Sage-Grouse Vocabulary Activity

Created by: IRRC	**Time Required:** 1 Class Period
Subject: Science	**Grade Level:** Secondary (6-12)

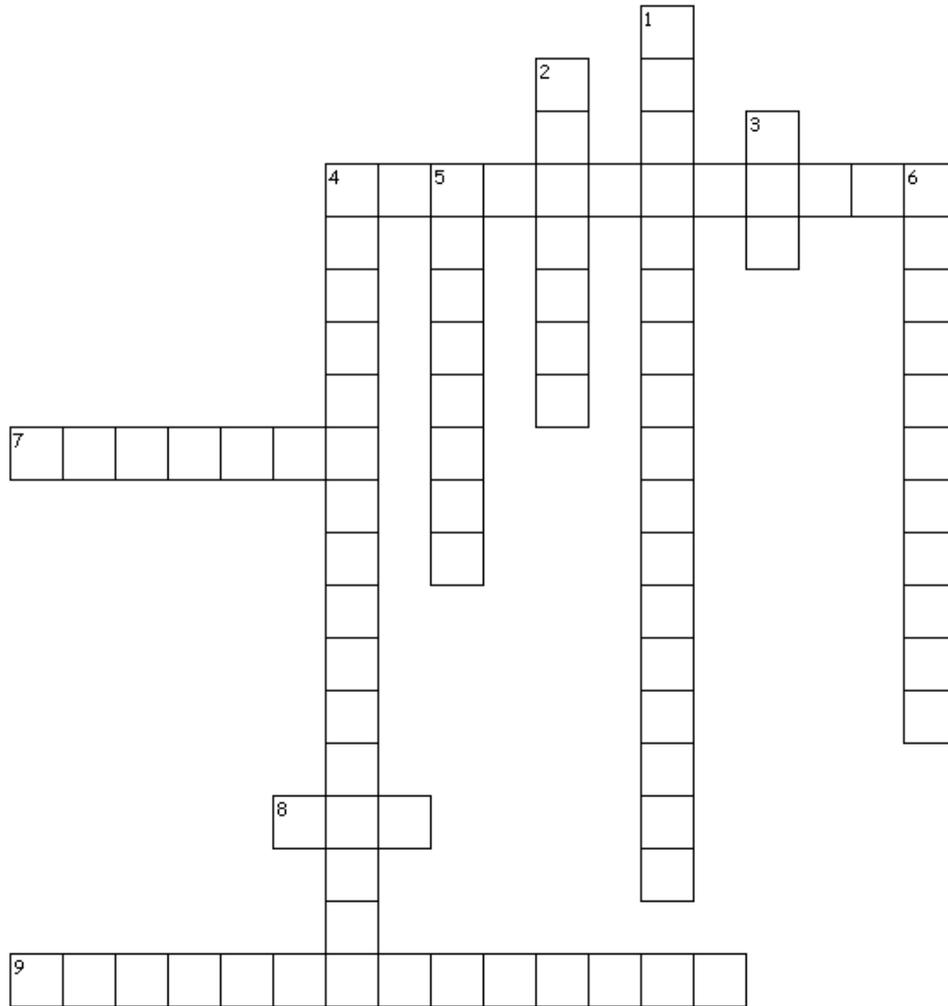|	
Overview	Students will watch the Sage-Grouse Movie Clip on the "Life on the Range" website, respond to questions and complete crossword puzzle vocabulary worksheet.
Goal(s) & Objective(s)	Students will learn about sage-grouse and expand their vocabulary concerning sage-grouse and rangelands.
Prerequisites & Materials	**Materials:** 1. Copies of vocabulary puzzle 2. Copies of Movie Clip Questions 3. Sage-Grouse Glossary (for reference)
Teaching Activities: *Instructional Approaches/Strategies*	**Procedures** **Introduction:** 1. (optional) Go over vocabulary from Sage-Grouse Glossary with students. **Procedures:** 1. Watch video of sage-grouse story posted on "Life on the Range" website: http://www.lifeontherange.org/range-stories/kids-learn-about-sage-grouse.asp 2. Have students complete the movie clip questions 3. Have students complete vocabulary crossword puzzle.
Assessment:	Discuss what students learned from the movie clip

Attachments:
Crossword Puzzle with key
Video Questions with key
Sage-Grouse Glossary

Students Learn About Sage-grouse

Name_____

Word Bank		
Juniper	Riparian	Hen
Shrub-Steppe	Habitat	Lek
Prescribed Burning	Radio telemetry	
Sagebrush-Steppe	Encroaching	

.idrange.org

Across

4. A type of low-rainfall grassland with an upper story of shrubs
7. An evergreen tree native to the western United States usually found in dry areas
8. A female grouse
9. The use of radio signals to locate a transmitter, usually on an animal

Down

1. Fires started by people with a specific purpose
2. The food, water, shelter, and space an animal needs to survive
3. An area where male birds gather for competitive mating displays
4. An area of low-rainfall grassland in the United States with an upper story of Sagebrush
5. Area on the bank of a stream, lake, or river
6. Advancement of something beyond its proper or natural limit

Students Learn About Sage-Grouse

Comprehension Questions

Name_____

1. Where do Sage-Grouse mate?

2. Where do the most dominant males position themselves on a Sage-Grouse lek?

3. Which Sage-Grouse arrive first on a lek?

4. How many eggs does each female grouse lay?

5. Why have populations in the leks increased this year? (Hint: What affected this population in past years?)

6. What do the male Sage-Grouse do to attract the females?

7. What is radio telemetry equipment used for and how does it work?

8. According to Jerry Hoagland, why is it important to maintain riparian areas?

9. Why are juniper trees encroaching?

10. Why would Hoagland like to see more prescribed burning?

11. What are they doing now to stop the junipers Encroaching?

Sage Grouse Vocabulary Lesson 3

Crossword Puzzle- Key

Across
4- Shrub-steppe
7- Juniper
8- Hen
9- Radio Telemetry

Down
1-Prescribed burning
2-Habitat
3-Lek
4- Sagebrush-steppe
5-Riparian
6- Encroaching

Students Learn About Sage-Grouse Key

Comprehension Questions

Name_____

1. Where do sage grouse mate?
    In Leks

2. Where are the most dominant males positioned on a Sage grouse lek?
   Center of the Lek

3. Which sage-grouse arrive first on a lek?
   Males

4. How many eggs does each female grouse lay?
   7-8

5. Why have populations in the leks increased this year? (Hint: what affected this population in past years?)
   West Nile Virus

6. What do the male Sage-Grouse do to attract the females?
   They dance around and puff out their chests, flap their wings, and their tails are up- bushed out.

7. What is radio telemetry equipment used for and how does it work?
   It is used to find sage-grouse collars. It works off of radio waves

8. According to Jerry Hoagland, why is it important to maintain riparian areas?
   To not lose soil, stop runoff & pollution in waters

9. Why are juniper trees encroaching?
   Because of the lack of wildfires- when we started putting out wildfires it allowed the junipers to spread

10. Why would Hoagland like to see more prescribed burning?
    To control spread

11. What are they doing now to stop the junipers?
    Cutting them down

Sage Grouse Vocabulary Lesson 4

Sage-Grouse Glossary

1. <u>Annual</u> – A plant that sprouts from seed, reproduces, and dies within the same year
2. <u>Biennial</u> – A plant that sprouts from seed and grows (usually into a round cluster of leaves called a rosette) the first year, then grows to maturity during a second year, produces seed the second year, then dies. Example: many thistles are biennials
3. Brood – As a noun, means a group of baby birds. As a verb, means the act of a bird raising its young.
4. <u>Cheatgrass</u> – a winter annual grass that is invasive on sagebrush grasslands
5. <u>Exotic plant</u> – a plant that is not native to an area, a plant introduced by humans
6. <u>Forb</u> – a non-woody plant with "broad" leaves, netted veins in the leaves, and showy flowers such as wildflowers and many weeds. Examples – a dandelion or a buttercup.
7. <u>Fragmentation</u> (of habitat) – placement of human structures such as roads, buildings, ditches, and agricultural fields so that one part of an animal's original habitat is separated from another
8. <u>Grass</u> – a plant with hollow, jointed stems, parallel veins, leaves on both sides of the stem. Examples: Idaho fescue, Cheatgrass
9. <u>Habitat</u> – includes the food, water, shelter, and space an organism needs to survive
10. <u>Invasive plant</u>– A plant that spreads and persists over large areas
11. <u>Juniper</u> – a coniferous shrub or small tree with scale-like leaves or small needles
12. <u>Lek</u> – An area where Sage Grouse gather in the spring to breed. From Swedish "lek" – a fun and rule-less competitive game
13. <u>Local Working Group</u> – A group made of any interested citizens and wildlife professionals to provide a forum to complete habitat improvement projects and get involved in discussions
14. <u>Medusahead Wild Rye</u> – a winter annual grass that is invasive on sagebrush grasslands and unpalatable to both wildlife and livestock during most of its life cycle.
15. <u>Native plant</u> – (indigenous plant) a plant that has been present in an area without obvious human intervention
16. <u>Noxious weed</u> – A plant species that has been designated at the state or federal level as damaging to agriculture, humans, and/or livestock. Government agencies and landowners are legally obligated to control noxious weeds on their land.
17. <u>Obligate</u> – an organism that can only live under specific conditions
18. <u>Perennial</u> – Plants that grow from a seed or cutting to maturity, and then continue to grow back and reproduce for more than two years
19. <u>Predation</u> – the act of eating another animal
20. <u>Predator</u> – an animal that eats other animals. Example: Coyotes are a predator of sage-grouse.
21. <u>Riparian Area</u> – the vegetation on the banks of a stream, river, or lake
22. <u>Sage-grouse Initiative</u> – developed to help landowners voluntarily conserve and improve Sage Grouse habitat on their working land. Provides advice and money to complete projects.
23. <u>Sagebrush steppe</u> – a dry, desert-like biome characterized by sagebrush as the primary cover plant with a perennial grass and forb understory
24. <u>Shrub</u> – a plant with solid, woody stems, flowers, and netted veins in the leaves. Examples: Sagebrush, bitterbrush
25. <u>Summer Annual</u> – An annual plant that sprouts from seed in the spring, matures and produces seed in the summer/fall, then dies. Example: Curly cup gumweed
26. <u>Winter Annual</u> – An annual plant that sprouts from seed during a damp period in the fall, lives through the winter, produces seed in the spring or early summer, and then dies. Example: Cheatgrass