

Food Chains & Food Webs

Name:

Date:

INQUIRY

The Chinese paddlefish was declared extinct in 2022 — a top predator in the Yangtze. What happened to the rest of the food web?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Producer	Makes own food by photosynthesis.
Consumer	Gets energy by eating other organisms.
Decomposer	Breaks down dead organisms.
Trophic level	A feeding level in a food chain.

Part A — Food Chains

- Xuanwu Lake chain: Algae → Small fish → Carp → Heron. (a) Name the producer. (b) Name the primary consumer. (c) Name the top predator. (d) What do the arrows represent? [4 marks]

- Construct a food chain with 4 organisms from a Korean forest. Label each trophic level. [3 marks]

Part B — Food Webs

3. In a German forest: Oak → Deer → Wolf, and Oak → Squirrel → Fox. If disease killed all deer, predict TWO effects on the food web. [4 marks]

4. Explain why a food web is more realistic than a single food chain. [2 marks]

Part C — Energy Transfer

5. A rice paddy in Nanjing captures 50,000 kJ. Using the 10% rule, how much energy reaches: (a) primary consumers? (b) secondary consumers? (c) tertiary consumers? [3 marks]

Show your working:

6. Explain why food chains rarely have more than 4-5 trophic levels. Use the 10% rule in your answer. [3 marks]