

Sage-Grouse Facts

Created by: IRRC	Date:
Subject: Science	Grade Level: 9+
Time Required: Two 45 minute periods	CCS Standards: Reading: Key ideas and details: 1 Speaking: Presentation of Knowledge & Ideas: 4

Overview	Students will learn about sage-grouse and what habitat is best for them during different stages of their life cycle.
Goal(s) & Objective(s)	Students will learn about sage-grouse and their habitat. In groups they will create the perfect habitat for one stage of the sage-grouse's life cycle.
Materials	<ol style="list-style-type: none"> 1. Copies of Sage-Grouse Fact Sheet 2. Paper for drawing habitat 3. Coloring pencils/crayons 4. Paper for writing the facts about the habitat and what stage of life the sage-grouse is in to live in this habitat.
Teaching Activities: <i>Instructional Approaches/Strategies</i>	Introduction: <ol style="list-style-type: none"> 1. Read through the Sage Grouse Fact Sheet as a class 2. Split students into groups of 3-4 students (some life stages may have to be repeated or have 4 groups) Procedures <ol style="list-style-type: none"> 1. Explain to the students that they will be drawing a picture and writing a description of the perfect sage-grouse habitat. 2. Have students pull their stage of the life cycle out of a bowl. 3. After they have their stage- have them reread the description from the <i>Sage-Grouse Fact Sheet</i>. 4. Students should then split up the project, between drawing a picture of the habitat, coloring it, and writing a description. If they need more chores have them draw a sage-grouse that fits into the habitat (i.e. Sage hen, Sage cock, sage chick, or a nest.) Closure

	<ol style="list-style-type: none">1. Have students present their projects-2. Remind them to pay attention to the other life cycles, because they have a questionnaire after presentations.
Assessment:	Have students hand in their projects and complete questionnaire.

Attachments:

Sage-Grouse Fact Sheet

Sage-Grouse Life Cycle Habitat Questionnaire



Sage-Grouse

What are they?

The greater sage-grouse are ground dwelling birds. They have large, rounded wings, with a long pointed tail and feathers that go to the base of their feet. They get up to 2-2 ½ feet tall, and weigh around 2-7 pounds.

The females are a mottled brown, black, and white. The males are larger and have a large white ruff around their neck and bright yellow air sacks on their breasts, which they inflate during their mating display.



Idaho, Montana, Wyoming, Colorado, Utah, South & North Dakota, Kansas, Oklahoma, Nebraska, New Mexico, Arizona, and the Canadian provinces of British Columbia, Saskatchewan and Alberta.

The greater sage-grouse are no longer present in Nebraska, Kansas, Oklahoma, New Mexico, Arizona British Columbia and Saskatchewan.

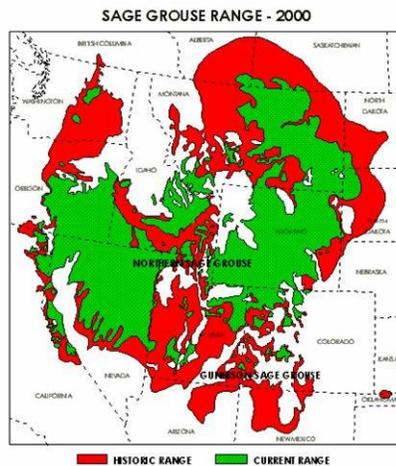
Lifespan:

4 to 5 years; however, they have been found to survive up to 10 years in the wild.

Where are they found?

The birds are found at elevations ranging from 4,000 to over 9,000 feet and are highly dependent on sagebrush for cover and food.

Historically the birds were found in Washington, Oregon, California, Nevada,



Dr. M. Schroeder- Washington Dept. of Wildlife

What they eat:

During the summer their diet consists of insects and forbs. During the winter, 99% of their diet is sagebrush leaves and buds. Sage-grouse must eat soft foods because of their unique digestive system.

Life cycle & Habitat

Throughout the year the sage-grouses habitat changes due to its needs.

Breeding & Nesting Season: From March to May the greater sage-grouse congregate at **leks** for a courtship strutting display to find their mate. Leks are generally in open areas adjacent to sagebrush; such as meadows, openings created by fires or roads, areas of low sagebrush, dry lake beds, or areas that are heavily used by livestock. Most leks become traditional and are used year after year.



Sage-grouse have a polygynous mating system. Which means one male will mate with multiple females. The females choose their mate at the leks. The male sage-grouse attracts females by strutting and making a “plopping” sound with their inflatable chest air sacs.

Nesting & Brooding (May-June)

After mating, the hen leaves the leks in search of a nesting site. Typically hens nest 2-3 miles from the leks, but they have been known to go 11 miles away to nest. The nest is a bowl-shaped depression on the ground made of dead grasses. The nest is usually located under a sagebrush shrub, but can be under other common steppe shrubs such as bitterbrush, yellow rabbit brush, or rubber rabbit brush. Eggs are an olive green to pale green color with small dots of brown.



The hens & chicks will stay in the vicinity of the nest for up to 3 three weeks after hatching.

Habitat characteristics-

During this time of nesting & brooding, sagebrush and a substantial understory of grasses and forbs are critical for the survival of the chicks. This provides them not only with shelter from predators, but food without having to leave the nest and risk being seen.

Late Brood-Rearing (July- Sept.)

As the summer months get hotter and the grasses and forbs on the rangeland start drying out, the hen and brood will then move out of their nesting habitat to follow forbs and insects. They often go to a higher elevated spot that is moister or to an area where water collects. They are often seen in agriculture fields, wet meadows and riparian areas adjacent to sagebrush cover.

Fall & Winter

The Greater Sage-Grouse will continue to use wet meadows, riparian areas and irrigated fields until their food dries up or is killed by frost, and then they will return to a sagebrush dominated habitat where they primarily eat sagebrush leaves and buds.

Some populations of sage-grouse migrate during the winter. Some, however, are seen to not make a change of range at all. Idaho’s sage-grouse tend to be migratory.

Brought to you by the Idaho Rangeland Resource Commission with information from: Sage-Grouse Habitat in Idaho by-Jeffrey K Gillan and Eva K. Strand and the Fish and Wildlife Service website.

Sage-Grouse Habitat Questionnaire

1. What are leks?
2. When are they used?
3. How far do hens travel to nest?
4. What type of habitat does the hen make her nest in?
5. What do the nests look like?
6. Where do the hens and their broods go after nesting? Why?
7. During the fall and winter where do sage-grouse go? (2 different responses)
8. Do ~~A~~ll sage-grouse Migrate?

Sage-Grouse Habitat Questionnaire Key

1. What are leks?

Leks are where sage-grouse congregate to find mates. They are usually in open areas next to sagebrush. They are meadows, , roads, dry lake beds, burned areas, areas used heavily by livestock or areas of low sage brush

2. When are leks used?

They are used during March – May for courtship. To find their mate.

3. How far do hens travel to nest?

Usually 2-3 miles but it can be up to 11.

4. What type of habitat does the hen make her nest in?

Sagebrush steppe- Under sagebrush shrubs, with a lot of grass and underbrush.

5. What do the nests look like?

They are bowl-shaped depression in the ground made of dead grasses.

6. Where do the hens and their broods go after nesting? Why?

They follow forbs and insects to a new habitat. They often go to a higher elevation that is wetter or to an area where water collects. Ex: agriculture fields, wet meadows and riparian areas next to sagebrush cover.

7. During the fall and winter where do sage grouse go? (2 different responses)

Fall- stay in wet meadows, riparian areas, and irrigated fields.

Winter- sagebrush dominated habitat.

8. Do ~~A~~ll sage-grouse Migrate?

No