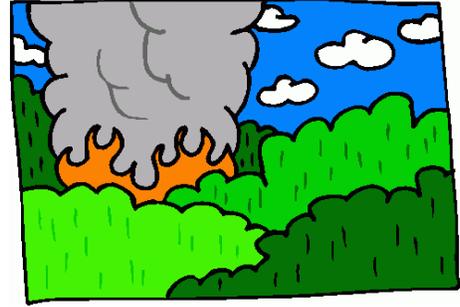


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# Animals & Fire

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## Objective

Students will determine when in a successional sequence different animals return to a burned environment.

## Materials

- Laminated **Animals and Fire** cards (12)
- **Forest Succession Background** handout (copy for each student)
- **Forest Succession Diagram** (copy for each student, pair or group)

**Appropriate Grade Level:** 6<sup>th</sup>-10<sup>th</sup>

**Time Required:** 1 Hour (or more)

**Curriculum Standards:** Science:  
6.2L.2, 7.2L.2, H.2L.1, H.2L.2, 7.2E.4,  
8.2E.4, H.2E.1, 8.2P.1, 8.2P.2, H.2P.2,  
6.3S.1, 7.3S.1, 8.3S.1, H.3S.1

## Background Information

Ecological succession is a theory of ecosystem change over time. After a disturbance, pioneer species (grasses, legumes, forbs, etc.) colonize the plant community. Over time, the plant community builds in complexity when shrubs move into the area. After a period of time, trees start to dominate and eventually a climax community is established. The climax community will perpetuate until it is disturbed. In the forests of the Klamath-Siskiyou Mountains, the climax community of the mixed-conifer forests are dominated by Douglas-fir, ponderosa pine and incense cedar. A disturbance such as fire can set a forest back to an earlier stage of succession. Different animals thrive in different stages of succession.

The **Forest Succession Background** page provides a brief description of a successional timeline. **Fact sheet #3: Fire Effects on Wildlife/Fauna** and **Fact Sheet #6: Fire Effects in Forested Ecosystems**, found in the Background Information of this binder, provide more information and can be assigned as a reading assignment prior to this lesson. The SEEC forest ecology kit provides more information on this topic.

## Activity

### Pre-Activity

- 1) Assign as reading, or read as a class, the **Forest Succession Background** handout.

### Classroom Activity

- 2) Distribute the **Animals and Fire** laminated cards to your students. Depending on the size of the class, students can work individually, in groups, or in pairs. Each group/pair/student will also need a copy of the **Forest Succession Diagram** page.

- 3) Have the students read their **Animals and Fire** card. Using the information from the **Forest Succession Background** handout, have the students determine in which successional stage their animal would thrive, and write it in the **Forest Succession Diagram**.
- 4) Have the students trade cards until they have placed each animal in a successional stage.
- 5) Have the students develop a narrative of forest succession, describing which animals return to the forest as it moves through each stage of succession.

**For example:** After the fire, wood boring insects arrive first, followed by birds like woodpeckers. As plants begin to grow, the seed-eating mammals arrive, followed by mid-size predators. As the plants get taller larger browsers arrive followed by larger predator/carnivores.

- 6) Once the class has completed their diagrams, put the **Forest Succession Diagram** on the board (by drawing it or using a document camera). Have the students take turns placing the animals in each stage of succession.
- 7) Discuss as a class to see if everyone agrees with the placement. Succession is a flexible process in nature, so there can be multiple correct answers. However, succession usually follows a general pattern. Be flexible and try to inspire students to think of creative reasons why their animal would arrive when it does.

## Assessment

In an essay or art project, have the students define succession; make sure they describe the changes that take place in a forest environment over time. Then have them list or draw, in chronological order, the reappearance of certain animals. (Keep in mind that the sequence is not always the same, but there is a typical arrival pattern.) Have the students explain why certain animals return before others. To evaluate student responses, refer to the **Forest Succession Background** page for detailed descriptions of the stages of succession and the reappearance of various organisms.

