

SCIENCE·3D

MASTERS OF THE DEEP: SPERM WHALES

In this packet, sample student answers are provided in **red** and notes to teacher are in **blue**.

Using this **Explore Your Backyard** activity, students will reinforce their understanding of energy flow in ecosystems and roles of organisms in ecosystems. They will also gain an understanding of how certain patterns are similar across different systems.



Activity 1: Comparing the Local Ecosystem to the Deep Sea

1. All ecosystems have similarities and differences. Animals that look very different may actually play similar roles in ecosystems. Let's compare the sperm whale's ecosystem to one near you. Your teacher will help decide what ecosystem to study.

Name of the ecosystem:

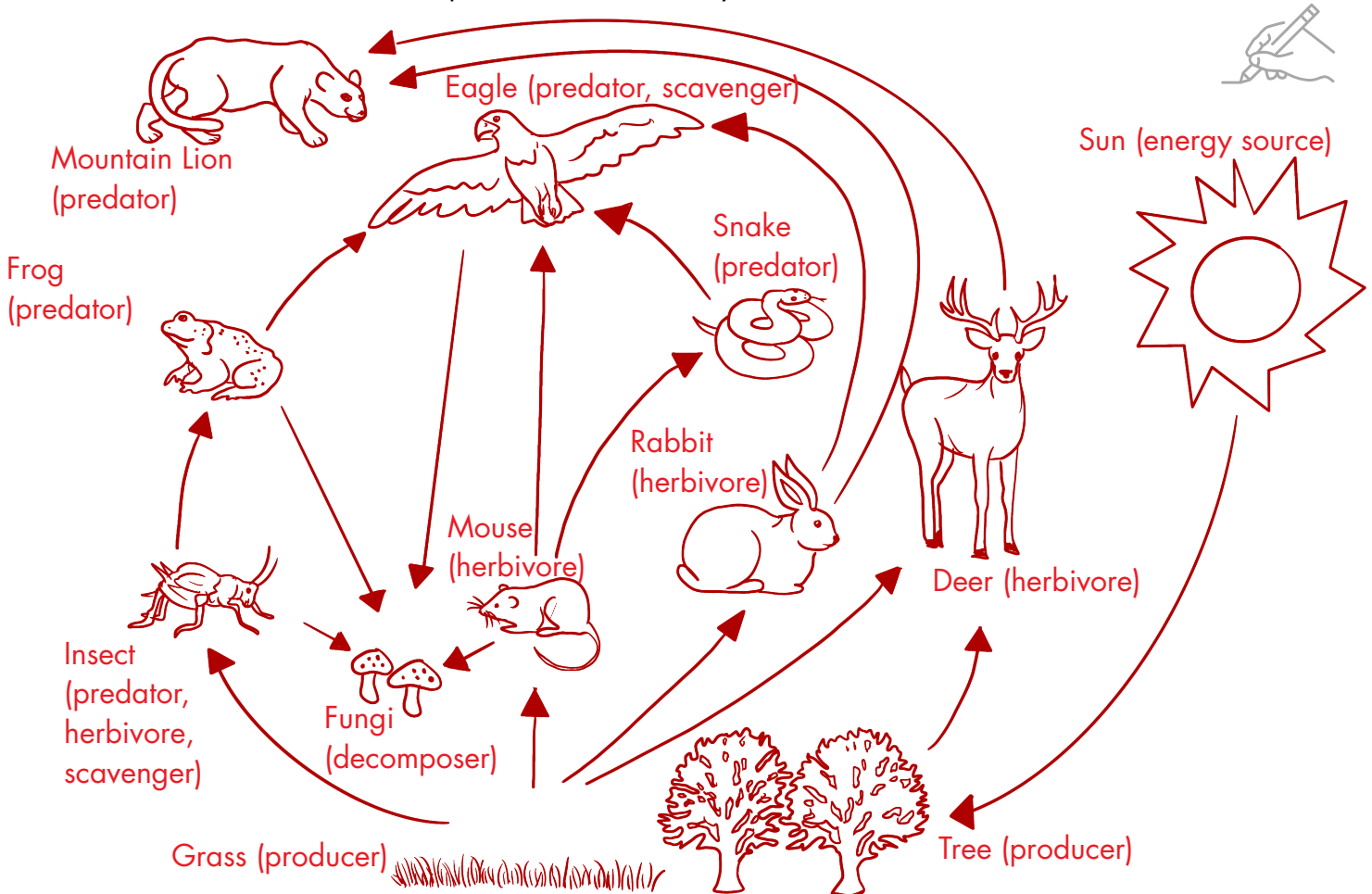
Examples: forest, tide pool, tundra, rainforest, desert, alpine, prairie.

List of organisms:

Examples: trees, shrubs, birds, squirrels, fungus, worms, deer, fox, rabbit, octopus, star fish,

groundhog, cactus, pineapple plant, monkey, minnow, frog, grasses, hawk, mountain lion

2. **Draw** the food web of the ecosystem. In your diagram, use arrows to show the flow of energy. Be sure to include the energy source in the ecosystem. Label each organism that you draw with the role it plays in the ecosystem (**producer, herbivore, predator, scavenger, decomposer**). Make sure each of these roles are represented in the ecosystem.



3. **Compare** and **contrast** this food web to the sperm whale food web that you completed in the Science Mission.

Similarities

Examples may include:

- source of energy is the sun
- there are producers, herbivores, predators and decomposers in each ecosystem.

Differences

Examples may include:

- their lifestyle
- size
- abundance