like easy prey. His cartoonlike face hides a dangerous secret.

If a tiger shark or barracuda takes him by surprise, the puffer fish will quickly swallow water or air to look like a water balloon. Elastic skin stretches easily, and the puffer fish becomes a ball three times normal size. The puffer fish is covered with lots of sharp spines that you can’t see until he puffs up. When he fills up with water or air, his spines stick straight out to defend him from predators. This makes him very difficult for a predator to swallow. If he is swallowed, he is toxic. He is a spiky surprise!

Today there are no predators in sight. This little puffer fish is safe. He continues to swim along, looking for a tasty crab or sea urchin to eat. The puffer fish may look harmless, but his defenses keep him quite safe.

#### **Glossary:**

**toxic:** poisonous

Written by Jessica Miller for EL Education. 750L.

#### Sources:

- “Porcupine Pufferfish.” *Bristol Zoo Gardens*. Bristol Zoological Society. Web. 31 Apr 15. <<https://www.bristolzoo.org.uk/schools-and-education>>.
- Guzik, Stephanie. “The Pufferfish Voucher Library.” *Smithsonian National Museum of Natural History*. Web. 31 Apr 15. <<https://insider.si.edu/2011/05/puffer-fish-voucher-library/>>
- “Pufferfish.” *Science Daily*. Web 31 Apr 15. <<http://www.sciencedaily.com/terms/pufferfish.htm>>.

1. What is the main idea of the text “Spiky Surprise”? (RI.4.2)
  - What’s the most important thing the author wants us to know from reading this text?

#### **Answer Here:**

2. Cite two details (evidence) from the text that support the main idea. (RI.4.2)

**Answer Here:**

3. According to the text, the puffer fish is not as innocent as he looks for all of the following reasons **except** (underline) (RI.4.2):

- A. He has long, sharp spines that stick straight out when he fills up with water or air.
- B. He glides through the ocean.
- C. He is toxic if swallowed.

4. Summarize the text "Spiky Surprise" in no more than five sentences. (RI.4.2)

**Answer Here:**

5. Imagine that you are doing a short research project on defenses used by certain kinds of fish. You have been given the following research questions:
- What does this fish look like?
  - What is its habitat?
  - What are its predators?
  - How does it use its body and behaviors to help it survive?

Create a graphic organizer for your research information about the puffer fish, (W.4.7, W.4.8) and be sure to:

- Reread the research questions and determine the categories you will need to organize information from the articles.
- Create a graphic organizer with clear headings on the page below.
- Organize relevant research from both texts—Text 1: “Pufferfish” and Text 2: “Spiky Surprise”—on the organizer you created.
- Include the sources you used to find the information.

Name: \_\_\_\_\_

Date: December 2, 2020

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## Module 2: Unit 2: Lesson 7

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| <b>Learning Targets</b>     | I can synthesize information from my research notes onto a planning graphic organizer. (RI.4.9, W.4.2, W.4.5, W.4.8)<br><br>I can group together facts from my research with related evidence in my informative piece. (RI.4.9, W.4.2) |
| <b>Assignment to Submit</b> | Informative Writing Planning Graphic Organizer, QuickWrite prompt  |

### Input

#### Directions:

1. **READ:** Read the following Model Informative Essay about the millipede and the Informational Texts anchor chart, which can be found in the Anchor Chart Reference document.
2. **THINK** and **WRITE:** Answer the questions in the space provided.

The millipede is a relative of the centipede. They have twenty to one hundred body segments. There are two pairs of legs on each segment. Millipedes like to be in damp areas. In the wild, they live on moist forest floors. Some millipedes live in our houses! They like to live in damp bathrooms and basements. Millipedes aren't fast. They roll into balls and eat leaves or decaying vegetation. Their main predators, animals that hunt and eat the millipede, are ants, toads, and mice. Millipedes have two main defense mechanisms to protect themselves from predators. When they're near a predator, millipedes might roll into a ball or ooze poison.

Because they have so many body segments, it's easy for them to bend and roll into a tight ball. They have hard exoskeletons, which means that their skeletons are on the outside of their bodies. That protects the millipede's body. The ball hides the millipede from predators because it doesn't look like a millipede anymore! A toad looking for lunch might easily mistake a tiny, rolled-up millipede for a pebble and pass it by. This is a very useful defense mechanism.



Some millipedes emit poison to protect themselves. This can be sticky. When the poison gets on the predator, it slows the predator down. This gives the slow millipede time to escape. Another poison is gas. The gas can be very strong, so strong that it can paralyze or kill the predator. Some millipedes have poison that smells. When predators smell it, they run away. Sometimes, other animals rub millipedes all over their bodies to use the poison to repel insects. The millipedes don't often use their poison, though. They would rather not be attacked in the first place!

Millipedes are very special critters. They have unusual and interesting defense mechanisms that keep them safe from predators.

Questions:

1. What is the purpose of this essay?

**Answer Here:**

2. What type of writing is this: narrative, opinion, or informational? Why?

**Answer Here:**

**Focus Question:** How does my expert group animal use its body and behaviors to help it survive?

**Focus Statement:**

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| <p><b>Introduction Paragraph</b><br/>Describe your animal.</p> <p>Details:</p> <ul style="list-style-type: none"><li>• What is my animal?</li><li>• What does my animal look like?</li><li>• Where does it live?</li><li>• What are its predators?</li></ul> | <p><b>Proof Paragraph 1</b></p> <ul style="list-style-type: none"><li>• What is one defense mechanism my animal uses?</li><li>• How/when would my animal use this defense mechanism?</li></ul> <p>Details:</p> <ul style="list-style-type: none"><li>• How do you think a predator would respond to this defense mechanism?</li></ul> |
| <p><b>Proof Paragraph 2</b></p> <ul style="list-style-type: none"><li>• What is another defense mechanism my animal uses?</li><li>• How/when would my animal use this defense mechanism?</li></ul>   | <p><b>Concluding Statement</b><br/>Restate your focus statement from the introduction.</p>  |

|   |  |
|---|--|
| <p>Details:</p><br><br><p>How would a predator respond to this defense mechanism?</p> |  |
| <p>My Sources: List any sources you used in planning your informative piece.</p>      | <p>Vocabulary from my research to be used:</p> |

**CFU (Submit in Google Classroom):**

- A **focus statement** tells the reader what your writing is going to be about and explains why it is important.

The paragraphs below were written to answer the question: How do animals' bodies and behaviors help them survive?

1. Underline the focus statement in each paragraph:

- How do you defend yourself from predators? What can your body do to help you survive? Animals often use their bodies and behaviors to defend themselves from predators. These defense mechanisms help them survive.
- Imagine if you were a small animal in the wild surrounded by lots of bigger animals that might eat you. To protect themselves from being eaten by predators, a lot of animals have defense mechanisms that help them survive.
- Animals often have defense mechanisms for protection. Some animals have thick, hard shells, and some can run very fast. These amazing defense mechanisms help animals survive.

Name: \_\_\_\_\_

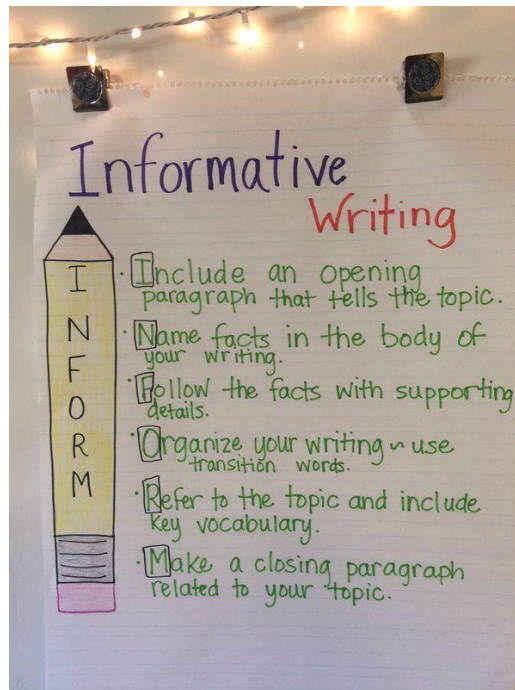
Date: December 3, 2020

BCCS-Girls

Howard University

## Module 2: Unit 2: Lesson 8

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| <b>Learning Targets</b>     | I can write an introduction paragraph for my informative piece that describes my expert group animal, its habitat, and its predators, and has a focus statement that tells the topic of my writing. (W.4.2, W.4.4, W.4.5, W.4.7, W.4.9b) |
| <b>Assignment to Submit</b> | Introduction paragraph (Google Classroom)  |



**Introduction Paragraph**

Describe your animal.

Details:

- What is my animal?
- What does my animal look like?
- Where does it live?
- What are its predators?

**Now, write your introduction paragraph. Use complete sentences, punctuation, and check your spelling with your sources!**

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Name: \_\_\_\_\_

Date: December 4, 2020

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## Module 2: Unit 2: End of Unit Assessment

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| <b>Learning Targets</b>     | I can analyze writing and answer language questions about it. (W.4.2, W.4.4, W.4.10, L.4.2, L.4.3a)<br><br>I can synthesize information from my research to plan and write a draft of an informative piece describing the puffer fish and its defense mechanisms. (RI.4.9, W.4.2, W.4.4, W.4.9b, W.4.10, L.4.2, L.4.3a) |
| <b>Assignment to Submit</b> | End of Unit Assessment  |

### Part I:

Read (or reread) Text 1, Text 2, and Text 3, and use them to answer the questions in Part I.

#### Text 1: Puffer Fish

There are more than 120 different species of puffer fish found all over the world. They can be one inch to more than three feet long. The puffer fish has small fins and bulging eyes. Some are brightly colored to show predators they are poisonous. Puffy lips cover strong teeth and jaws, like a beak. This beak helps the puffer fish eat snails, hermit crabs, and other small animals with hard shells.

The puffer fish usually hides to escape predators. When it cannot escape, the puffer fish quickly swallows air or water until it is completely full and round. Pointed spines stick out of the body when it is inflated.

Most puffer fish contain a dangerous poison. If a predator swallows a puffer fish, it could be lethal. One puffer fish has enough poison to kill thirty humans! In Japan, certain species of puffer fish are a rare and expensive food for humans. It can be deadly to eat if you don't know how to prepare it. Chefs have to be trained to remove the poisonous parts of this fish before they serve it.

#### Glossary:

**bulging:** sticking out

**inflated:** filled with air or water

**lethal:** causes death

**rare:** not very common

Written by EL Education for Instructional Purposes. 820L.

Sources:

“Pufferfish.” *National Geographic*. National Geographic Society. Web. 31 Apr 15.

<http://animals.nationalgeographic.com/animals/fish/pufferfish/>.

“Puffer.” *Encyclopedia Britannica*. Encyclopedia Britannica, Inc. Web. 31 Apr 15.

<http://www.britannica.com/EBchecked/topic/482954/puffer>.

## Text 2: Spiky Surprise

Things aren’t always what they seem. In the warm tropical ocean, there are fish of many shapes and sizes. Some are harmless vegetarians, like the parrotfish. Others are dangerous predators, like the tiger shark. But beware—some fish that seem harmless are really quite dangerous!

One such fish swims slowly along. The pufferfish looks innocent as he glides silently through the ocean. He looks like easy prey. His cartoon-like face hides a dangerous secret.

If a tiger shark or barracuda takes him by surprise, the puffer fish will quickly swallow water or air to look like a water balloon. Elastic skin stretches easily, and the puffer fish becomes a ball three times normal size. The puffer fish is covered with lots of sharp spines that you can’t see until he puffs up. When he fills up with water or air, his spines stick straight out to defend him from predators. This makes him very difficult for a predator to swallow. If he is swallowed, he is toxic. He is a spiky surprise!

Today there are no predators in sight. This little puffer fish is safe. He continues to swim along, looking for a tasty crab or sea urchin to eat. The puffer fish may look harmless, but his defenses keep him quite safe.

### Glossary:

**Toxic:** Poisonous

Written by Jessica Miller for EL Education. 750L.

Sources:

• “Porcupine Pufferfish.” *Bristol Zoo Gardens*. Bristol Zoological Society. Web. 31 Apr 15.

<https://www.bristolzoo.org.uk/schools-and-education>.

• Guzik, Stephanie. “The Pufferfish Voucher Library.” *Smithsonian National Museum of Natural History*. Web. 31 Apr 15. <https://insider.si.edu/2011/05/puffer-fish-voucher-library/>

• “Pufferfish.” *Science Daily*. Web 31 Apr 15. <http://www.sciencedaily.com/terms/pufferfish.htm>.

## Text 3: Picture of the Day: Puffer Fish





Puffer fish inflate themselves as a protection against predators. This is because their lack of mobility makes them a target. By inflating themselves through ingesting large amounts of water, or even air if they are not in the water, puffer fish can increase their size, intimidating predators long enough for the puffer fish to swim away. Some puffer fish, such as the one in this image, have spines, which add further protection. Another line of defense is the tetrodotoxin found in certain puffer fish species, which is lethal to many predators. Tetrodotoxin is also lethal to humans, being up to 1,200 times more poisonous than cyanide. The amount of toxin in one puffer fish is enough to kill 30 humans.

The puffer fish diet includes most invertebrates and algae, and larger puffer fish will eat clams, mussels, and shellfish. Over 120 puffer fish species exist worldwide, and they are found in tropical and subtropical ocean waters and also in fresh water.

Image credit: Bruce Moravchik, NOAA / Islands in the Stream Expedition 2002 / NOAA Office of Ocean Exploration. "Picture of the Day: Pufferfish." *Science360 News*. National Science Foundation, 21 May 10. Web.

**Glossary:**

**mobility:** ability to move from one place to another

**ingesting:** swallowing something

**tetrodotoxin:** kind of poison produced by certain puffer fish

**toxin:** poisonous substance


**invertebrates:** type of animal that does not have a backbone

**algae:** simple plants that have no leaves or stems and that grow in or near water

**Directions:** Use all three texts to answer the following questions. You may look back at the texts as often as you wish.

1. Which source would most likely be the most helpful in understanding how humans use puffer fish? Explain why this source is **most likely** the most helpful. Use **two** details from the source to support your explanation. (W.4.8)

**Answer Here:**



## Parts II and III:

**Directions:** You have been researching different animals and their defense mechanisms. On the Mid-Unit 2 assessment and on this assessment, you read texts about the puffer fish and how it uses its body to survive. Using your research notes and the two texts on the puffer fish, you will write an informational piece. Other students, teachers, and parents will read your piece to learn more about how the puffer fish defends itself.

Write an informational piece that describes the puffer fish’s physical characteristics, habitat, predators, and at least two defense mechanisms. Choose the most important information from your sources to include in your piece. Then, write an informative piece that is several paragraphs long. In your piece, clearly state your focus. Use accurate and relevant facts, definitions, concrete details, quotations or other information and examples to explain and support the information presented. Clearly organize your writing by using linking words to connect your ideas.

### **REMEMBER, a well-written informational piece:**

- Clearly states a focus and stays focused throughout the piece
- Uses accurate and relevant facts, details, and other information to support the main idea
- Clearly presents information that is easy to understand and engages the reader
- Follows rules of writing (spelling, punctuation, and grammar, including using modal auxiliaries—such as **can**, **could**, **would**, **may**, and **should**—to show condition)
- Incorporates research from at least two sources

### **Now, begin work on your informational piece. Manage your time carefully so that you can:**

1. Review the texts used in your research and your research notes.
2. Plan your informational piece.
3. Write your informational piece.
4. Use the Informational Writing checklist to revise and edit your writing to be sure it meets all the criteria.
5. **Focus Question:** How does the puffer fish use its body and behaviors to help it survive?

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**Focus Statement:**

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| <p><b>Introduction Paragraph</b><br/>Describe the puffer fish.</p>                            | <p><b>Proof Paragraph 1</b><br/>Describe one defense mechanism the puffer fish uses.</p> |
| <p><b>Proof Paragraph 2</b><br/>Describe one defense mechanism that the puffer fish uses.</p> | <p><b>Concluding Statement</b><br/>Restate your focus statement.</p>                     |
| <p><b>My Sources:</b> List any sources you used in planning your informative piece.</p>       | <p><b>Vocabulary from My Research to Be Used:</b></p>                                    |

**Answer Here:**

A large, empty rectangular box with a thin black border, intended for the user to write their answer to the question above.