

Pond Balance

Identify signs of ecosystem health and human impacts.

5.12.C "describe a healthy ecosystem and how human activities can be beneficial or harmful to an ecosystem."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline details that show what makes Willow Pond healthy, circle actions that help the pond, and number the three harmful human actions 1, 2, and 3. These marks will help you explain how people affect an ecosystem.

Willow Pond

- ① Willow Pond is home to frogs, turtles, minnows, insects, and water plants. In a healthy pond, living things have the food, water, shelter, and space they need. Sunlight helps plants grow. Plants provide food and hiding places, while insects and small fish become food for larger animals. Bacteria and fungi break down dead material and return nutrients to the water and soil.
- ② Human actions can upset this balance. When nearby lawns receive too much fertilizer, rain can wash the fertilizer into the pond. Extra nutrients may cause algae to grow quickly. As algae die and decay, they can lower the oxygen available to fish. Dumped trash can injure animals, and removing plants along the shore can leave animals without shelter and allow soil to wash into the water.
- ③ People can also protect Willow Pond. A community group planted native grasses beside the shore. Their roots held soil in place, so less soil washed into the pond. The grasses also gave insects and young frogs shelter. Another group picked up litter and taught neighbors to use only the fertilizer their gardens needed. These actions helped keep the water cleaner and supported the pond's living things.

2 ANSWER WITH EVIDENCE Use the passage

1 What four things do living things need in a healthy pond?

2 How can too much fertilizer on lawns harm fish in Willow Pond?

3 Name two harmful human actions from the passage. Tell how each action can harm the pond ecosystem.

4 How did planting native grasses help Willow Pond?

3 YOUR TURN Your own words

Choose a different ecosystem, such as a forest, field, beach, or stream. Write three sentences that describe one healthy feature, one harmful human action and its effect, and one helpful human action and its benefit.

PART 1 • READ AND MARK

Underline details that show what makes Willow Pond healthy, circle actions that help the pond, and number the three harmful human actions 1, 2, and 3. These marks will help you explain how people affect an ecosystem. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What four things do living things need in a healthy pond?	Food, water, shelter, and space.
2	How can too much fertilizer on lawns harm fish in Willow Pond?	Rain can wash fertilizer into the pond. It can cause algae to grow, and decaying algae can lower the oxygen available to fish.
3	Name two harmful human actions from the passage. Tell how each action can harm the pond ecosystem.	Answers may include too much fertilizer, which can lower oxygen for fish; dumped trash, which can injure animals; or removing shore plants, which removes shelter and allows soil to wash into the water.
4	How did planting native grasses help Willow Pond?	The grasses held soil in place so less soil washed into the pond. They also gave insects and young frogs shelter.

PART 3 • YOUR TURN (SAMPLE ANSWER)

In a healthy prairie, native grasses, wildflowers, insects, rabbits, and hawks have food, water, shelter, and space. If people spray too much pesticide, insects may die, leaving less food for birds. People can plant native flowers instead, giving pollinators nectar and helping the prairie food web.

Accept equivalent descriptions that match the passage. For the open response, accept any accurate ecosystem example that includes all three required parts and correctly explains harmful and helpful human effects.