Name: _____ Date:_____ HR:_____

Keystone Practice Questions:

Which statement is a hypothesis?

A. The presence of an enzyme increased the reaction rate.

B. The reaction rate increased 100% once the enzyme was introduced.

C. Introducing an enzyme into a reaction did not increase the rate of the reaction.

D. When an enzyme is introduced into a reaction the reaction rate will increase by 100%.

Use the table below to answer the question.

Student's Observations of a Pond Ecosystem

Quantitative	Qualitative
37 fish and 3 frogs	Leaves lie on the bottom of the pond.
2 types of aquatic grass	Water insects move along the water's surface.
12 small rocks and 1 medium rock	All 3 frogs are sitting on a pond bank.
sand	

A group of students measured a ten-square-meter section of a pond ecosystem and recorded observations. Which statement is a testable hypothesis?

A. The frogs living in the pond represent a population.

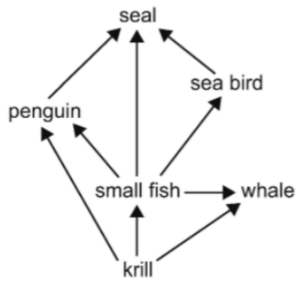
B. Water is an abiotic component in the pond ecosystem.

C. If the fish are given more food, then they will be happier.

D. If the frogs are startled, then they will jump into the water.

Use the diagram below to answer the question.

Marine Food Web



Which sequence correctly describes the flow of energy between organisms in the marine food web?

A. from seals to penguins to krill

B. from whales to krill to small fish

C. from sea birds to seals to penguins

D. from small fish to penguins to seals

A species of snapping turtles has a tongue that resembles a worm. The tongue is used to attract small fish. Which **best** describes the interaction between the fish and the snapping turtle?

A. predation

B. symbiosis

C. parasitism

D. competition

A researcher observing an ecosystem describes the amount of sunlight, precipitation, and type of soil present. Which factors is the researcher **most likely** describing?

A. biotic factors in a forest

B. biotic factors in a tundra

C. abiotic factors in a prairie

D. abiotic factors in an ocean

Which statement correctly describes how nitrogen in the soil returns to the atmosphere?

A. Soil bacteria convert nitrates into nitrogen gas.

B. Decomposers directly convert ammonium into nitrogen gas.

C. Plants assimilate nitrites and convert them into nitrogen gas.

D. Nitrogen-fixing bacteria in plant roots convert nitrates into nitrogen gas.

Use the list below to answer the question.

Observations

- two grey wolves
- five moose
- several species of conifer trees
- large granite rock
- shallow pond

A student wrote several observations in a field notebook. Which term **best** classifies all of the student's observations?

A. population

B. food chain

C. ecosystem

D. community

Which example describes a mutualistic relationship between organisms?

A. Young wasps prey on caterpillars.

B. Crabs eat the remains of dead fish.

C. Ants protect a tree on which they feed.

D. Tapeworms feed on food in the intestines of cats.

A student studying the biosphere makes a list of biotic and abiotic characteristics of various biomes. Which characteristic is considered a biotic factor?

A. dry, sandy, nutrient-poor soil in a desert

B. less than 25 cm of precipitation in a desert

C. evergreen trees present in a coniferous forest

D. temperature range of -40 to 40°C in a grassland

Organism Relationships in an Ecosystem

Animal	Food Sources	Predators
beaver	tree bark, twigs, leaves, and roots; pond lilies	coyote, wolf, eagle, black bear
warbler birds	insects, earthworms, fruit	eagle, coyote, hawk
black bear	fish, insects, fruit, small mammals, eggs, carrion	brown bear, wolf

15. An ecosystem includes the organisms listed in the table.

Part A: Identify the initial source of energy for the ecosystem.

_____

Part B: Using the table, complete a food chain that includes a producer, a primary consumer, and a secondary consumer.

_____ → _____ → _____

Part C: The number of beavers in this ecosystem suddenly decreases. Describe the effect this may have on one other organism.

_____

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