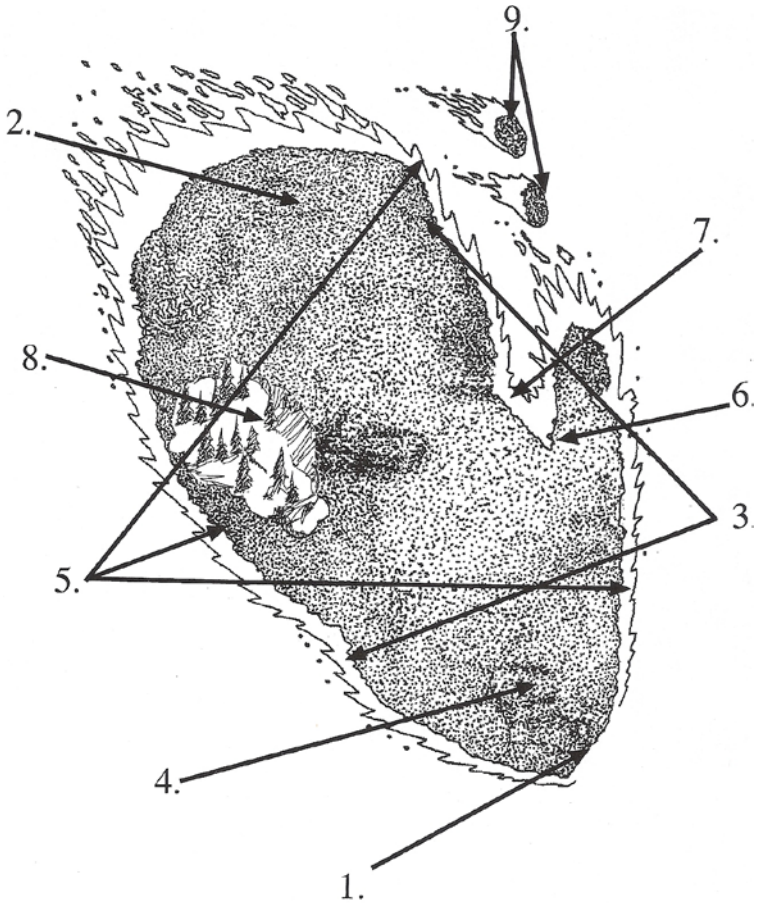


# Fire in Florida Activity Book



Thanks to Fire in Florida's Ecosystems Student's Workbook  
for supplemental materials and illustrations.

## Parts of a Wildland Fire



1. Point of Origin: Where the fire started.
2. Head of a fire: The side of the fire having the fastest rate of spread.
3. Flank of a fire: The part of a fire's perimeter that is roughly parallel to the main direction of spread.
4. Rear of a fire: That portion of a fire edge opposite the head. Slowest spreading portion of a fire edge.
5. Fire perimeter: The entire outer edge or boundary of a fire.
6. Fingers of a fire: The long narrow extensions of a fire projecting from the main body.
7. Pockets of a fire: Unburned indentations in the fire edge formed by fingers or slow burning areas.
8. Island: Area of unburned fuel inside the fire perimeter.
9. Spot fire: Fire ignited outside the perimeter of the main fire by a firebrand.

## Facts about Fire

Florida Statutes, section 590.125(3)4

"The use of prescribed burning for management of public lands is essential to maintain the specific resources values for which these lands were acquired."

Wildfires are started with the help of lightning while some are caused by people.

Florida is the lightning capital of the USA!

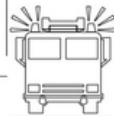
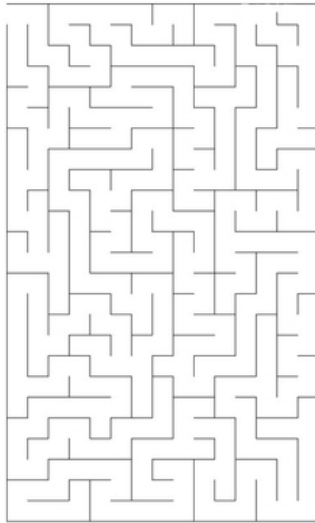
Prescribed Fires are planned to mimic natural processes.



## Fire has a History in Florida!

A long time ago Native Americans observed their surroundings with regard to their individual needs. When they noticed that deer and elk preferred grazing in areas that recently burned, they began to burn similar areas to attract game. They also noticed that some plants produced more fruit, and that certain insect pest populations were temporarily reduced after fire.

### Can You Escape the Blaze Through the Maze?



## Plants and Animals Live in Harmony With Fire!

Plants and animals that thrive in fire **environments** have formed adaptive traits or abilities that allow them to escape or to reproduce and **regenerate** after a fire has passed. An **adaptive trait** is a behavior, physical feature or other characteristic that helps a plant or animal survive and make the most of its habitat.

Plants have a harder time than animals when it comes to escaping a fire so they've adapted other methods for survival of fires. The bark of the slash pine is thicker than many other pine trees. This adaptation protects them from the heat of most fires. Small woody plants and shrubs normally have thin bark. These plants use the soil as in **insulating** layer to protect themselves. Individual plants resist being killed in fires by producing new growth (shoots) from underground organs called **roots**.



Animals know that they need to escape a fire to survive it so different animal species have developed different methods or strategies for escaping fires. Animals such as deer, bear and fox are all accomplished runners and use this skill to escape from flames. Other animals not so adapted for running sometimes hide in underground burrows. Rats, mice, moles, snakes, lizards, frogs and **Gopher Tortoises** move deeper underground to wait for the fire to pass before they can safely return to the forest. Birds like the **Florida Scrub Jay** can tell when there's a fire and fly away to safety to wait for it to pass. All living things have some traits that are adaptations to disturbances and constraints of their environment.

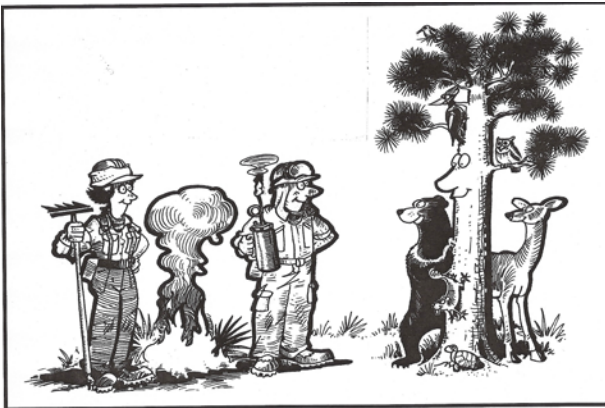


## Leave it to the Professionals to conduct Prescribed Fires!

It is important to know that fires are dangerous. Fire safety must be carefully observed to prevent unwanted fire.

Only trained professionals should decide when and where a prescribed fire is started or permitted to burn.

Before a **prescribed fire** is ignited or allowed to burn, weather conditions are assessed for likelihood of the fire burning out-of-control. Many conditions can affect the size and intensity of a fire. Winds, soil type, fuel moisture, and the amount of fuel are a few factors which influence fire behavior. These factors are carefully weighed before decisions are made to conduct a prescribed fire or not.







Color in and name all of the members of the ecosystem you see here!

## Fire Triangle

Each year Florida averages about 5,000 wildfires. Before a fire can start, three things must be present: oxygen, fuel, and heat.



**Oxygen:** There must be approximately 16 percent oxygen for a fire to start. The air we breathe has 21 percent oxygen

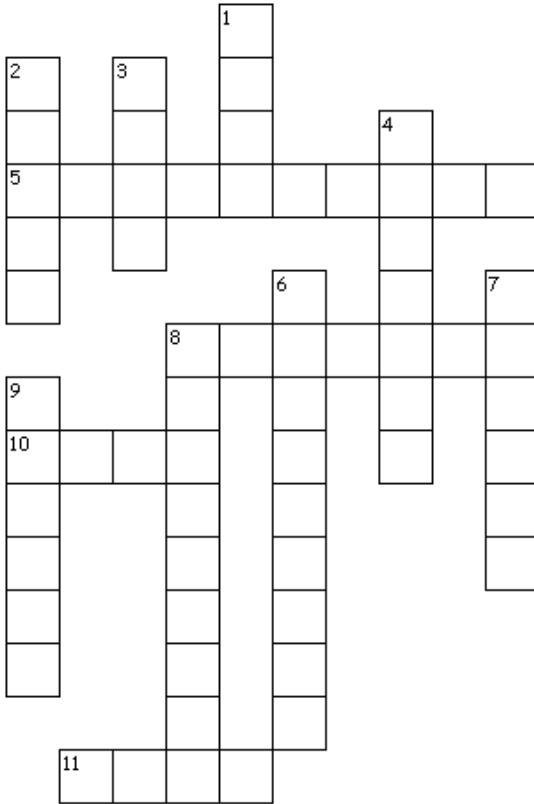
**Fuel:** Any living or dead material that will burn. Some fuels such as dead plants, dry leaves, pine needles and grass are more likely to burn than moist green plants. This is because they contain less moisture or water than living plants. However, this is not always the case. In Florida many plants contain oleoresins that burn easily even when the plant is green.

**Heat:** Can be supplied by lightning striking a tree or the ground. People can also provide heat by using matches or carelessly starting or leaving a campfire.

Wildfires start small and can only grow and spread if favorable fuels, heat, and oxygen are available. By removing fuels from the path of an advancing fire, firefighters can slow a fire's growth. Firefighters can also slow a fire's growth by using water, which robs fire of its heat.



# Fire in Florida's Ecosystem Crossword



**Across**

5. An alteration in structure or function of a plant or animal that aids it in changing over time in order to be better suited to live in its environment.
8. Unburned indentations in the fire's edge formed by fingers or slow burning areas.
10. Slowest spreading portion of a fire's edge.
11. A self-sustaining chemical reaction that releases energy in the form of light and heat.

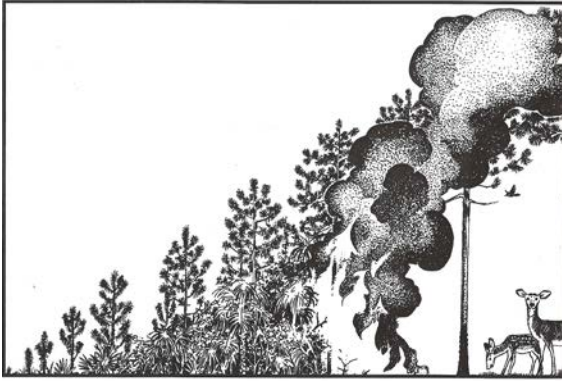
**Down**

1. Fire ignited outside the perimeter of the main fire.
2. The part of a fire's perimeter that is roughly parallel to the main direction of spread.
3. The side of the fire having the fastest rate of spread.
4. The long narrow extensions of a fire projecting from the main body.
6. An area in which all living organisms, work together and influence each other.
7. Area of unburned fuel inside the fire perimeter.
8. The entire outer edge or boundary of a fire.
9. Where the fire started.

## Animals of Florida

G C L F V R R Z U M C L Z D Y  
C O O A A U B S U J E I H H A  
E X P B N Y L S Z W K Z U E J  
M S B H P I S T O H A A M H B  
Q I U A E O D O U P N R M A U  
T B N O P R D R F R S D I W R  
C I Y O M P T N A R E H N K C  
D E E R E P X O S C O V G Z S  
C K H C Y Y E K R U T G B F E  
S W K H Z P K E W T N H I Y P  
S E S P A R R O W R O B R Z R  
R O T A G I L L A B H I D R T  
K W I Y V V Z E S M A Z S X M  
N L Z C R E B K G B P Q G E F  
F B P S C C J V W A O V M K T

ALLIGATOR, BEAR, CARDINAL, DEER, FOX, FROG,  
GOPHER TORTOISE, HAWK, HUMMING BIRD, LIZARD,  
MOUSE, OPOSSUM, RABBIT,  
SCRUB JAY, SNAKE, SPARROW, TURKEY, VULTURE,  
WOODPECKER



## Questions

1. Fire occurs naturally in the ecosystem? Circle one.  
True or False

2. Explain what "prescribed fire" means.

3. Explain the difference between a wildfire and a prescribed fire?

4. What does adaptation mean?

5. Circle the example of an adaptation that helps plants survive fires.

Fuzzy buds	Black leaves
Thick bark	Wide branches

6. Name one adaptation some animals have to survive a fire?

## Important Words to Know

Adaptation- An alteration in structure or function of a plant or animal that aids it in changing over successive generations in order to be better suited to live in its environment.

Biological Diversity- The total variety of all living organisms in a given area.

Ecosystem- An area in which energy, nutrients, water and other biological and geological influences, including all living organisms, work together and influence each other.

Fire- A self-sustaining chemical reaction that releases energy in the form of light and heat.

Prescribed Fire- The planned application of fire to natural fuels, grasslands and understory vegetation to achieve specific objectives with the intent to confine the fire to a predetermined area.

Wildfire- Any fire occurring on wildlands that is not meeting management objectives and thus merits a suppression response.

Wildland fire- All fires that burn in wildlands, including wildfires and prescribed fires.



