

Pond Weather Watch

Use weather records to predict changes in a pond ecosystem.

4.4 “The student will investigate and understand that weather conditions and phenomena affect ecosystems and can be predicted. Key ideas include weather measurements create a record that can be used to make weather predictions...”

NAME _____ DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline weather measurements and prediction clues, circle effects on the pond ecosystem, and number the sentences that explain climate.

Willow Pond Weather Record

- ① At Willow Pond, students measured afternoon air temperature and rainfall for five days in April. They used a thermometer and rain gauge. Their record is shown in the table. A weather record helps people notice patterns. It does not promise exactly what will happen, but it gives evidence for a careful prediction about tomorrow’s weather.

WILLOW POND AFTERNOON WEATHER RECORD		
Day	Air temperature	Rainfall
Monday	12°C	0 mm
Tuesday	14°C	0 mm
Wednesday	16°C	0 mm
Thursday	18°C	1 mm
Friday	20°C	0 mm

- ② Weather can change a pond ecosystem quickly. After several hot, dry weeks, the water level may drop. Fish have less space and warmer water holds less dissolved oxygen. Some animals may move away or die. A heavy storm can also wash soil into the pond, making the water muddy and covering places where insects and fish find food.
- ③ Climate describes the usual weather pattern in a place over many years. Willow Pond has warm summers and cold winters year after year. These long-term seasonal trends affect which plants and animals can live there. Frogs may breed in spring when temperatures rise, while some birds leave before winter. One unusual storm is weather, not climate.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 Use the table. Describe one weather pattern, then make a careful prediction for the next day.

2 How could several hot, dry weeks affect fish in Willow Pond? Use two details from the passage.

3 How can a heavy storm change the pond ecosystem?

4 Why is one unusual storm weather, not climate?

3 YOUR TURN _____ Your own words

Make a four-day weather record for a pond. In the last row, use the pattern you made to predict day five and state one likely effect on the pond ecosystem.

DAY	AIR TEMPERATURE	RAINFALL	DAY FIVE PREDICTION	LIKELY POND EFFECT

PART 1 • READ AND MARK

Underline weather measurements and prediction clues, circle effects on the pond ecosystem, and number the sentences that explain climate. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Use the table. Describe one weather pattern, then make a careful prediction for the next day.	The air temperature rose from 12°C to 20°C over five days, and rainfall was low. A careful prediction is that the next day may be warmer, although the record cannot guarantee it.
2	How could several hot, dry weeks affect fish in Willow Pond? Use two details from the passage.	The water level may drop, giving fish less space. Warmer water also holds less dissolved oxygen, so fish may move away or die.
3	How can a heavy storm change the pond ecosystem?	A heavy storm can wash soil into the pond, making the water muddy and covering places where insects and fish find food.
4	Why is one unusual storm weather, not climate?	Weather is a short-term event. Climate is the usual pattern of seasonal weather in a place over many years.

PART 3 • YOUR TURN (SAMPLE ANSWER)

DAY	AIR TEMPERATURE	RAINFALL	DAY FIVE PREDICTION	LIKELY POND EFFECT
Day 1	18°C	0 mm		
Day 2	20°C	0 mm		
Day 3	22°C	0 mm		
Day 4	24°C	0 mm	Day 5 may be 26°C with little rain.	The pond water may warm and hold less dissolved oxygen.

Accept any plausible weather record with a prediction that follows the student's stated pattern. Accept a connected ecosystem effect, such as lower water, warmer water, less dissolved oxygen, muddy water, or reduced food sources.