



A Sage Map

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Subject: Geography	Grade Level: 4+
Time Required: 1 class period	Standards: <u>Standard 2:</u> 6-9 th Geography Western Hemisphere

Overview	Students will compare different types of maps to draw conclusions about precipitation, elevation, and the sagebrush steppe biome.
Goal(s) & Objective(s)	Use maps of Idaho to identify precipitation amounts and elevation of the sagebrush steppe biome.
Materials	Rangeland pictures, Overhead of Rangeland biomes, blank Idaho map overhead, Blank Idaho maps (per student), Wet erase markers (per group), Blank Idaho map overhead (per group), Idaho Precipitation, elevation, and rangeland biomes maps (per group), Computers with internet access (per group),
Teaching Activities: <i>Instructional Approaches/Strategies</i>	<p>Introduction: Choose one of the following to lead into the lesson</p> <ol style="list-style-type: none"> 1. Project or pass around the different range photos provided. Let students know that all of the locations are in Idaho. Ask students WHY they think the plants are different at each place. Discuss how precipitation, the type of soil, and elevation change what types of plants can grow. 2. Display and discuss different types of maps – political maps, climate maps, and topographic maps. Discuss relationships between different maps – that cities are often near water, for example. <p>Instruction</p> <ol style="list-style-type: none"> 1. Hand out a blank Idaho map and a Sagebrush Hunt worksheet to each student. Display a map showing rangeland biomes and discuss each biome briefly. Emphasize the sagebrush grasslands (sagebrush steppe) biome as the one which students will be researching today using maps. Have students outline and color in the sagebrush grassland boundary on their blank Idaho map. 2. Organize students into groups if they are not already grouped. Tell students they will be finding information and drawing conclusions based on climate maps, political maps, and online maps showing specific locations. Give each group an overhead of the Idaho map and model how

	<p>to trace boundaries of different areas on the overhead. Give each group a copy of the Idaho precipitation map and elevation map, and provide computer access.</p> <p>3. Students use their map and the computers to answer the questions on the “Sagebrush Hunt” worksheet.</p> <p>Closure: Discuss the types of maps that were used in this lesson.</p>
Assessment	Check student answers on the Sagebrush hunt worksheet and review the correct answers with the class.

Background and Preparation: You will need an overhead of Idaho’s Rangeland Biomes, a blank overhead of a map of Idaho (<http://www.waterproofpaper.com/printable-maps/idaho.shtml>), and an Idaho climate map showing precipitation. Every student will need a blank copy of an Idaho map to fill in. Each group will need an overhead transparency of the Idaho map, and an erasable marker to trace/identify features from different types of maps. Preview the website <http://www.idrange.org/faq> for any information you may need before teaching the lesson. Use provided photos of Idaho Rangelands, find more at <http://www.lifeontherange.org/index.asp> or provide your own for getting started option #1.

Sagebrush Hunt Worksheet

Name _____

Water, water everywhere...

1. Locate the precipitation map of Idaho. Answer the following questions using the map:
 - a. What color indicates areas with less than 10 inches of precipitation per year?
 - b. What color indicates 50-60 inches of precipitation per year?
 - c. If you wanted to find the driest areas in Idaho, what colors would you look for?
2. Trace the outline of the sagebrush grasslands biome onto your overhead map of Idaho. Place the overhead map with your outline on top of the precipitation map to answer the following questions:
 - a. The precipitation color inside the outline is mostly _____.
 - b. How much precipitation does this color mean these areas receive?
 - c. What is the most precipitation received in any area of the sagebrush grasslands?
 - d. Are sagebrush grasslands some of the driest or wettest locations in Idaho?

How high is that?

1. Locate the elevation map of Idaho. Answer the following questions using the map:
 - a. What color on the map indicates areas less than 1000 feet above sea level?
 - b. What color indicates areas 3000-4000 feet above sea level?
 - c. What is the highest elevation color in Idaho?
2. Trace the outline of the sagebrush grasslands biome onto your overhead map of Idaho. Place the overhead map with your outline on top of the elevation map to answer the following questions:
 - a. The elevation color inside the outline is mostly _____.
 - b. What is the lowest elevation within Idaho's sagebrush grasslands?
 - c. What is the highest elevation within Idaho's sagebrush grasslands?
 - d. Write the range of elevations at which you could find sagebrush grasslands in Idaho:
 - e. Are sagebrush grasslands generally at a low elevation, a high elevation, or at a moderate elevation? Explain your choice.

Mapping the web

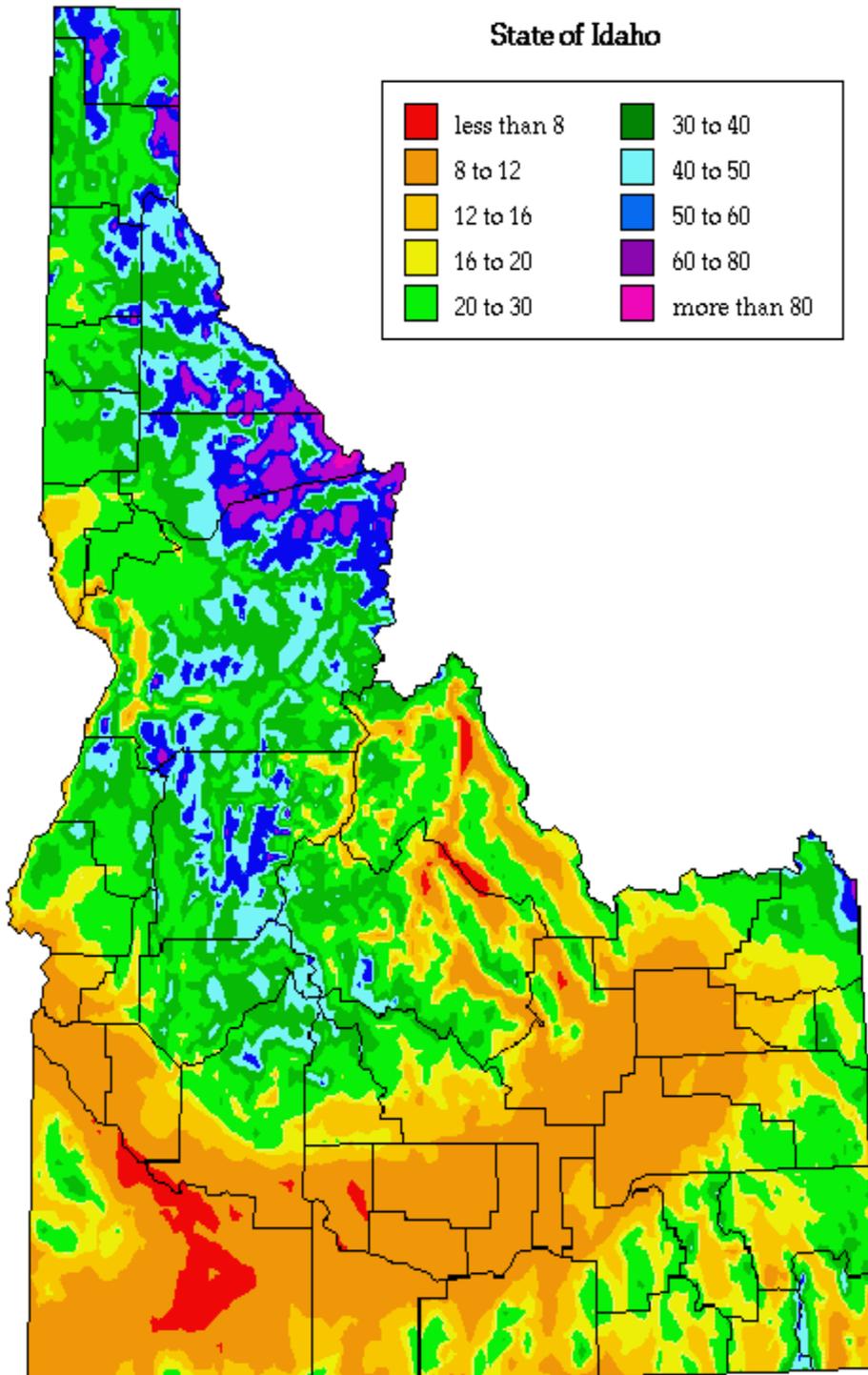
1. Go to <http://www.lifeontherange.org/> Notice the map of Idaho on the left side. It shows different ranches in Idaho. Locate one near your side of the state, if possible. Point the mouse to one of the dots, and notice the location. Write the name of the ranch and its location here:
2. Go to <http://maps.google.com/> and type in the location on “Search”.
3. Is this ranch located in the Sagebrush Grasslands region?

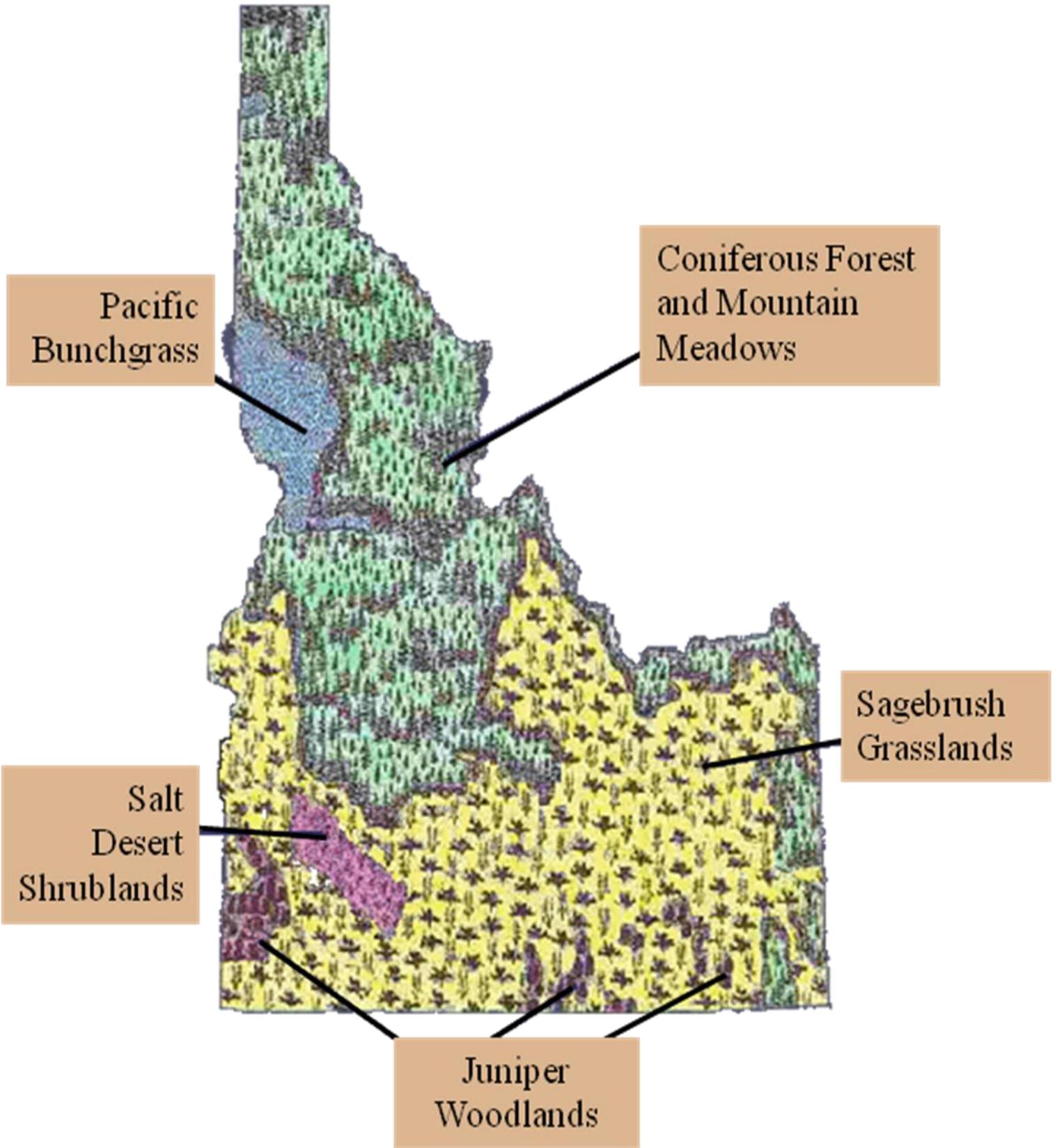
Reflection questions

1. Other than food provided by plants in the sagebrush grasslands, what else would animals in these areas need to survive? How can they get it?
2. Research how much water a Kentucky Bluegrass lawn needs in a year. What percent of that water does sagebrush grassland typically receive in a year?
3. What generally happens to the temperature of an area as you go higher into the mountains? What does this indicate about the temperature of sagebrush grassland regions compared to other regions of Idaho?

Average Annual Precipitation

State of Idaho







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