

## Lightning and Fire



Florida receives the most lightning strikes in North America. Scientists have recorded over 20 million lightning strikes in the continental United States, and Florida gets more than any other state. Florida is surrounded by water, with the Gulf of Mexico to the west and the Atlantic Ocean to the east. This amount of water means it can be very humid throughout the year. During the hot summer season, this mix of heat and humidity creates many thunderstorms. This pattern of storms and the lightning they often bring is predictable. It is so common that Florida has been called the Lightning Capital of the World, and the people of Florida know when to go inside!

### **FIRE IS NATURAL**

Over billions of years, lightning and the fires they light on the ground have shaped our planet. Many plants and animals in Florida depend on fire, and have adapted to the constant presence of fire. A plant called wiregrass is so used to fire that it germinates, or grows out of its seeds, after a fire. The bare soil that remains after a fire is a soft and fertile soil bed. The wiregrass plant uses this soil bed to put down its roots. Without regular fires, wiregrasses might be taken over by other plants and trees that grow faster and taller.

An animal in Florida that likes to eat wiregrass is the gopher tortoise. Wiregrass is a big part of a gopher tortoise's diet, so regular fires mean gopher tortoises have a regular food supply. The gopher tortoise has adapted to fire by living and digging their homes, or burrows, in the ground. They don't have to dig very deep to escape a fire's heat, but their burrows can be almost 10 feet deep. These burrows provide great protection from fire, and other animals understand this, too. Mice, frogs and snakes have been found in burrows with a tortoise, during fires. Skunks, coyotes and owls have often been found using burrows that tortoises abandon.

**FIGHT FIRE WITH FIRE**

Many plants and animals need fire to survive, and before we built our roads and cities, a fire could just burn and extinguish naturally. Today, when lightning hits the ground in and around our homes, fires can cause a lot of damage, so firefighters work very hard to stop them. When they aren't fighting fires, some firefighters switch jobs and light fires on purpose! Don't worry, they are burning forests and grasslands, not where we live and work. When they do this, they join something called a Prescribed Fire Crew.

Prescribed Fire Crews light fires for two main reasons. One reason is to protect people from wildfires, and the other is to mimic nature. Although forest fires and grassfires can cause damage when they reach our homes and cities, fire is necessary for many plants and animals around the world. Just like us, these plants and animals live according to the seasons and know that the summer means more lightning and fires. They are ready for it and use it to their advantage.

The fires Prescribed Fire Crews set are carefully planned with clear start-and-end points. By regularly burning parts of a forest, they prevent larger wildfires. In some ways, they are fighting fire *with* fire because regular burning keeps the amount of fuel low. This fuel can be anything found in forests, like trees, leaves and bushes. These fires are helpful for the plants and animals that depend on fire, and for the people that live close-by.

**PASSING THE TORCH**

The weather and climate of Florida is unique. Storms and lightning are a fact of life there, especially in the summer. Florida's plants and animals have adapted very well to a lightning-rich environment. The people of Florida have also adapted to the weather and lightning with firefighters and prescribed fires.

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

1. Which state in the United States receives more lightning strikes than any other?

- A Texas
- B Florida
- C New York
- D California

2. Fires are an effect. What is one cause?

- A lightning
- B wiregrass
- C gopher tortoises
- D the Gulf of Mexico

3. Many plants and animals in Florida depend on fire.

What evidence from the passage supports this statement?

- A Forest fires and grassfires can cause a lot of damage when they reach homes and cities.
- B Prescribed Fire Crews set carefully planned fires with clear start-and-end points.
- C Florida is surrounded by water, with the Gulf of Mexico to the west and the Atlantic Ocean to the east.
- D A plant called wiregrass uses the bare soil that remains after a fire to put down its roots.

4. How do Prescribed Fire Crews fight fire with fire?

- A They find homes for mice, frogs, and snakes during wildfires.
- B They find homes for skunks, coyotes, and owls during wildfires.
- C They live in a state with lots of lightning strikes.
- D They light carefully planned fires to prevent larger wildfires.

5. What is this passage mostly about?

- A differences between the Gulf of Mexico and the Atlantic Ocean
- B how thunderstorms are created from a mix of heat and humidity
- C fires in Florida and how they affect life there
- D why Florida is known as the Lightning Capital of the World

6. Read the following sentence: "Many plants and animals in Florida depend on fire, and have **adapted** to the constant presence of fire."

What does the word "**adapted**" mean in the sentence above?

- A burned to the ground
- B changed in order to live with
- C set carefully planned fires
- D surrounded by water on all sides

7. Choose the answer that best completes the sentence below.

Lightning often strikes Florida; \_\_\_\_\_, fires are sometimes started.

- A consequently
- B otherwise
- C such as
- D previously

8. What do gopher tortoises eat?

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9. Why are regular fires important to gopher tortoises?

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10. Are fires in Florida helpful or harmful? Explain your answer with evidence from the passage.

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## Teacher Guide &amp; Answers

Passage Reading Level: Lexile 1080

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8. What do gopher tortoises eat?

**Suggested answer:** Gopher tortoises eat wiregrass.

9. Why are regular fires important to gopher tortoises?

**Suggested answer:** Students responses may paraphrase the sentence in the passage stating that regular fires mean gopher tortoises have a regular food supply. They may also go into more depth, explaining that because wiregrass needs fires to survive and wiregrass is a big part of a gopher tortoise's diet, gopher tortoises need fires so that they have enough to eat.

10. Are fires in Florida helpful or harmful? Explain your answer with evidence from the passage.

**Suggested answer:** Answers may vary. All students should be capable of making the argument that fires in Florida are helpful. As evidence, they may point to the importance of fires to the survival of plants and animals such as wiregrass and the gopher tortoise. Conversely, students may argue that fires in Florida are harmful. The passage states that fires can cause a lot of damage, particularly to homes and cities.