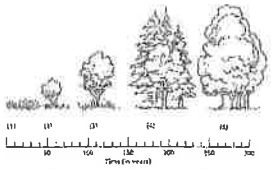
Name _____ Period _____
Due date _____

ECOLOGICAL SUCCESSION



Ecosystems tend to change with time. Ecological succession in an ecosystem is the gradual replacement of one community of organisms by another until a stable stage is reached. Stable ecosystems have extensive food webs with a diversity of producers and consumers. At the end of ecological succession, a climax community of organisms is reached. Primary succession begins on bare rock while secondary succession starts with soil already in place.

In this activity, you will examine a powerpoint presentation to learn the basics of primary and secondary succession. You will then watch a documentary video showcasing a true case of ecological succession on Mount St. Helens.

PART 1: SUCCESSION POWERPOINT

Log onto: **science-class.net**

On the left side, click on **"Ecology"** then click on **"Succession – archived materials"**

Under **"Slideshows"** click on **Succession (download)**

SLIDE #

1 Fill-in-the-blanks - Changes in _____ : Ecological _____

2 The _____ replacement of one plant _____ by another through natural processes over _____.

3 Primary Succession – Begins in a place _____ any soil.

Lichens are called " _____ Species"

4 Draw a lichen in the box:

5 When lichens _____, they _____, adding small amounts of organic matter to the rock to make _____.

7 Simple plants like _____ and _____ can grow in the _____ soil

Lichen Drawing

8 The soil level _____, and _____, wildflowers, and other plants begin to take over.

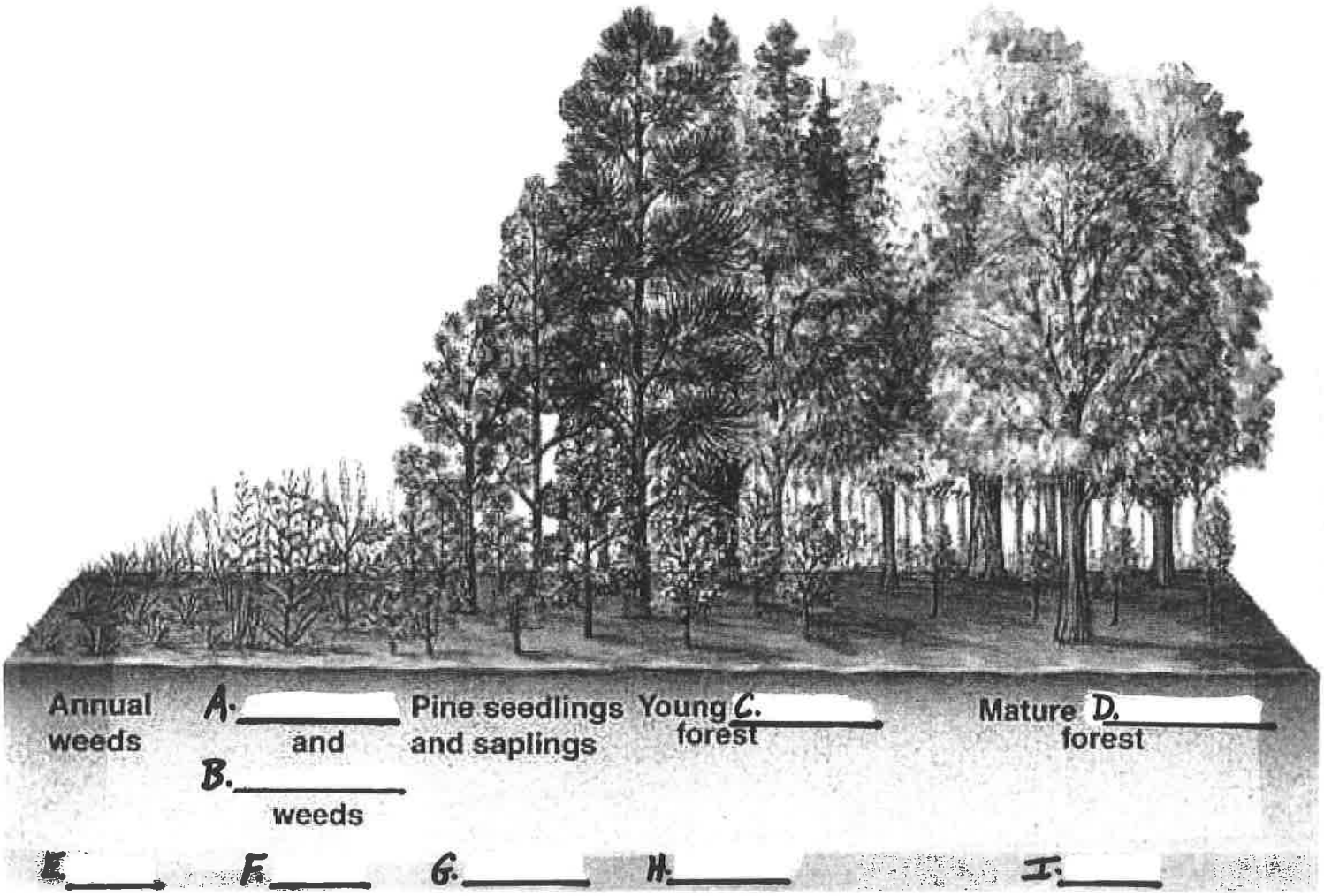
9 _____ and trees can survive now

SLIDE #

10 What was once bare _____ now supports a _____ of life.

11 _____ Succession
Begins in a place that _____ has _____ and was once the _____ of living organisms.
Example: after forest _____

13 FILL-IN-THE –BLANKS in the diagram below:



15 _____ Community
A _____ group of plants and animals that is the end result of the _____ process

PART 2: MOUNT ST. HELENS DOCUMENTARY

Log onto: www.teachertube.com

Type into the Search Box: "Primary Succession after Mount St. Helens" then click on the Search button

Scroll down and click on the first **"Primary Succession after Mount St. Helens"**

Answer the following questions as you watch the video. You may pause as needed.

SUCCESSION

1. This refers to the development of _____ communities over time…
   From empty _____ to a _____ community

2. The two plants that are colonisers are _____ and _____.
   They begin to erode the bare _____ to form a thin _____ of _____.

MOUNT ST. HELENS

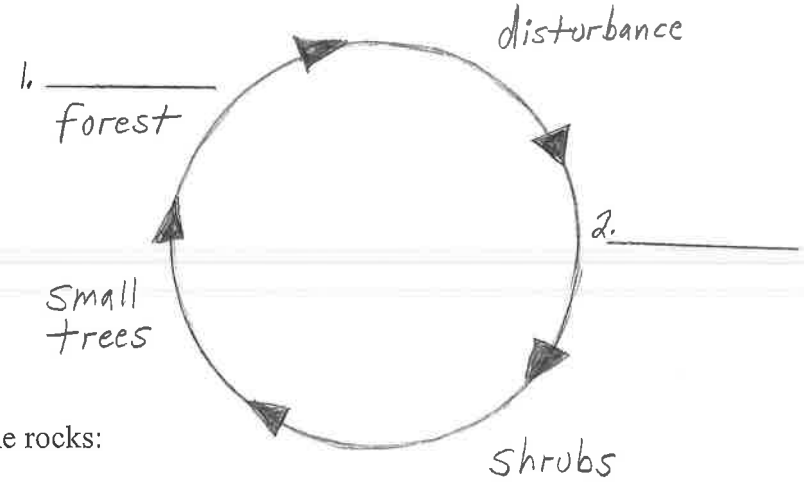
3. 8:32 am May 18, _____ (Now just watch the actual video footage for the next few minutes.)

EVENING NEWS WITH DAN RATHER

4. It will take more than $150 million just for _____ and bridge repair

5. What is Spirit Lake filled with? _____ (Now just listen to the song and watch the video.)

6. CYCLE DIAGRAM – Fill in the missing terms:

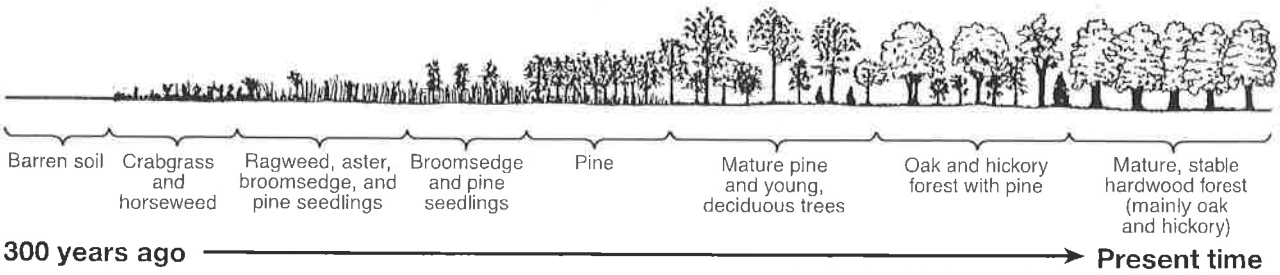


7. Give any 2 colors of lichens you see growing on the rocks:

_____ _____

Regents Practice Questions

The diagram below represents a process that occurs in nature.



1. If the oak and hickory trees were burned in a forest fire, leaving bare soil, which group of plants would most likely be the first to grow back?

(1) crabgrass and horseweed
(2) oak and hickory trees
(3) broomsedge and pine seedlings
(4) mature pine and young deciduous trees

2. **What would most likely occur after an ecosystem is disrupted by fire?**

(1) The ecosystem would eventually return to its original state.
(2) The ecosystem would return to its previous state immediately.
(3) The ecosystem would evolve into a new ecosystem that is totally different from the original.
(4) The ecosystem would become an ever-changing environment with no stability.

3. **Cutting down a rain forest and planting agricultural crops, such as coffee plants, would most likely result in**

(1) a decrease in biodiversity
(2) an increase in the amount of energy recycled
(3) a decrease in erosion
(4) an increase in the amount of photosynthesis

"On the positive side, down wood will enrich your land by providing a home for beneficial wildlife."