



Fire Effects Inventory and Monitoring

Names:

Date:

School:

Background Information

The slow replacement of one kind of habitat by another habitat is called succession. Succession is going on all the time; it's part of nature. Succession turns abandoned farmland into forest, changes small ponds into dry land, and helps areas burned by fires to become green again. **Any process, whether natural or man-made, that changes a habitat is called a disturbance.** Fire is a natural disturbance.

After a fire, plants (fireweed, pinegrass, willows) regrow in the newly open, sunny areas and nutrient-rich soil created by the burn. Some will re-grow from roots, bulbs, or rhizomes that survived in the soil. Shrubs (serviceberry, huckleberry) re-sprout after a fire, increasing fruit production. Lodgepole pine and Western larch produce large amounts of seedlings in the new forest.

The stands of forest seen in the park are in different stages of regeneration. Without fire, Glacier Park's landscape would look a lot different. Today we will collect data that will help us monitor the changes that are seen in a forest as it recovers from a disturbance.

Our Expected Observations

Question: How will the physical appearance of a forest change after a disturbance?

1: In the burned forest I expect to observe: _____

2: In the older forest I expect to observe: _____

After—Analyze Your Data

1. Do you feel the data you and your group gathered is accurate? Why or why not?
2. Compare and contrast the data collected from your 2 plots. How are they the same or different?
3. Does the data your group gathered match your expected observations? Why or why not?
4. Is there a correlation or trend between the light meter reading and the species of trees in each plot?
5. Think about what each forest might look like in 20-50-100 years. What factors might affect the growth of these forests?
6. Think of an additional question that your group might like to research. Write it here:
7. What additional data would you need to collect in order to answer your question?

Data Collection

Materials: string, light meter, tree key, pencil, data sheet

Procedure: Choose a location near the trail. Begin by taking a light meter reading at the center of your plot. Assign one person to be the center pivot point: they should hold one end of the rope while a second person walks around and counts trees. Each tree will need to be identified by species and height. Your third team member is the recorder. Write down any additional findings or species in the "Weather Observation and Additional Notes" sections.

Plot Location:	Height Less than < 2m	Height Greater than >2m	Total:	%
Lodgepole Pine				
Western Larch				
Engelmann Spruce				
Douglas-Fir				
Western Red-Cedar				
Western Hemlock				
Broadleaf Plant				
Other Tree Species				
Snag (<i>Standing Dead Tree</i>)				

Light Meter Reading at 2m _____ **Total:** _____

Weather Observation and Additional Notes:

Plot Location:	Height Less than < 2m	Height Greater than >2m	Total:	%
Lodgepole Pine				
Western Larch				
Engelmann Spruce				
Douglas-Fir				
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Light Meter Reading at 2m _____ **Total:** _____

Weather Observations and Additional notes: