

Name _____ period _____
 date assigned _____ date due _____ date returned _____

Succession Activity

Directions: Carefully cut out the cards for each example of succession. Only cut out the six to eight cards for each type at one time. Match the picture to the description and place them in the correct order from beginning to climax community. Glue them down here. Place the picture on the top row and the descriptions underneath.

POND SUCCESSION			
1	2	3	4
GRASSLAND SUCCESSION			
1	2	3	4

FOREST SUCCESSION			
1	2	3	4
DESERT SUCCESSION			
1	2	3	4

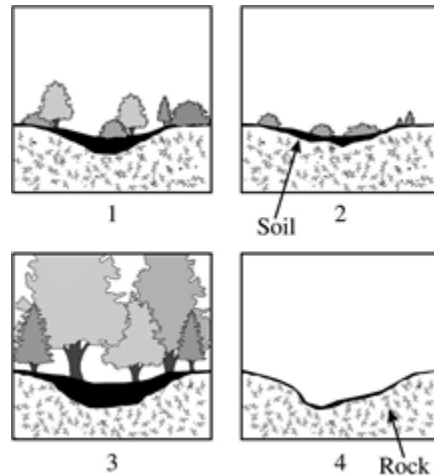
33. Label each type of succession as primary or secondary

pond _____ forest _____

desert _____ grassland _____

- 34** Which of these types of environments experiences the LEAST change in the total number and type of species over time?
- A** an ecosystem with only pioneer species
 - B** an ecosystem that is in primary succession
 - C** an ecosystem that is in secondary succession
 - D** an ecosystem with a climax community
- 35** Which plant characteristics are common to pioneer species?
- F** plants with roots that act as wedges to slowly break apart rocks
 - G** plants with long, thick roots that tap into deep water supplies
 - H** trees with exposed surface roots that trap soil and vegetation
 - J** plants with a broad mat of surface roots that quickly soaks up water
-
- 36** A hurricane hits a coastal prairie and destroys the habitat. Years later there is an appearance of small plants with rapidly spreading roots on newly formed coastal sand dunes. This vegetation describes—
- A** a microhabitat
 - B** primary succession
 - C** secondary succession
 - D** biodiversity
- 37** What is the relationship between ecological succession and equilibrium in an ecosystem?
- F** Ecological succession helps maintain equilibrium in an ecosystem.
 - G** Ecological succession prevents ecosystems from ever reaching equilibrium.
 - H** There is no relationship between ecological succession and equilibrium.
 - J** Ecological succession and equilibrium are the same thing.

38

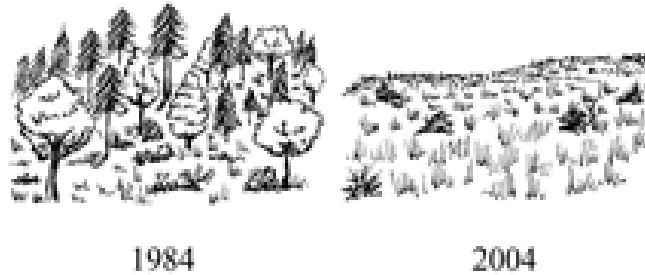


The diagrams above show an ecosystem during different stages of ecological succession.

In which order will these stages occur, from earliest to latest?

- A** 4, 2, 1, 3
- B** 1, 2, 3, 4
- C** 3, 1, 4, 2
- D** 2, 4, 3, 1
- 39** Some ranchers use controlled fires to rid their grazing lands of unwanted plants. These ranchers keep their land in early stages of succession and in a state of equilibrium that is best for their livestock. Which of these kinds of plants would MOST LIKELY be some of the first plants found growing in a pasture after fire?
- F** trees
- G** grasses
- H** ferns
- J** mosses

40



The figure above shows the same ecosystem in Texas at two different times.

Which of the following MOST likely caused the change of species shown in the figure?

- A** development of a parking lot
 - B** passing through of a glacier
 - C** preservation of habitat
 - D** occurrence of a forest fire
-
- 41** Lava from an underwater volcano piles up over many years. Eventually, the pile of lava sticks up above the ocean surface, forming a new island. To show that succession is occurring on the island, it would be MOST helpful for a scientist to measure changes in —
- F** average temperature
 - G** day length
 - H** annual precipitation
 - J** soil depth

- 42** A non-native plant is introduced into a diverse, mature ecosystem in equilibrium. Assuming that the non-native plant has no natural enemies and that it thrives in the ecosystem, how will it affect the community?
- A** The native species will become more like the new plant.
 - B** The number of native species will decrease.
 - C** The number of native species will not be affected at all.
 - D** The native species will become extinct
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- 43** A non-native animal is introduced into a diverse, mature ecosystem in equilibrium. Assuming that the non-native animal has no natural enemies and that it thrives in the ecosystem, how will it affect the community?
- F** Only the plants would be affected.
 - G** The entire ecosystem would be affected.
 - H** Only the animals would be affected.
 - J** There would be no effect.

44 Which of these types of environments is MOST LIKELY to experience the arrival of a pioneer species?

- A** an old growth forest
- B** an undisturbed prairie
- C** an established mountain lake
- D** a newly formed volcanic island

45 Why does secondary succession occur faster than primary succession?

- F** Fewer changes must occur in secondary succession.
- G** There are more pioneer species in secondary succession.
- H** The environmental conditions are more extreme in primary succession.
- J** There are more trophic levels in secondary succession.

46 Which of the following sequences MOST likely represents ecological succession on a recently abandoned farm?

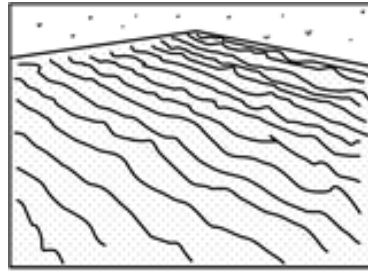
- A** grasses → flowering plants → shrubs → maple trees
- B** maple trees → shrubs → flowering plants → grasses
- C** shrubs → grasses → maple trees → flowering plants
- D** flowering plants → maple trees → shrubs → grasses

47 Pioneer species such as lichen and moss inhabit an area after a major disturbance, such as a volcanic eruption. Over time, other species are found in the disturbed area, and the number of pioneer species decreases.

Why does the number of pioneer species decrease?

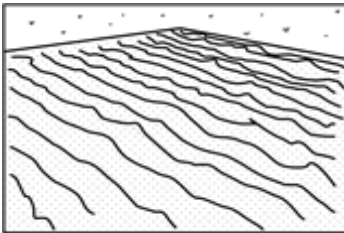
- F** The amount of available sunlight is reduced. The pioneer species can no longer thrive.
- G** The area has more soil to support complex plants. The competition decreases the pioneer species role.
- H** The area is more susceptible to the wind. Seeds are captured in the pioneer plants and germinate at a higher rate.
- J** The temperature is not as extreme as it was following the disturbance. Fewer of the pioneer species reproduce.

- 48** A flower bed is created at a school so flowers can be planted in the Fall.

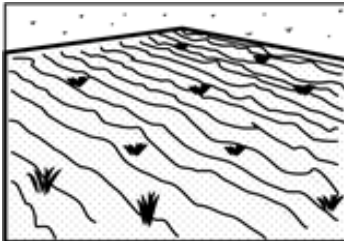


Tilled Dirt

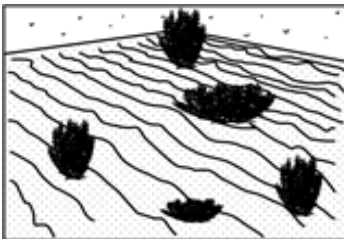
Over the summer it is uncared for. Which of the following could the students expect to find when they come back to school?



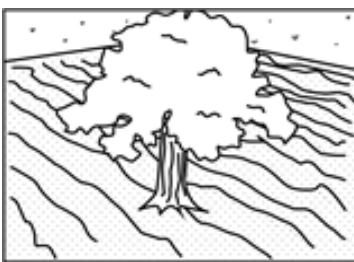
Nothing



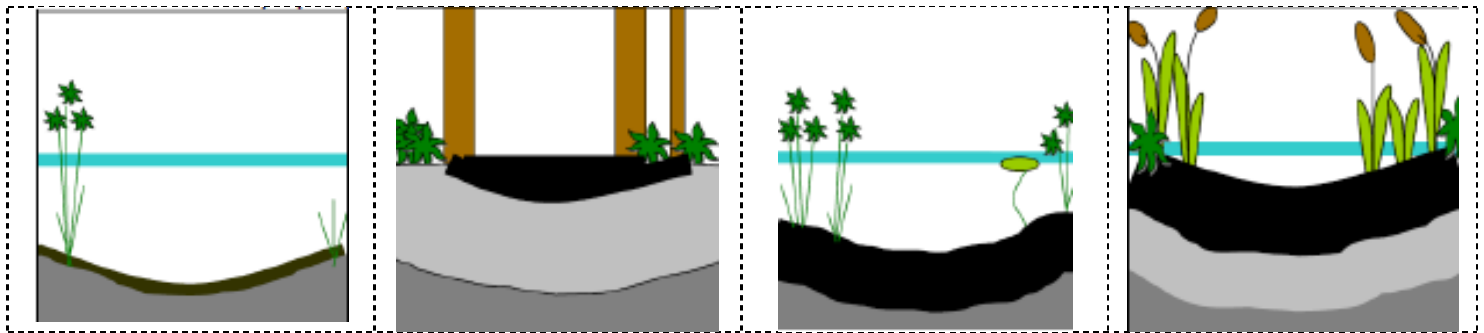
Weeds



Shrubs



Tree



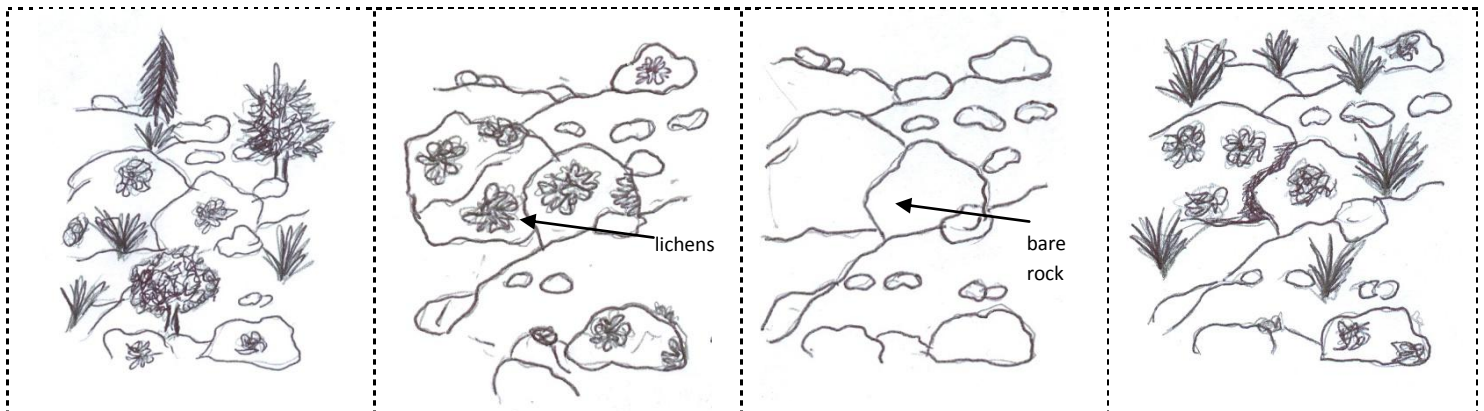
cut all dotted lines, you will have 8 separate "cards". Put them in order before you cut out the next set.

Grasses and other small land plants begin to grow on dry edges; more soil; small land animals, such as mice, rabbits, etc... move into the area.

Greater variety of plants; larger sized plants growing; layer of sediments thicker due to build up of dead organisms and soil washed into the pond.

Young pond; few plants; small size; a variety of small organisms present; bottom of pond has little sediment (soil is the black layer).

Pond completely filled in; bushes shade out the grass; trees overgrow the bushes; larger land animals present such as deer, squirrels, etc...



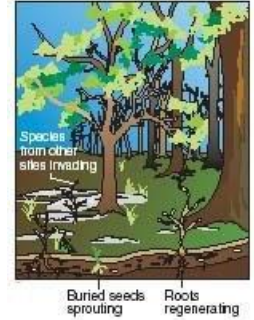
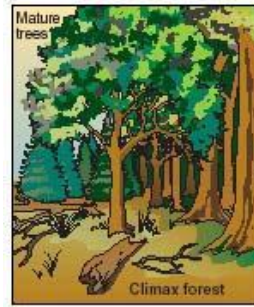
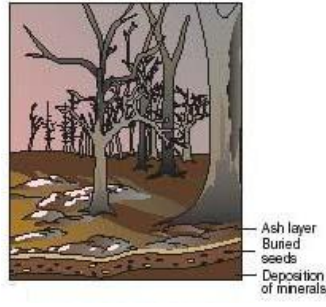
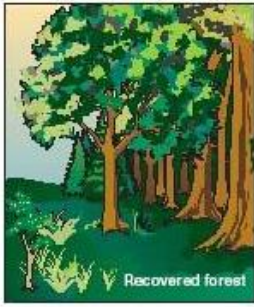
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As lichens create cracks in the rock, mosses and weeds begin to grow helping to create more soil.

Once soil is formed, weeds, grasses and small shrubs can take root. Small animals will begin to come into the area as well.

The glacier scrapes the earth as it moves by. After it melts, it leaves bare rock behind.

After about a year, lichens begin to grow on the rocks. The lichens begin to chemically break the rock down into soil.



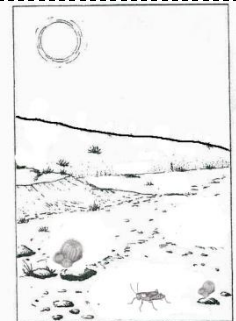
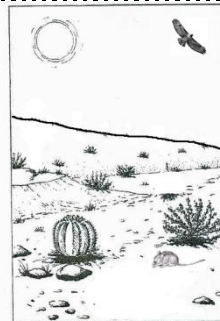
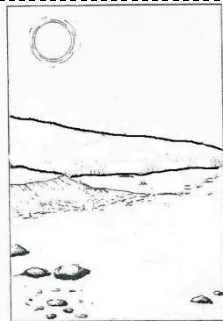
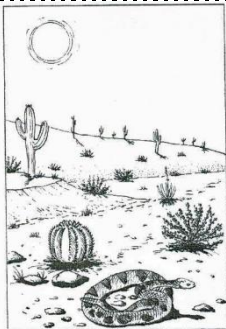
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Weeds begin to grow in the richly fertilized soil. Insects and other small organisms make their way back to the areas.

A fire comes through a forested area and burns up all of the plant life. What remains is soil and ash. The ash fertilizes the soil.

Trees grow in and the forest can now support more organisms and larger animals.

Grasses and small shrubs start to grow in. Small mammals and ground birds come back.



cut all dotted lines, you will have 8 separate "cards". Put them in order before you cut out the next set.

The shrubs become mature and certain cacti become very tall. Medium size mammals move in and birds begin creating holes in the cacti to nest in.

very small weeds and cacti begin to grow. insects may begin to move in

small shrubs move in and some of the cacti grow taller or larger. Small mammals and some birds move in.

A flash flood sweeps through a desert community leaving nothing but the bare sand.