

Nova's Nature Explorers: Understanding Food Chains

Learning objective: To be able to construct and interpret food chains, identifying producers, primary consumers, and predators.

Read each question carefully and use your knowledge of habitats and ecosystems to complete the tasks. Ensure you show the direction of energy flow correctly in your diagrams.

Nova the owl is observing the woodland ecosystem. In a food chain, the arrow represents the transfer of energy from one organism to another. Remember: the arrow points towards the creature that is doing the eating!

Word bank: Producer · Consumer · Predator · Prey · Energy · Habitat · Photosynthesis

1. Nova observes a grass plant, a rabbit, and a fox. Draw a food chain using these three organisms. Make sure your arrows point in the correct direction. (2 marks)

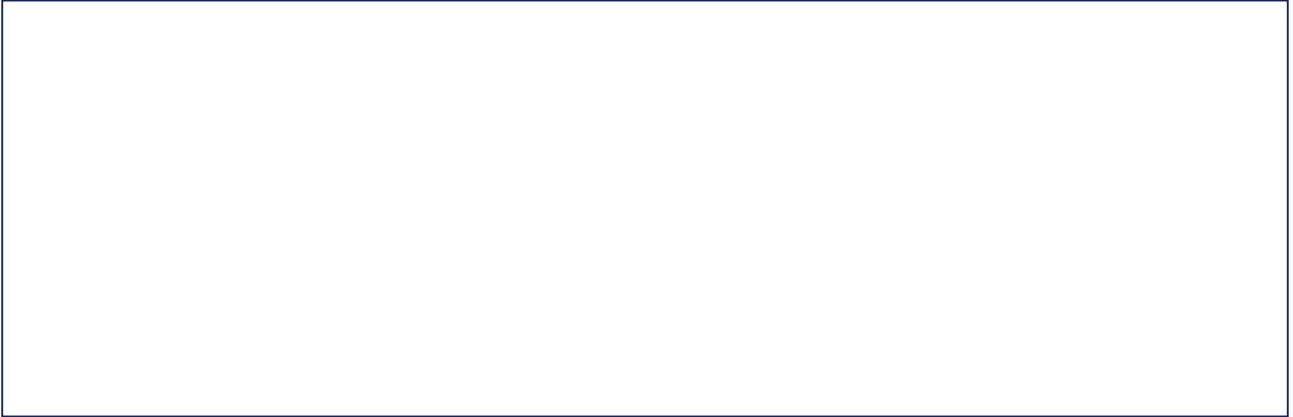
2. In your food chain above, identify which organism is the 'producer' and explain why it is given this name. (2 marks)

3. If a disease caused the population of rabbits to decrease significantly, what would likely happen to the population of foxes? Explain your reasoning. (2 marks)

4. Why do food chains almost always start with a green plant? Think about where the initial energy for the chain comes from. (2 marks)

5. Look at this sequence: Algae -> Small Fish -> Kingfisher. Which organism is the 'secondary consumer' in this chain? (1 mark)

Draw: Draw a pond food chain including a water lily, a pond snail, and a frog. Label each organism as a producer, primary consumer, or secondary consumer.



Extension challenge: Research what happens to a food chain if a new predator is introduced to a habitat. Write a short paragraph explaining the impact on the existing food web.