Sagebrush Steppe Habitat Lesson Plan

Learning Objectives: Student will understand the following:

- What a sagebrush steppe is.
- What animals and plants are found in the sagebrush steppe.
- What a food chain is.
- Which animals are part of the sagebrush steppe food chain in southeastern Idaho.


Materials: Paper, card, scissors, compasses, paints, crayons or felt-tips, string, pins.

Background:

A sagebrush-steppe is a type of dry habitat characterized by sagebrush and other shrubs and short grasses. Southeastern Idaho lies in the largest sagebrush-steppe in North America.

The name "sagebrush-steppe" comes from sagebrush, which is the most abundant plant species that grows in this ecosystem and "steppe," which is a word describing a large, dry, level, grassland having few or no trees.

In the Snake River Plain, shrub-steppe winters are cold and wet with strong winds and blowing snow. Summers are hot and dry with temperatures that can reach above 100 degrees Fahrenheit during the day, then cool at night. Less than 7 inches of rain falls per year.

Southeastern Idaho home to several sagebrush obligate species. Sagebrush obligates are animals that cannot survive without plenty of sagebrush and its associated perennial grasses and forbs.

- Sage Grouse
- Brewer's Sparrow
- Sage Thrasher
- Sage Sparrow
- Pygmy Rabbit
- Sagebrush Lizard
- Sagebrush Vole
- Pronghorn Antelope

Focus Phase:

Ask the students what they envision when they hear the word “desert”? (Tall cacti, miles of sand, hot temperatures).
Not all deserts are the same. Some have tall cacti, some have hot temperatures, and some have miles of sand. Some are cold, have smaller cacti, and are covered by dirt. The definition of a desert is a habitat that receives less than ten inches of rain a year.

In southeastern Idaho, the desert we live in is called a sagebrush steppe.

Have the children visit the sagebrush steppe species list at [www.stoller-eser.com/species_index.htm](http://www.stoller-eser.com/species_index.htm) to identify the vertebrate species who live in the sagebrush steppe. Have the children visit [www.stoller-eser.com/Flora/plantlist.htm](http://www.stoller-eser.com/Flora/plantlist.htm) to identify plant species of the sagebrush steppe habitat.

**Food chain background**

A food chain is a model that shows how energy is passed in the form of food from one organism to another.

1. Plants are called primary **producers** because they are able to use light energy from the Sun to produce food (sugar) from carbon dioxide and water.

2. Animals cannot make their own food so they must eat plants and/or other animals. They are called **consumers**. There are three groups of consumers.
   
   a. Animals that eat ONLY PLANTS are called primary **consumers**

   b. Animals that eat herbivores are called **secondary consumers**

   c. Animals that eat other secondary consumers are called **tertiary consumers**

**Activity:** Make a Food Chain Mobile

1. Have the children identify producers and consumers from animals and plants listed in the species lists above.
2. Have them draw and color an example of a producer. (For example, a sagebrush plant) Make the drawing about 3 inches tall.
3. With a compass, draw a circle around the sagebrush plant.
4. Now draw a primary consumer around the producer picture (about 6 inches tall). With the compass, draw a circle around the primary consumer.
5. Now draw a secondary consumer around the primary consumer picture (about 9 inches tall). With the compass, draw a circle around the secondary consumer.
6. Finally, draw a tertiary consumer around the secondary consumer picture (about 12 inches tall). With the compass, draw a circle around the tertiary consumer.
7. Color the food chain.
8. Cut out all the circles.
9. Cut along the outlines of each part of the food chain.
10. Carefully pierce a hole in the top of the producer picture, and thread string through it. Pierce another hole above the circle in the primary consumer and string the two together. Make sure the pictures are balanced. When the hole is in the right place, thread string through it.
11. Attach the primary consumer to the secondary consumer, and the secondary consumer to the tertiary consumer in the same way as step 10 and find the balance point with a pin. Hang up your finished mobile and watch it move in the wind.