Chapter Five

Grasslands and Forests

Day One:

Today, you and your child will:

1. Read the text
2. Review the text with your child
3. Complete the student worksheets
4. Collect the materials you will need for days two and three

National Science Education Standards covered this week:

An organism's pattern of behavior is related to the nature of its environment. This includes the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment.

Grassland biomes are either hot year round or have seasons which may get cold. They typically have wet and dry seasons. The soil is very good for sustaining small plants and it contains many different organisms.

The deciduous forest biome typically have hot summers and cold winters with all four seasons present. There is plenty of rain in the biome to support large plants and trees and has an abundance of organisms.

Definitions

Biomes	areas of the world that have the same temperature, amount of rainfall, kind of soil and habitats
Grassland biome	a biome that has good soil for many different kinds of grasses and few trees
Tropical grasslands	grasslands which are hot all year long
Temperate grasslands	grasslands which have hot summers and cold winters
Burrow	to dig
Fertile	having plenty of nutrients in the soil
Deciduous forest biome	a biome that is filled with trees that lose their leaves in the fall and have four separate seasons (summer, fall, winter and spring)
Hibernate	to sleep through the winter

Sample questions to ask your child after completing the weekly reading.

What kinds of animals live in the grasslands? Do you think they could survive in a deciduous forest?

Animals that live in the grassland biome include grazing and burrowing animals. Many of these animals should be able to survive in the deciduous forest. However, some organisms that are used to a warm climate may not survive the cold season of the forest.

What is the difference between the two different grassland biomes?

A tropical grassland remains hot all year long while the temperate grasslands have hot and cold seasons.

What abiotic (nonliving) resource causes there to be few trees in the grassland biomes?

Water.

Answers to worksheet questions:

Page 1:

(Word search)

Page 2:

5 - biomes

4 - grassland biome

3 - tropical grasslands

8 - temperate grasslands

6 - burrow

2 - fertile

7 - deciduous forest biome

1 - hibernate

Page 3:

Biome #1 = grassland

Biome #2 = deciduous forest

A grassland has between 10-20 inches of rain per year while a deciduous forest biome gets 30-60 inches of rain per year.

Day Two:

Today, you and your child will:

1. Review Day One using the following text
2. Run the first activity this week

The following text will give you the most important items to review for your activity today.

A burrowing animal seeks protection from the environment and other organisms by building a home underground.

The environmental changes that occur on the grassland biome can involve hot and cold seasons. These seasons undoubtedly cause and effect on the environmental conditions in an underground home.

Home Sweet Home

Objective:

The child will be able to explore why an animal burrows into the ground.

Materials:

water
thermometer
small bucket of soil
lamp or sunny area
freezer

Procedure:

Place the thermometer onto the soil in the bucket. Place the bucket in a sunny area or under a lamp and record the temperature on the thermometer.

Leave the thermometer on the soil for one hour and write down the temperature once again. You should notice an increase in the temperature.

Now, bury the thermometer several inches into the soil and repeat the same procedure.

There should be a greater change in temperatures from the thermometer that is exposed to the heat source.

With the thermometer still buried in the soil, place the bucket in the freezer for one hour. Record the change in temperature after one hour.

Remove the thermometer and place it on top of the bucket of soil. Return the bucket to the freezer for one hour and record the temperature once again.

You should notice a greater change in temperature in the thermometer that was placed on top of the soil at this time!

Explanation:

A burrowing animal seeks protection from the weather, a storehouse for food and a secure home from predators. This activity simulates how a burrowing animal, such as a prairie dog, uses a burrow to stay warm in the winter months and cool during the summer.

Home Sweet Home Data Chart

	Temperature reading on thermometer	Temperature after one hour with thermometer on top of the soil	Temperature after one hour of being buried under the soil	Temperature after one hour of the buried thermometer in the freezer	Temperature after one hour of thermometer on top of the soil and in the freezer
Trial One					
Trial Two					
Trial Three					
Average					

Day Three: Lab Activity

Today, you and your child will:

1. Review Day One using the following text
2. Run the first activity this week

The following text will give you the most important items to review for your activity today.

Many organisms, like bears, raccoons and squirrels are not true hibernators as they commonly search for food during the warmer days of winter.

True hibernators, like frogs, turtles and snakes, slow down their heart rate to conserve energy throughout the entire winter.

Rise and Shine

Objective:

The child will be able to explore how animals wake up from hibernation.

Materials:

water
two small sponges rubber
bands
two bowls
freezer

Procedure:

(optional) Cut the sponges into the outline of a turtle or a frog.
Wet the sponges.
Roll both of the sponges up separately and secure them with rubber bands.
Place the sponges in a bowl (make certain they are not touching!) and place in the freezer overnight.
Have your child predict what will happen to the wet sponges.
Take out the frozen sponges and remove the rubber bands.
Let your child feel the "frog and turtle." Ask your child if their prediction was correct or not.
Put each sponge in a separate bowl and place them in different parts of the room.
Let the children predict what will happen.
Have the children observe the rolls over the next half hour.
Draw the child's attention to the fact that the "frogs and turtles" did not thaw all at once - it takes some time.

Explanation:

The thawing of the sponges simulates hibernating animals. These animals, like the frog, turtle, snake and the bat, are true hibernators. They sleep during the winter, slowing down their heart rate to conserve energy.

True hibernators are not to be confused with animals that only partially hibernate (you can call it "napping" if you like.) Bears, raccoons, squirrels and skunks only partially hibernate during the winter these animals will wake up occasionally during warm winter days to search for food.