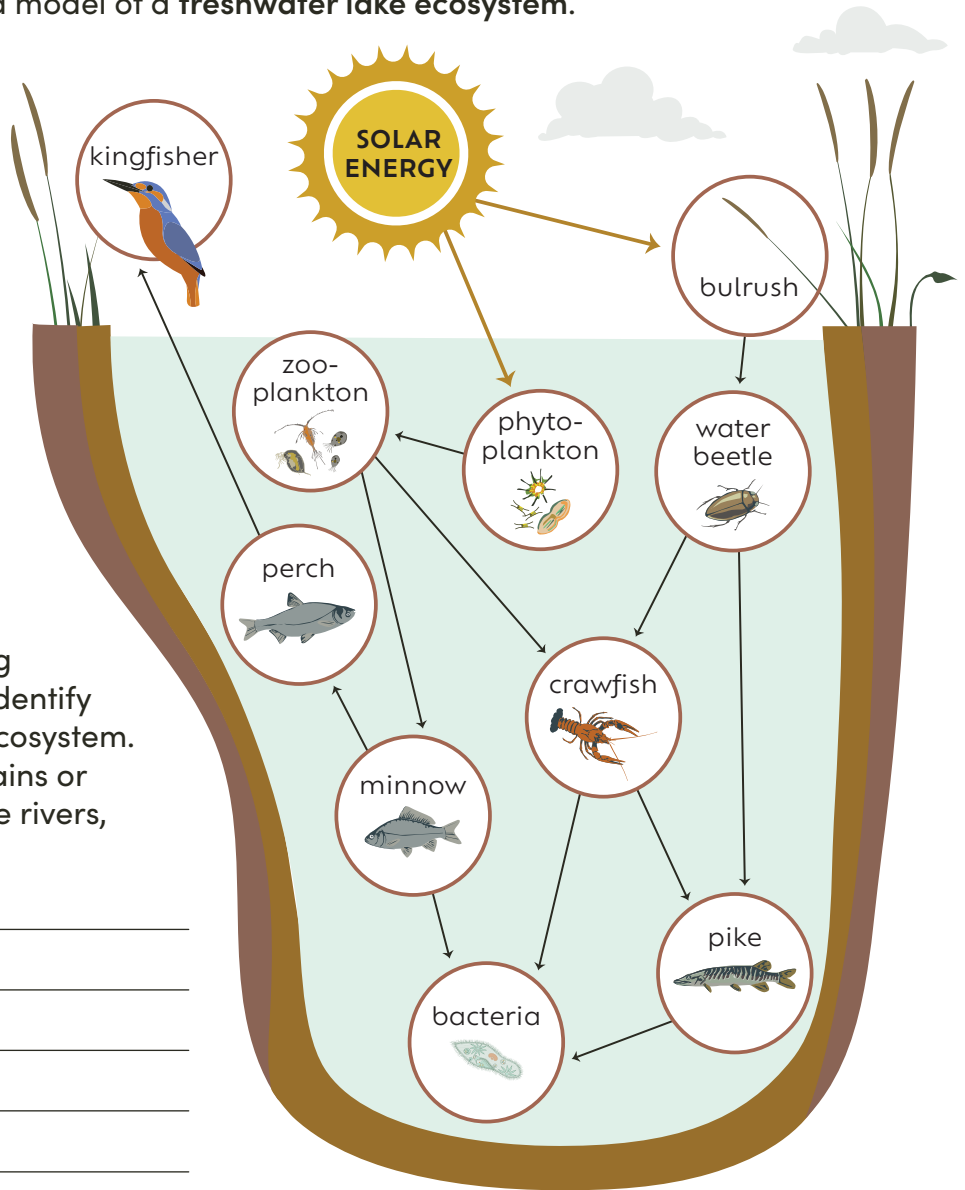# Research an Ecosystem

An **ecosystem** is made up of a community of organisms and the nonliving environment in which they interact. For example, here is a model of a **freshwater lake ecosystem.**

Pick an ecosystem to research, other than the one pictured here. You can use textbooks or online resources to help you answer the questions below about your ecosystem.

1. Ecosystem:

_____

2. Location of your ecosystem (state or country):

_____

3. **Abiotic factors** are the nonliving components of an ecosystem. Identify some nonliving things in your ecosystem. Consider landforms like mountains or valleys and sources of water like rivers, lakes, or oceans.

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4. **Biotic factors** are the living components of an ecosystem. **Food chains** are composed of biotic factors. They show how matter and energy can be transferred in an ecosystem. Identify two food chains in your ecosystem. Find a producer, a primary consumer, a secondary consumer, a tertiary consumer, and a decomposer for each food chain. Write these in the table below.

	PRODUCER	PRIMARY CONSUMER	SECONDARY CONSUMER	TERTIARY CONSUMER	DECOMPOSER
FOOD CHAIN 1					
FOOD CHAIN 2					

Research an Ecosystem

Keep going! Answer the questions below.

5. Create an **ecosystem model** in the space below. Include the following in your model:

- Sketch some abiotic factors identified on page 1 that are unique to your ecosystem.
- Draw a **food web**. Food webs connect food chains to describe how matter and energy are transferred in an ecosystem. Using your food chains from page 1, sketch and label the producers, consumers, and decomposers. Use arrows to show the relationships between them.
- Ecosystems need a constant source of **energy** to survive. Add that source of energy to your model. Draw arrows showing where energy from the source is captured by the ecosystem.

6. Choose one organism from your model above. Describe how that organism helps to cycle nutrients and energy through the ecosystem.

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