



YEAR 9

Ecosystems and Food Webs

Three parts that get harder: a warm-up, where you should be now, then a stretch. Write the letter of the right option, or a number where one is asked for. Follow the energy.

Name: _____

Date: _____

Score: _____

A. Warm-up

Arrows in a food chain point the way the energy goes.

- 1 In a food chain, what does an arrow show?
 - (a) Which animal is bigger
 - (b) The direction energy is transferred
 - (c) Which way the animals move
 - (d) Who is the fastest
 - 2 What is a producer?
 - (a) An animal that eats plants
 - (b) An animal that eats other animals
 - (c) An organism that makes its own food, usually a plant
 - (d) A decomposer
 - 3 In grass → rabbit → fox, which is the primary consumer?
 - (a) Grass
 - (b) Fox
 - (c) Sun
 - (d) Rabbit
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- 4 In grass → rabbit → fox, which is the predator?
- (a) Fox
 - (b) Grass
 - (c) Rabbit
 - (d) Sun
-

- 5 Where does the energy in most food chains come from originally?
- (a) The soil
 - (b) The Sun
 - (c) Water
 - (d) The animals
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B. Where you should be now

Populations depend on each other.

- 6 A habitat is
- (a) the food an organism eats
 - (b) a group of animals
 - (c) the place where an organism lives
 - (d) the weather in an area
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- 7 A community is
- (a) one species in one place
 - (b) a single organism
 - (c) the non-living parts of a habitat
 - (d) all the populations of different species living in one habitat
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- 8 If all the foxes were removed, the rabbit population would most likely
- (a) increase at first
 - (b) decrease at first
 - (c) stay exactly the same
 - (d) disappear
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- 9 Why is energy lost at each step of a food chain?
- (a) Animals store all of it
 - (b) Some is used in respiration and lost as heat, and some is in waste
 - (c) Plants take it back
 - (d) It is destroyed
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- 10 Decomposers such as bacteria and fungi
- (a) make food from sunlight
 - (b) hunt other animals
 - (c) break down dead material and return nutrients to the soil
 - (d) pollinate flowers
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- 11 Which is an example of competition?
- (a) A fox eating a rabbit
 - (b) A bee pollinating a flower
 - (c) A fungus breaking down a leaf
 - (d) Two plants growing close together, both needing light
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C. Stretch

Numbers through the chain, and what builds up at the top.

- 12 Why are food chains rarely longer than five steps?
- (a) Too little energy is left at the top
 - (b) There are not enough animals
 - (c) Predators get bored
 - (d) Plants stop growing
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- 13 If 10% of the energy passes to the next level, how much of 5000 kJ in the plants reaches the primary consumers?
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- 14 And how much of that reaches the secondary consumers?
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- 15 A pesticide sprayed on crops is found in high amounts in birds of prey. This is because
- (a) birds of prey eat the crops
 - (b) it builds up at each step up the food chain
 - (c) it is made in the birds
 - (d) rain washes it into their nests
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- 16 Which is an adaptation of a cactus to dry conditions?
- (a) Large thin leaves
 - (b) Shallow roots only near the stem
 - (c) Spines instead of leaves, to reduce water loss
 - (d) Bright flowers all year
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