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- 32** Aquatic plants have adaptations that help them live in water. For example, the structures needed for making food are located on the tops of floating plant leaves.

This adaptation helps the plants —

- F** absorb sunlight
 - G** stay anchored
 - H** avoid predators
 - J** capture fish
- 6** Which of these describes one or more living organisms that depend on another living organism to survive?
- F** Bacteria living in the mouth of a horse
 - G** Ivy plants growing up a fence to obtain more sunlight
 - H** Mold living on a hard, rocky surface
 - J** An angelfish releasing carbon dioxide into pond water

27 A student observed and recorded some activities in an aquarium.

Observations

1. A fish eats flakes of fish food dropped into the aquarium.
2. A snail crawls over colored rocks at the bottom of the aquarium.
3. A fish eats leaves from a plant in the aquarium.
4. A snail lays eggs in a corner of the aquarium.
5. A fish swims through air bubbles being pumped into the aquarium.
6. A snail moves up a wall of the aquarium.

An interaction between two living parts of the environment is represented by —

- A** Observations 1 and 2
 - B** Observation 3
 - C** Observations 4 and 5
 - D** Observation 6
- 19** A zookeeper sets up a habitat for a certain species of rabbit. Which answer choice describes the rabbit as it interacts with two nonliving parts of the rabbit's habitat?
- A** The rabbit breathing air while running down a rocky path
 - B** The rabbit licking its fur while feeding its young
 - C** The rabbit hiding under plants from loud noises
 - D** The rabbit nibbling on vegetation inside the habitat

22 The chart lists plants and animals interacting with parts of an environment.

1. A hummingbird dips its beak inside a flower.
2. A lizard burrows into the sand to stay cool.
3. A fish absorbs oxygen through its gills.
4. A cactus wren eats seeds from a cactus fruit.
5. A sea star clings to a rock in a tidal pool.
6. A bear scratches its back against a tree.

Which statements describe an animal interacting with a living part of the environment?

- F** Statements 1, 4, and 6 only
- G** Statements 1, 3, and 5 only
- H** Statements 2, 5, and 6 only
- J** Statements 2, 3, and 4 only

- 33** Many gardeners use red worms like the ones shown in the photograph to turn vegetable and fruit scraps into topsoil for plants. The gardeners build a worm farm in a large container lined with old newspapers and filled with moist garden soil. The worms eat about half their body weight daily and produce waste that can be used as plant fertilizer.

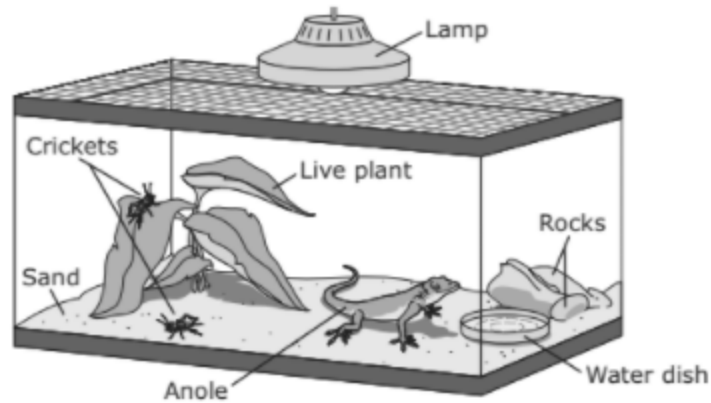


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The container for a worm farm needs to have a lid, but the lid must be left partially open because worms require which of the following in order to survive?

- A** Oxygen
 - B** Sunlight
 - C** Carbon dioxide
 - D** All of these
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- 12** Green anole lizards are bright-green reptiles native to the southeastern United States and the Caribbean islands. They can be kept in terrariums to study their behavior and how they interact with their environment.



Which observation describes this anole lizard interacting with the living elements in its environment?

- F** The anole rested on one of the rocks and lifted its head toward the light.
- G** The anole climbed the plant and then ate a cricket off one of the leaves.
- H** The anole drank some water and then ran across the sand.
- J** The anole jumped from the rock and scattered sand with its tail.

- 21 A prickly pear cactus is shown below.



The roots of the prickly pear cactus spread out in a wide underground network. How does this type of root system benefit a prickly pear cactus?

- A By producing fruit and storing water
 - B By capturing sunlight and getting rid of waste materials
 - C By absorbing water and supporting the plant in loose, sandy soil
 - D By releasing nutrients into the sandy soil and taking in oxygen
- 41 Some facts about birds called cattle egrets are listed below.

Cattle Egrets

1. They have yellow bills and light-orange legs.
2. They make nests in trees away from predators.
3. They eat ticks off cattle while the cattle graze.
4. They are often found in the same fields as cattle.



Which of these facts best describes how these birds depend on other animals to survive?

- A Fact 1
- B Fact 2
- C Fact 3
- D Fact 4

27 A student observes the following activities while walking in a park.

- A fire ant digging a tunnel in sandy soil
- A blue jay drinking water from a puddle
- A bee collecting pollen from a tree
- A hawk circling in the air over a tree

Which of these living organisms was interacting with another living organism in the environment?

- A Fire ant
- B Blue jay
- C Bee
- D Hawk

21 The table below lists the preferred diet of several types of birds.

Preferred Diets of Birds

Type of Bird	Preferred Diet
American goldfinch	Seeds from grasses and wildflowers
Eastern bluebird	A large variety of insects
Lesser goldfinch	Seeds from sunflower plants
Purple martin	Winged insects
Yellow warbler	Caterpillars, moths, mosquitoes, and beetles

Based on this information, which two types of birds do **not** compete for food resources?

- A Purple martin and yellow warbler
- B Eastern bluebird and purple martin
- C Lesser goldfinch and eastern bluebird
- D American goldfinch and lesser goldfinch

- 11 The table below lists ways that four organisms obtain energy.

Methods for Obtaining Energy

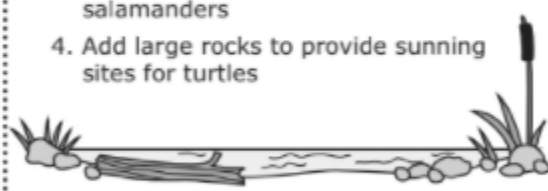
Organism	Method
Oak tree	Produces food through photosynthesis
Mushroom	Absorbs nutrients from decomposing plants and animals
Cottontail rabbit	Eats grasses, twigs, and bark
Mountain lion	Preys on deer, wild hogs, and rodents

Which organism obtains energy without depending on another organism?

- A Oak tree
 - B Mushroom
 - C Cottontail rabbit
 - D Mountain lion
- 27 A farmer is reading a nature guide to learn how to make changes to a pond so that it will attract and support wildlife. The guide gives the suggestions listed below.

Help Your Pond Support Wildlife

1. Reduce soil erosion by keeping livestock away from the banks of the pond
2. Allow plants to grow along the shoreline to provide cover, nests, and food for wildlife
3. Float logs near the edge of the water to provide habitats for salamanders
4. Add large rocks to provide sunning sites for turtles



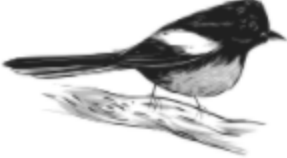
Which suggestion involves interactions between two groups of living organisms?

- A Suggestion 1
- B Suggestion 2
- C Suggestion 3
- D Suggestion 4

- 16** Tropical climates have warm temperatures and abundant sunlight all year. What must be available for plants in these climates to make their own food throughout the year?
- F** Bacteria
 - G** Birds
 - H** Shade
 - J** Water
- 10** A student observing birds in a park records some ways that birds interact with living and nonliving parts of their environment. All the following observations are ways that a bird interacts with nonliving parts of its environment **except** —
- F** reacting to morning sunlight by singing
 - G** drinking and taking a bath in a puddle of water
 - H** responding to cold temperatures by fluffing its feathers
 - J** feeding insects to its chicks
- 3** Some beetles break down the remains of dead animals. Some mushrooms break down the remains of dead trees. How do these actions most benefit plants?
- A** By returning nutrients to the soil
 - B** By releasing oxygen into the air
 - C** By making space for new animals
 - D** By decreasing the population of herbivores

- 25** Some facts about a bird called the painted redstart are listed in the box shown below.

Facts About the Painted Redstart

	<ol style="list-style-type: none">1. Builds nests on hillsides covered with dense vegetation2. Usually raises one group of young each year3. Hunts for insects and spiders on plant leaves4. Feeds on sugar water and peanut butter at feeders
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Which fact best describes one way this bird changes its environment to meet its needs?

- A** Fact 1
 - B** Fact 2
 - C** Fact 3
 - D** Fact 4
- 29** In fall and winter many trees lose their leaves in response to cooler temperatures and —
- A** a decrease in average wind speed
 - B** fewer hours of daylight
 - C** an increase in humidity
 - D** more direct sunlight

17 Two box turtles live in an area in a zoo's reptile house. Zoo visitors made a list of observations of the turtles. The list is shown.

1. Sliding into a small pond
2. Eating a strawberry
3. Digging a hole in the sandy soil
4. Climbing onto a flat rock
5. Holding an earthworm in its mouth
6. Walking across the area

Which observations best describe how box turtles interact with living parts of their environment?

- A** Observation 4 and observation 6
 - B** Observation 2 and observation 5
 - C** Observation 1 and observation 5
 - D** Observation 3 and observation 4
- 12** Students study barracudas. They gather some observations of barracudas. A barracuda is shown.

Barracuda



Which observation describes barracudas interacting with the living elements of their ecosystem?

- F** Barracudas can travel quickly using surface ocean currents.
- G** Barracudas live around hard structures such as oil rigs and jetties.
- H** Barracudas are predators of other fish.
- J** Barracudas tend to live in warm waters.