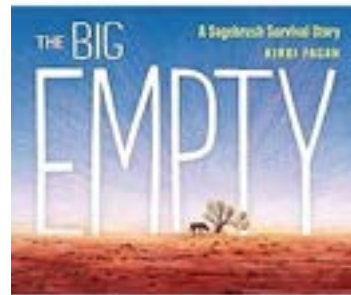


# Sagebrush Survival Challenge

**Objective:** Develop an understanding of how plants, animals, and environmental factors interact in the sagebrush ecosystem while collecting resources to survive.

**Learning goals:** Food chains and food webs; producers and consumers; predator/prey relationships; environmental changes effect on ecosystem

**Resources:** The Big Empty A Sagebrush Survival Story by Kirbi Fagan  
ISBN: 979-8-7656-2724-2



Adopt a National Park Classroom Project: Book Tie-in: The Big Empty (Free Lesson Plan)

<https://thescraplibrary.com/3302/adopt-a-national-park-a-project-based-activity-that-connects-the-big-empty-to-conservation/>

Inquiry Exploration and Service Learning in the Sagebrush Ecosystem

<https://www.engagingeverystudent.com/wp-content/uploads/2025/10/00-Sagebrush-Ecosystem-Curriculum-FINAL-5.pdf>

Rockie's Sagebrush Adventures

<https://www.audubon.org/rockies/get-involved/rockies-sagebrush-adventures>

Sammie's Quest to Save the West

[https://dn790007.ca.archive.org/0/items/sammysquesttosav00unse/Sammys\\_Quest\\_to\\_Save\\_the\\_West.pdf](https://dn790007.ca.archive.org/0/items/sammysquesttosav00unse/Sammys_Quest_to_Save_the_West.pdf)

US Fish and Wildlife Service-Sagebrush Ecosystem Curriculum

<https://www.fws.gov/library/collections/sagebrush-ecosystem-curriculum>

## **Sagebrush Survival Challenge Game**

Before you play the game, read the book *The Big Empty A Sagebrush Survival Story* to the class. Have a class discussion about the ecosystem. Explain that each person/team will become a part of the sagebrush ecosystem in the game.

This game may be played individually or in small teams.

**Setup:** Make an area either inside your classroom or outside as the Sagebrush Ecosystem. Copy the ecosystem token cards: plants, food, water, sunlight. You will need several of these cards scattered around the ecosystem area.

**Roles:** Each student /team will become one of the following: jackrabbit, hawk, snake, fox, sagebrush plant, insect

Students/team will draw card to see what role to play

### **To start the round: (5-10 minutes)**

Students move around collecting what they need to survive.

Plants need sunlight and water

Herbivores need plants and water

Predators need prey tokens (taken from herbivores/insects)

### **Interactions:**

Predators will tag prey---prey will give them one token card

Predator and prey will continue to hunt until time is up

Herbivores will collect plant token cards

Insects can be eaten by multiple animals-picking up the insect token card

End of Round one- Survival Check--Students/ Teams share what they have collect and tell why they collected each token

### **Round Two: (15-20 minutes)**

**Resume playing and collecting tokens. During this round new events happen.**

**Event Cards** ( teacher introduces surprises)

Every few minutes, announce an event:

Wildfires—remove some plant tokens

Harsh Winter-remove some resources

Rainstorm-extra water appears

Human Impact- reduce the size of the ecosystem

End of Round two-Survival Check-Students/team must show required resources; those who do not have enough resources to survive must sit out

If time permits play another round including events.

### **Winning the Game:**

The last surviving players or the players with the most resources collected after several rounds are the Survivors. Survivors must explain the need for each of their tokens collected.

### **Extension ideas:**

Students/Teams can create a poster of their role in the ecosystem

Create a Sagebrush Food web with one of the token cards

Research the sagebrush animals, insects, or weather and create an informational poster

Research the lifecycle of the Sagebrush plant and how it can survive in the ecosystem

### **Next Generation Science Standards**

Crosscutting Concepts •

Structure and function • Systems and system models • Stability and change Core and Component Ideas in the Life Sciences

LS1: From Molecules to Organisms: Structures and processes • LS1.A: Structure and Function • LS1.B: Growth and Development of Organisms LS2: Ecosystems: Interactions, Energy, and Dynamics •

LS2.A: Interdependent Relationships in Ecosystems • LS2.C: Ecosystem Dynamics, Functioning, and Resilience

LS4: Biological Evolution: Unity and Diversity • LS4.C: Adaptation Core and Component Ideas in Earth and Space Sciences

ESS2: Earth's Systems • ESS2.C: The Roles of Water in Earth's Surface Processes ESS3: Earth and Human Activity •

ESS3.C: Human Impacts on Earth Systems

### **Common Core State Standards**

Speaking and Listening Standards for Grade 6 (similar standards for grades 4-5; 7-12)

Standard 4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

Standards for Writing

Standard 6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Standard 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.



Jackrabbit



Hawk



Snake



Fox



Sagebrush



Grasshopper



Cicada



Butterfly



Aphid



Buckmoth





Human Impact



Human Impact



Wildfire



Wildfire



Harsh Winter



Harsh Winter



Rainstorm



Rainstorm