Name _____ Teacher _____

Date _____ Section _____

GRSDE 7, 3D NINE WEEKS PRACTICE

Instructions:

1.

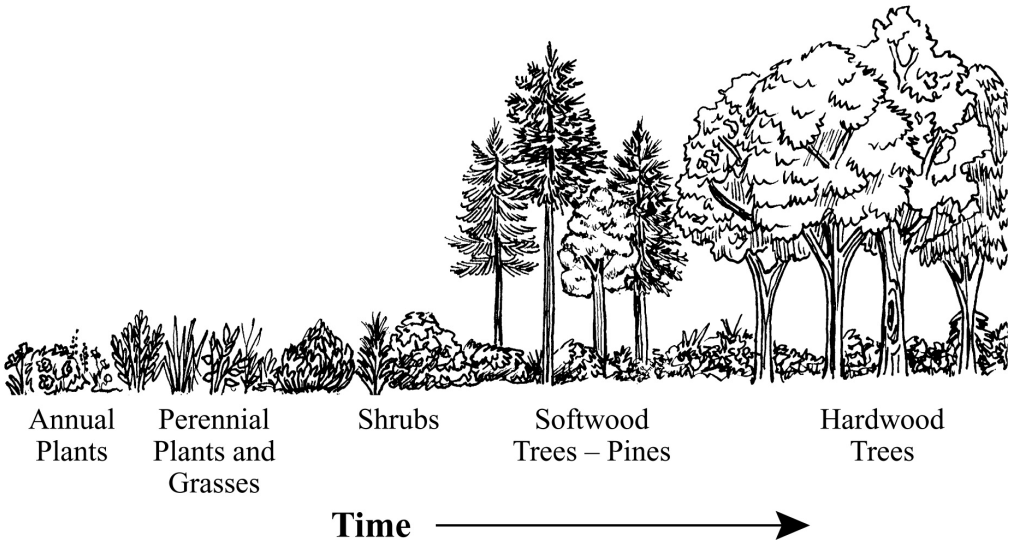
A volcanic eruption adds, among other things, a large amount of lava to the environment. This balances which of the following forces?

A. Gravity
B. Weathering
C. Erosion
D. Fossilization

2.

After a large volcanic eruption, it may take many years for the ecosystem surrounding the volcano to return to the equilibrium that existed before the eruption. Which of these is a natural process that directly works to return ecosystems to their equilibrium?

A. Photosynthesis
B. Homeostasis
C. Succession
D. Desertification



3.

Succession leads to a change in the plant species in an area over time. The final stage is the forest, which remains stable for a long time.

Which of these BEST explains why forest trees are the final stage in succession in this type of ecosystem?

A. Trees are very large and use up all of the available nutrients.

B. Trees have deep roots and soak up all of the ground water.

C. Trees are tall and make it hard for small plants to grow because they block the sunlight.

D. Trees have many leaves and keep other plants from growing by using the available air.

4.

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

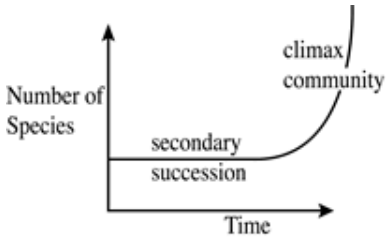
C. An ecosystem that is in secondary succession

D. An ecosystem with a climax community

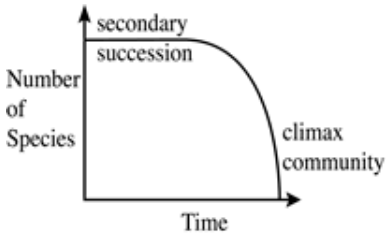
5.

These graphs show changes in the number of species over time. Which one BEST represents the changes in the number of species over time as an ecosystem in secondary succession becomes a climax community?

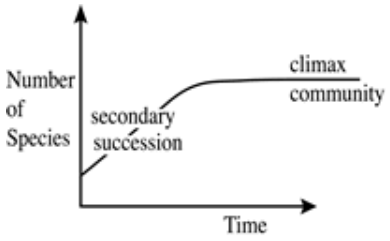
A.



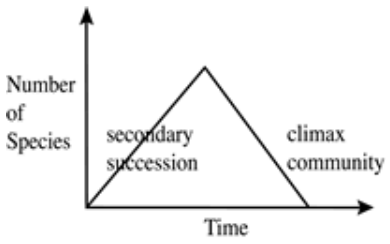
B.



C.



D.



6.

How does secondary succession help restore equilibrium to a region destroyed by a flood?

A. It increases the number and types of species.

B. It brings back species from extinction.

C. It stops other floods from occurring.

D. It decreases the rate of evolution.

7.
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 a fire?

A. Trees
B. Grasses
C. Ferns
D. Mosses

8.
During the hot, dry African summer months, African clawed frogs can dig one-foot deep burrows into the mud. The frogs leave a small hole open to supply air. They can stay in these burrows for up to 10 months. These frogs MOST likely live in these burrows in order to —

A. stay warm
B. find mates
C. capture food
D. conserve water

9.
Dogs pant with their tongues out in order to cool off their bodies. Dogs are MOST likely to pant when the weather is —

A. cloudy
B. hot and dry
C. raining
D. cold and windy

10.
A student leaves an air-conditioned room and goes outdoors where the temperature is over 100 °F. Which of these BEST describes how the student's body maintains homeostasis?

A. Lungs breathe faster.
B. Muscles increase activity.
C. Blood vessels widen.
D. Skin begins to sweat.

11.
Reptiles are described as being cold blooded, which means that their body temperatures depend on the temperature of their environment. Alligators are a type of reptile. Which of these examples is MOST LIKELY a situation in which an alligator is trying to warm up his body?

A. An alligator lying on a river bank in the sun
B. An alligator swimming to the bottom of a lake
C. An alligator hiding in a hole dug into the side of a pond
D. An alligator resting beneath the surface of a pond in the shade of a tree

12.
Sea turtles have a salt gland that empties into their eyes and makes them appear to be crying salty tears. This salt gland is an adaptation that allows the sea turtle to maintain its internal environment while living in the ocean. This adaptation MOST LIKELY helps the sea turtle by —

A. raising its internal body temperature to the temperature of ocean water
B. helping to get rid of extra carbon dioxide that builds up in its tissues
C. maintaining the concentration of chemicals in the fluid in its blood and cells
D. removing extra water that builds up in its body from drinking ocean water

13.
Which of the following situations shows a response to colder temperatures?

A. A dog begins to drool.
B. A plant sheds its leaves.
C. A human starts to sweat.
D. A bacterium splits in half.

14.
Many deserts have a very hot, dry climate. Desert animals have developed many adaptations to survive in the desert. Which of these is an adaptation that a desert animal would MOST LIKELY develop in response to high temperatures found in the desert?

A. They hibernate in the winter.
B. They are active only at night.
C. They lay eggs that must incubate in water.
D. They have very dark fur and skin.

15.
Trees that grow in a forest tend to grow very tall with few branches. The same species of tree grown in an open area tends to grow shorter with many branches. The stimulus responsible for these different growth patterns is the amount of —

A. nutrients in the soil
B. water in the ground
C. wind striking the tree
D. light reaching the tree

16.
Temperate deciduous forests of the United States often have cold winters and hot, humid summers. How would mammals in this type of biome MOST likely respond to hot temperatures?

A. Fasting
B. Hibernating
C. Shivering
D. Sweating

17.
Two ponds are similar in size and shape and are found in the same area. One is murky and has few aquatic plants growing in it. The other pond is clear with many aquatic plants growing in it. What is the MOST likely reason that more plants are growing in the clear pond?

A. The clear pond has better soil nutrients.
B. It is warmer in the clear pond.
C. Light penetrates deeper into the clear pond.
D. The clear pond has more fish living in it.

18.
Which of the following is a biotic factor in an ocean ecosystem?

A. The salt content of the water
B. The temperature of the water
C. The fish in the water
D. The oxygen in the water

19.
An intertidal zone is an area along an ocean coast that is between the high and low tide marks. It is under water when the tide is high and out of the water when the tide is low. Organisms that live in these areas must be able to tolerate extreme changes in temperature and times when they are under water and above water. Crabs and clams can burrow into the mud for protection from both predators and the hot sun when the tide is low. Plants of the intertidal zone are adapted to withstand being flooded by saltwater. Which of these is an abiotic component of this ecosystem?

A. The predators that feed during low tide
B. The clams that burrow into the mud for safety
C. The land between the high and low tide points
D. The plants that withstand the pounding of the waves

20.

Which of these is a biotic factor in a river ecosystem?

A. The types of microorganisms that live in the river water

B. The amount of soil and other particles carried by the river

C. The speed at which the river water flows toward the ocean

D. The amount of rain that flows off the land and into the river

21.

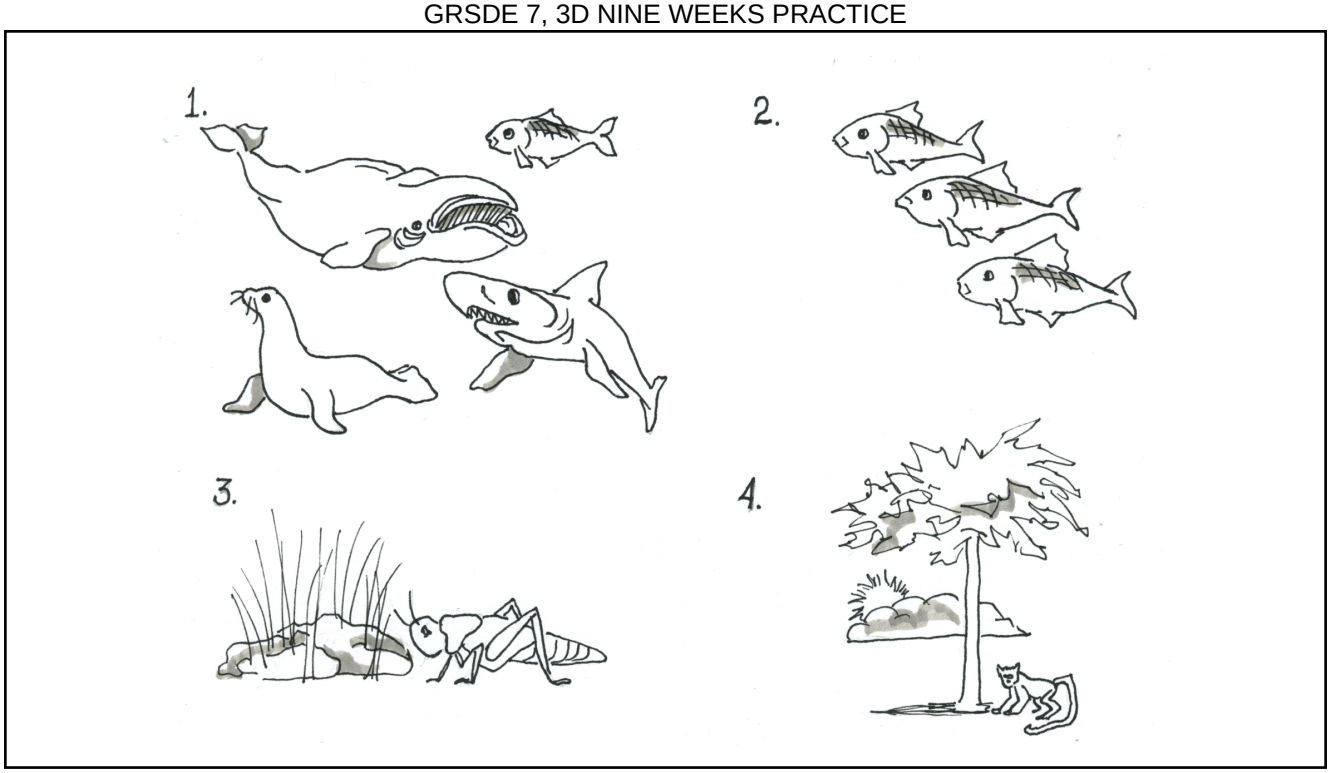
A hollow, sealed glass sphere contains sand, water, air, algae, and tiny brine shrimp. The sphere is a model ecosystem. Which of these is a biotic factor of this ecosystem?

A. Air

B. Algae

C. Sand

D. Water



22.
Which diagram best represents a population?

A. Diagram 1
B. Diagram 2
C. Diagram 3
D. Diagram 4

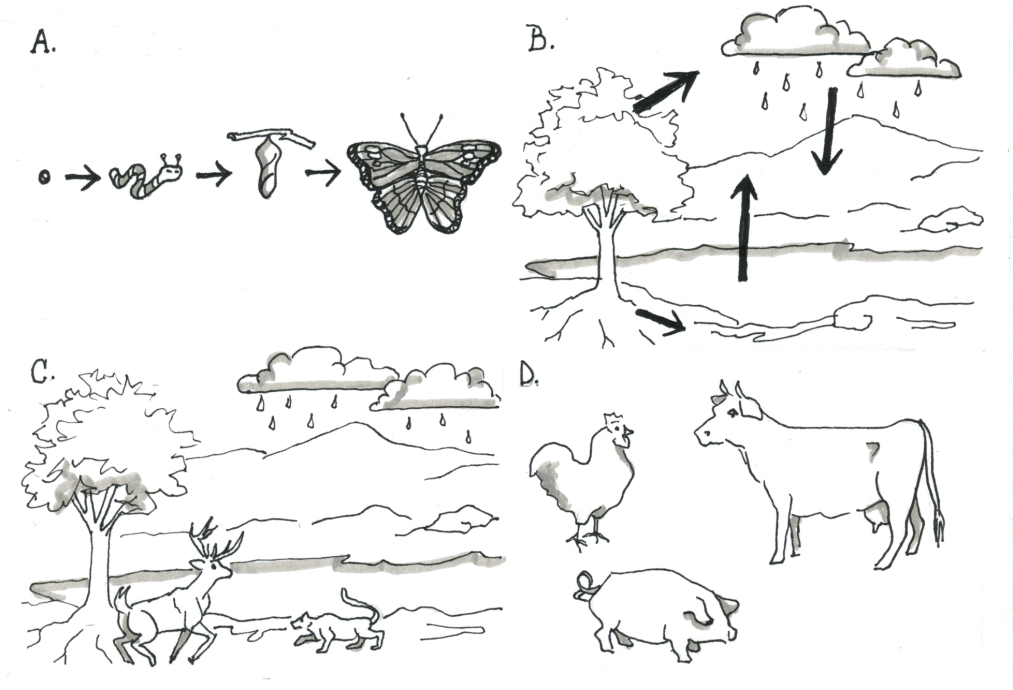
23.
Which diagram best represents a community?

A. Diagram 1
B. Diagram 2
C. Diagram 3
D. Diagram 4

24.

In an ecosystem, abiotic factors include

A. plants, animals, microorganisms, fungi
B. all living and nonliving things
C. sunlight, water, temperature, soil
D. producers and consumers



25.
Which diagram best represents an ecosystem?

A. Diagram A
B. Diagram B
C. Diagram C
D. Diagram D

26.
Biotic components of ecosystems include

A. all living factors in a given area
B. all living and nonliving factors
C. anything in the physical environment
D. all forms of symbiosis

27.
In a pond ecosystem, red-winged blackbirds, mosquitoes, algae, lily pads, cattails, and perch are called

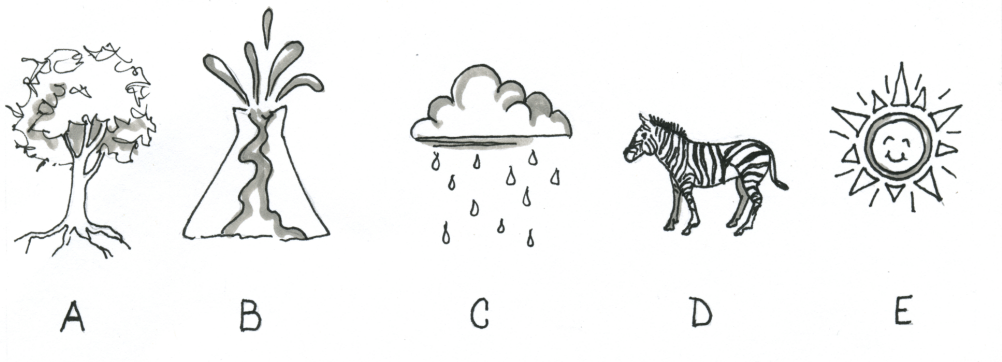
A. a population
B. a community
C. abiotic components
D. a food chain

28.
Sagebrush is the dominant vegetation in Yellowstone National Park. Collectively, all the sagebrush make up

A. a community
B. an ecosystem
C. a population
D. a niche

29.
Drought, erosion, flood, and prolonged heat spells are examples of

A. abiotic changes within an ecosystem which can affect biotic factors
B. biotic factors within an ecosystem which affect abiotic components
C. populations
D. communities



30.
Refer to the diagram. Which list includes abiotic factors only?

A. Items A, C, D
B. Items B, C, E
C. Items A, D
D. Items A, B, C, D, E

31.

Which of the following statements represents a result of abiotic change?

A. A giraffe eats up to 35 kg. of vegetation daily.

B. Due to the decrease in bobcat numbers, white tail deer are experiencing extreme overpopulation in certain counties.

C. The southwest experienced a decline in yucca population due to a decrease in natural pollinators.

D. Water flow velocity increases in a stream after spring rains.

32.

An abiotic component of an ecosystem is represented by the

A. bats in a bridge in Austin, Texas

B. population of deer on a deer lease in Central Texas

C. monthly average rainfall in Texas

D. attack on a wheat field by fungus

33.

Which statement below refers only to biotic components in an ecosystem?

A. Evaporation, transpiration, and precipitation are complex processes that cycle water between the atmosphere and the Earth's surface.

B. Photosynthesis and respiration are not considered atmospheric processes.

C. Vegetation is an indicator of several environmental factors, including precipitation, temperature, soil, geology, and wind.

D. In Yellowstone Park, shrubs have expanded their range into large areas formerly populated by short grasses, due to overgrazing and trampling by livestock.

34.

In prairie ecosystems, the prairie dog is a keystone species. This means that prairie dogs are disproportionately important in the dynamics and stability of the structure of the ecosystem. More than 200 wildlife species depend directly or indirectly on the prairie dogs for food and habitat. Among those animals associated with prairie dogs, their colonies and burrows are insects, coyotes, eagles, foxes, hawks, burrowing owls, badgers and black-footed ferrets.

According to this passage, which statement below is correct?

A. In prairie ecosystems, all prairie dogs make up a community.

B. Prairie dogs, insects, coyotes, eagles, foxes, hawks, owls, badgers, and ferrets are abiotic components of the prairie ecosystem.

C. All the interacting populations in the prairie ecosystem make up a community.

D. Only the animals dependent on the prairie dogs make up a community.

35.

In an ecosystem in Africa, zebras and gazelles feed on grasses and other plants. Lions and leopards feed on zebras and gazelles. Which of these is the role of zebras and gazelles in this ecosystem?

A. Carnivores

B. Consumers

C. Decomposers

D. Producers

36.

Which of these BEST describes how trees would be affected if there were no decomposers in a forest?

A. Trees would not get sick because there would be no germs in water.

B. Trees would stop growing because their roots would have no water.

C. Trees would die because the soil would run out of important nutrients.

D. Trees would keep growing forever because they would never rot.

37.
Which of these processes removes carbon from the atmosphere?

A. Combustion of fuels
B. Photosynthesis
C. Respiration in cells
D. Decomposition

38.
Raspberries → Rabbits → Foxes

The food chain above can be found in a forest ecosystem. Suppose all of the foxes were removed from the forest. Which of the following is MOST LIKELY to happen in the forest after the foxes are removed?

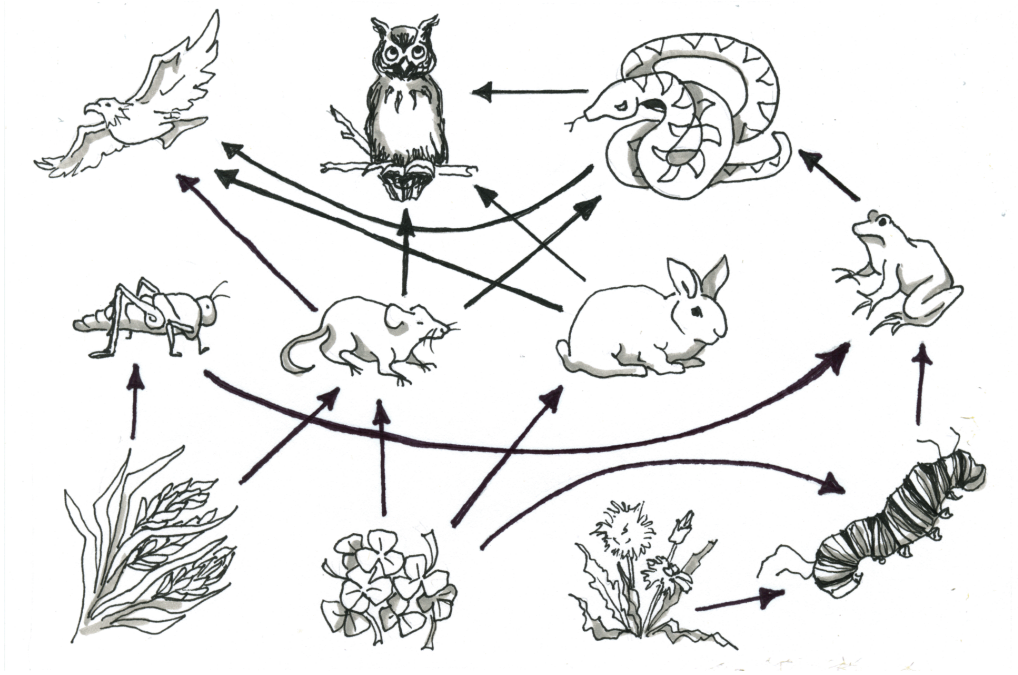
A. The raspberries will increase, and the rabbits will increase.
B. The raspberries will decrease, and the rabbits will increase.
C. The raspberries will decrease, and the rabbits will decrease.
D. The raspberries will increase, and the rabbits will decrease.

39.
If you eat a ham and cheese sandwich for lunch with lettuce and tomatoes, where would you be placed on the food chain?

A. producer
B. primary consumer
C. secondary consumer
D. tertiary consumer

40.
The primary consumer depends on _____ for food.

A. producers
B. carnivores
C. fungi
D. secondary consumers



41.

How many producers are in the diagram?

A. 1
B. 2
C. 3
D. 4

42.

How many food chains are in this diagram?

A. 3
B. 6
C. 9
D. more than 9

43.

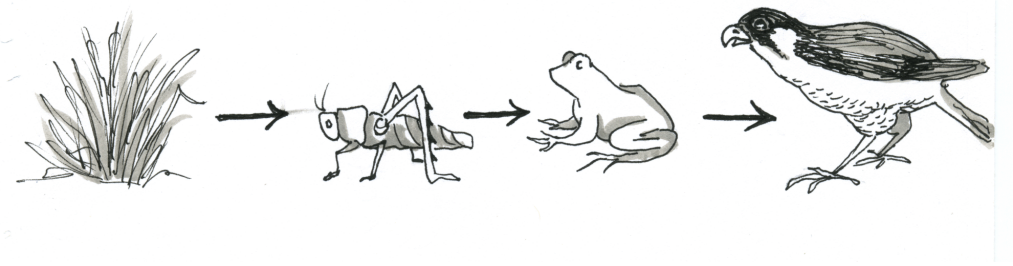
The arrows in the diagram show

A. that some organisms are more important than other
B. the direction of energy flow through organisms
C. the direction of energy flow through organisms
D. the sequence of events in feeding relationships

44.

Which organisms belong to the same food chain?

A. clover, mouse, rabbit, owl
B. wheat, mouse, snake, owl
C. wheat, grasshopper, hawk
D. clover, dandelion, caterpillar, frog



45.
What kind of organism is **not** shown in the diagram?

A. producer
B. consumer
C. herbivore
D. decomposer

SUN → STRANGLER FIG → CATERPILLAR → LIZARD → HARPY EAGLE

46.

What would happen if pesticides drastically reduced the number of caterpillars in this food chain?

A. All populations would be relatively unaffected.

B. The strangler fig population would increase; the lizard population would decrease.

C. The lizard population would decrease; the strangler fig population would decrease.

D. The strangler fig population would be unaffected; the lizard population would decrease.

47.

A student explains that most marine plants are found near the surface of the ocean because the ocean floor does not provide enough minerals for plants. Which of the following facts is the greatest weakness of the student's explanation?

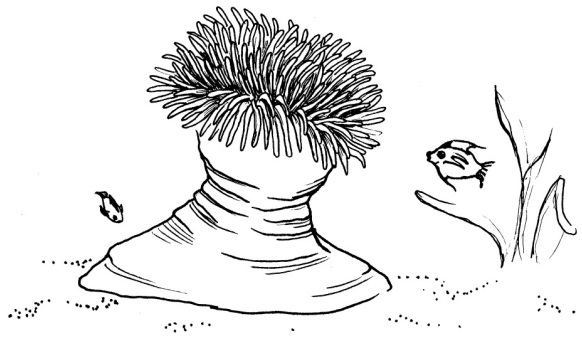
A. In the deepest part of the ocean, there is very little light.
B. Many marine animals are also found near the surface of the ocean.
C. Deep-water vents on the ocean floors heat up the nearby water.
D. Many plants are found on the ocean floor in the shallows close to shore.

48.

Bacteria that live on the deep ocean floor are able to survive without —

A. water
B. energy
C. sunlight
D. nutrients

49.



Sea anemones have a muscular disk that helps them cling to rocks. This disk helps a sea anemone —

A. survive in the presence of bright sunlight
B. withstand the force of crashing waves
C. escape from hungry ocean animals
D. survive the salt found in seawater

50.

Some desert animals are most active at dusk and dawn. This adaptation is MOST helpful for —

A. preying on plant species
B. finding new water sources
C. avoiding high temperatures
D. hiding from hungry animals

51.

Students see crickets, ants, field mice, and owls in a dry grassy field, but they do not see any frogs. Which change would MOST likely let frogs live in the field?

A. A warm summer that increases the number of insects in the field
B. A disease that reduces the number of owls that live in the field
C. A fire that burns away the tall grass that covers the field
D. A flood that causes a new stream to run through the field

52.

During the summer months, some fish in a lake may stay as deep as 20 feet below the surface. Staying this deep underwater is MOST likely to help the fish —

A. maintain a cool body temperature
B. get as much oxygen as possible
C. be close to the plants they eat
D. avoid the larger predator fish

53.

Adaptations help improve an animal's chances of survival and reproduction. They can be behavioral or structural. Which choice describes an animal best suited for cold environment?

A. eyes and nostrils on the top half of the head, outer covering of scales
B. special feet with flattened, webbed toes for climbing up smooth surfaces
C. torpedo body shape for fast swimming
D. two layers of fur: inner layer insulates, outer layer sheds moisture and protects from wind

54.

A good adaptation for living in grassland would be

A. the ability to hibernate
B. the ability for plants to grow very high to reach the sunlight
C. thick insulating fur
D. the ability for plants to regrow after prairie fires

55.

Functions of animals that help them survive in their environment are

A. structural adaptations
B. modifications
C. physical chararactistics
D. behavioral adaptions

56.

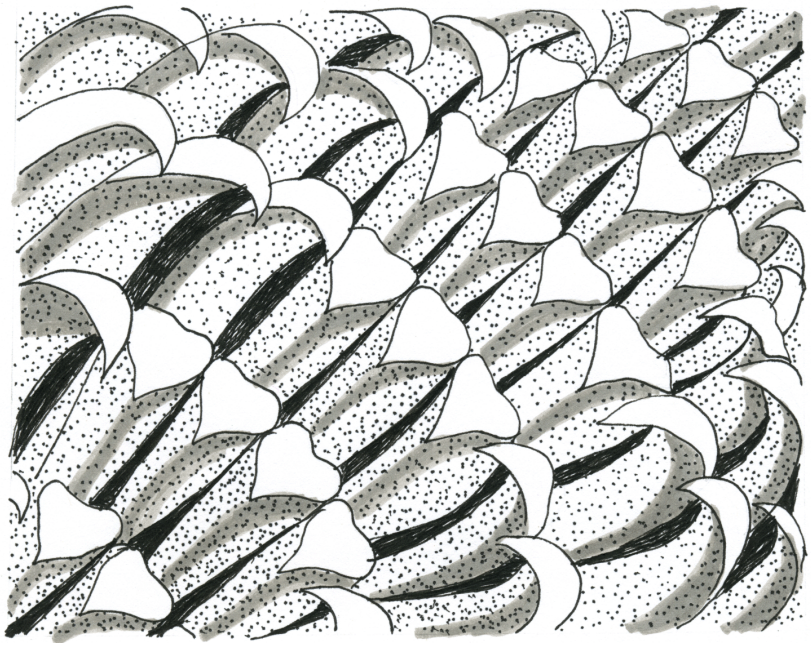
Gila monsters are desert lizards thatare inactive most of the time, with most of their activities occurring mainly at night or in the early morning and evening hours. They move about slowly. Their bumpy, scaly body has a large, blunt head with a powerful lower jaw, a thick tail for fat storage, short legs and strong claws. There are venom glands in the lower jaw. Which of these are behavioral adaptations?

A. blunt head with powerful lower jaw
B. thick tail which can store fat for nutrition in lean months
C. poison glands in the lower jaw
D. active at night or early morning and evening hours and move about slowly

57.

All camels are basically similar in structure. Because camels evolved in a semi-desert environment, they have developed adaptations for coping with both heat and dehydration. Which of the following does not benefit the camel as a means of preventing dehydration?

A. Camels can extract water from their solid wastes.
B. Camels ears are lined with fur to keep out sand and other blowing matter
C. Their kidneys are capable of concentrating urine to reduce water loss.
D. Water is absorbed slowly from their stomach and intestines.



58.

Snails are classified into a much larger group of animals called mollusks, all having a unique file-like tongue called a radula. Why would it be beneficial for you to have a snail in your aquarium? Why would it be advantageous for the snail to have a tongue with rows of spiked teeth?

A. To scrape algae off of hard surfaces.
B. To enable the snail to move more easily in an aquatic environment
C. To extract extra food from gravel.
D. To efficiently clean the surface of the water.

59.

Which statement is an essential characteristic of reptiles and birds that are primarily terrestrial and reproduce on land?

A. They have soft bodies covered with hair or fur.

B. They have hard-shelled eggs.

C. They have 4 appendages and can move about swiftly.

D. They must be primary consumers.

Biome	Plant Description
1	Absence of trees; plants with think leaves to withstand strong winds; extensive root system; seasonal plants
2	Nonporous, extremely small or reduced leaves to minimize water loss; dormant during extreme temperature; fewer stomata, extended root systems
3	Small, low growing; dark, hairy leaves to absorb heat; grow in clumps for greater protection from wind and cold; flowers often disk-shaped to collect sun
4	Leaves with drip tips, climbing vines, smooth bark; buttress roots; dense canopy promotes intense plant competition

60.
Refer to the table. Which plants would most likely be found in the rainforest?

A. 1
B. 2
C. 3
D. 4

61.
Refer to the table. Which plants are more adapted for the tundra?

A. 1
B. 2
C. 3
D. 4

62.

Troglobites are a highly specialized group of animals that cannot survive outside their environment. Many fish, crayfish, spiders, salamanders, and a few mammals are troglobites. These animals have highly developed sense organs, such as antenna, for detecting predators and prey, although many have no eyes. Because they have no need for camouflage, most troglobites have no pigmentation and are white. Based on this information, where are you most likely to find troglobites?

A. prairie
B. rainforest
C. caves
D. desert

63.

In the waters off the coast of California, giant forests of kelp grow. Kelp are large seaweed with bladders at the base of each blade which keep the plant up toward the surface as it gathers light for photosynthesis. Swimming in the kelp forests are fish, some of which have swim bladders, structures that function principally to maintain neutral buoyancy. In some species, the swim bladder also functions as a sound amplifier. Based on this passage, what is the best definition for bladder?

A. a flexible pouch with waterproof or gas-proof walls
B. a hollow organ that stores urine
C. a balloon-like object inserted in the narrowed area of a blood vessel
D. a lighter-than-air structure filled with helium

64.

The role of a pioneer species in primary succession is to change a bare habitat into one that is suitable for other organisms. A species that is responsible for primary succession in an ecosystem is MOST likely able to —

A. survive underwater
B. migrate during the winter
C. burrow underground
D. carry out photosynthesis

65.

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 —

A. average temperature
B. day length
C. annual precipitation
D. soil depth

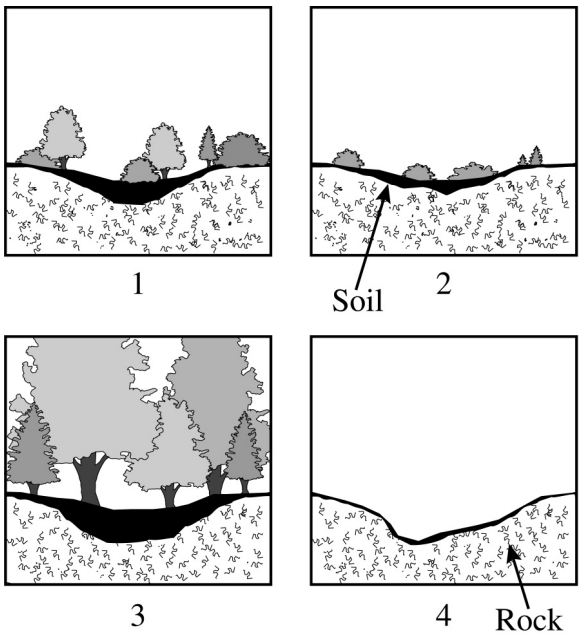
66.

1984 2004

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 forest fire

67.



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

68.

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

A. An old growth forest
B. An undisturbed prairie
C. An established mountain lake
D. A newly formed volcanic island

69.

The table below shows part of the crop rotation schedule used by George Washington, the first President of the United States of America.

Year	**Crop in Field 1**	**Crop in Field 2**	**Crop in Field 3**
1793	Buckwheat	Wheat	Corn and Potatoes
1794	Wheat	Buckwheat	Wheat
1795	Clover or Grass	Wheat	Buckwheat
1796	Clover or Grass	Clover or Grass	Wheat
1797	Clover or Grass	Clover or Grass	Clover or Grass

Rotation of crops helped ensure the long-term productivity of George Washington's farm because each crop MOST likely —

A. needed a different amount of sunlight
B. had a different effect on soil nutrients
C. used a different amount of fresh water
D. relied on different gases found in air

STOP

Answer Key

#	Item ID	Key	TEKS	Stimulus
1	C073182341	B	7.5A	-
2	C073272143	C	7.5A	-
3	C073240924	C	7.5B	PC073240924
4	C073240976	D	7.5B	-
5	C073240977	C	7.5B	-
6	C073240981	A	7.5B	-
7	C073272124	B	7.5B	-
8	C073135618	D	7.9B - 8C0	-
9	C073135620	B	7.9B - 8C0	-
10	C073240931	D	7.9B - 8C0	-
11	C073272131	A	7.9B - 8C0	-
12	C073272132	C	7.9B - 8C0	-
13	C073218551	B	7.11B	-
14	C073218552	B	7.11B	-
15	C073218554	D	7.11B	-
16	C073218555	D	7.11B	-
17	C073240932	C	7.11B	-
18	C073182352	C	7.12A	-
19	C073182355	C	7.12A	-
20	C073182356	A	7.12A	-
21	C073240933	B	7.12A	-

#	Item ID	Key	TEKS	Stimulus
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23	C071061836RX	A	7.12A	C071061834RXp
24	C071061838RX	C	7.12A	-
25	C071061840RX	C	7.12A	C071061840RXp
26	C071061842RX	A	7.12A	-
27	C071061844RX	B	7.12A	-
28	C071061846RX	C	7.12A	-
29	C071061848RX	A	7.12A	-
30	C071061850RX	B	7.12A	C071061850RXp
31	C071061852RX	D	7.12A	-
32	C071061854RX	C	7.12A	-
33	C071061856RX	D	7.12A	-
34	C071061858RX	C	7.12A	-
35	C073240970	B	7.12B - 8C2	-
36	C073240972	C	7.12B - 8C2	-
37	C073240974	B	7.12B - 8C2	-
38	C073272138	B	7.12B - 8C2	-
39	C071058531RX	C	7.12B - 8C2	-
40	C071058532RX	A	7.12B - 8C2	-

#	Item ID	Key	TEKS	Stimulus
41	C071058533RX	C	7.12B - 8C2	C071058533RXp
42	C071058534RX	D	7.12B - 8C2	C071058533RXp
43	C071058535RX	B	7.12B - 8C2	C071058533RXp
44	C071058536RX	B	7.12B - 8C2	C071058533RXp
45	C071058537RX	D	7.12B - 8C2	C071058537RXp
46	C071058538RX	B	7.12B - 8C2	C071058538RXp
47	C073135257	D	7.12C - 8C2	-
48	C073182390	C	7.12C - 8C2	-
49	C073182392	B	7.12C - 8C2	-
50	C073183757	C	7.12C - 8C2	-
51	C073218558	D	7.12C - 8C2	-
52	C073218559	A	7.12C - 8C2	-
53	C071058539RX	D	7.12C - 8C2	-
54	C071058540RX	D	7.12C - 8C2	-
55	C071058541RX	D	7.12C - 8C2	-
56	C071058542RX	D	7.12C - 8C2	-

#	Item ID	Key	TEKS	Stimulus
57	C071058543RX	B	7.12C - 8C2	-
58	C071058544RX	A	7.12C - 8C2	C071058544RXp
59	C071058545RX	B	7.12C - 8C2	-
60	C071058546RX	D	7.12C - 8C2	C071058546RXp
61	C071058547RX	C	7.12C - 8C2	C071058546RXp
62	C071058548RX	C	7.12C - 8C2	-
63	C071058549RX	A	7.12C - 8C2	-
64	C073182378	D	7.12D - 8C2	-
65	C073182379	D	7.12D - 8C2	-
66	C073182380	D	7.12D - 8C2	-
67	C073182382	A	7.12D - 8C2	-
68	C073272139	D	7.12D - 8C2	-
69	C073240994	B	7.14C - 8C5	-