

## Bea's Brilliant Food Chain Challenge

*Learning objective: To identify and describe the roles of producers, predators, and prey within various food chains, and understand how energy flows through an ecosystem.*

Join Bea the honeybee on an adventure through the meadow! Answer these 10 questions to test your knowledge of how nature stays connected. Read each question carefully and write your answers in the spaces provided.

Answer Key: 1. A (Producer); 2. True; 3. Producer; 4. B (Carnivore); 5. False (It eats plants); 6. Predator; 7. Sunlight; 8. False (The arrow shows the flow of energy); 9. Herbivore; 10. Apex Predator. Teachers: Ensure pupils understand that arrows indicate energy transfer, not 'who eats whom'.

*Word bank: Producer · Consumer · Predator · Prey · Herbivore · Carnivore · Omnivore · Energy · Sunlight · Ecosystem*

**1. 1. In a food chain, what do we call a plant that makes its own energy? A) Producer\* B) Consumer C) Predator D) Prey (1 mark)**

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**2. 2. True or False: All food chains start with energy from the sun. (1 mark)**

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**3. 3. If a rabbit eats grass, what is the grass in this food chain? (1 mark)**

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**4. 4. An animal that only hunts and eats other animals is a: A) Herbivore B) Carnivore\* C) Producer D) Plant (1 mark)**

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**5. 5. True or False: A squirrel is a carnivore because it eats nuts. (1 mark)**

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**6. 6. What is the name for an animal that hunts and eats other animals for food? (1 mark)**

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**7. 7. What is the primary source of energy for almost all food chains? (1 mark)**

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**8. 8. True or False: In a food chain diagram, the arrow points to the animal that is being eaten. (1 mark)**

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**9. 9. What do we call an animal that eats only plants? (1 mark)**

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**10. 10. What is the name for a predator that has no natural enemies of its own? (1 mark)**

**Draw: Draw a woodland food chain starting with an oak tree. Include at least four organisms and use arrows to show the correct direction of energy flow.**



*Extension challenge: Greater Depth Challenges: 1. Explain why there are usually fewer predators than producers in an ecosystem. 2. Compare and contrast a food chain with a food web. 3. Justify your answer: What might happen to the fox population if all the rabbits in a meadow suddenly disappeared? 4. Analyze the impact of a drought on a local food chain. 5. If you added a decomposer to your food chain, where would it fit? 6. Design an original food chain for a deep-sea environment and identify the producer.*