

Pattern Detectives

Use repeated observations to explain changes and plan a test.

3.5.A "identify and use patterns to explain scientific phenomena or to design solutions;"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each repeated observation or prediction, and number the two places where the class uses a pattern to explain something or choose a design.

Following Sunlight Clues

- ① After a rainy day, Ms. Lee's class noticed puddles on the blacktop. At 9:00, a puddle in the sun was wide. By lunch, it was smaller. A puddle under a tree stayed about the same size. The class saw this pattern on three sunny days: water in sunny places disappeared faster than water in shade. This helped them ask why.
- ② They learned that heat from the Sun can make liquid water change into water vapor, a gas that mixes with air. This change is called evaporation. The repeated puddle pattern gave the class evidence that sunny spots received more heat. They used the pattern to explain why the sunny puddle became smaller first each day.
- ③ Next, the class wanted paintbrushes to dry after art time. They put wet brushes on a tray near a sunny window instead of inside a dark cabinet. They predicted the brushes would dry faster in the warmer place. Their design used the puddle pattern. A test could show whether the prediction was correct or wrong.

2 ANSWER WITH EVIDENCE Use the passage

1 What repeated pattern did the class observe in the two puddles?

2 How did the puddle pattern help the class explain what happened to the sunny puddle?

3 What design did the class choose for the wet paintbrushes, and what pattern did they use to choose it?

4 What prediction would the paintbrush test check?

3 YOUR TURN Your own words

Think of a different pattern involving sunlight and shade. Write three sentences: describe the repeated observation, explain what it shows, and design a fair test that could check your idea.

PART 1 • READ AND MARK

Underline each repeated observation or prediction, and number the two places where the class uses a pattern to explain something or choose a design. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What repeated pattern did the class observe in the two puddles?	The puddle in the sun got smaller faster, while the puddle under the tree stayed about the same size.
2	How did the puddle pattern help the class explain what happened to the sunny puddle?	The pattern showed that sunny spots got more heat, so water in the sunny puddle evaporated faster.
3	What design did the class choose for the wet paintbrushes, and what pattern did they use to choose it?	They put the brushes near a sunny window. They used the pattern that water in sunny, warmer places disappeared or dried faster.
4	What prediction would the paintbrush test check?	It would check whether brushes near the sunny window dry faster than brushes in a dark cabinet.

PART 3 • YOUR TURN (SAMPLE ANSWER)

On warm days, snow on the sunny side of the playground melts before snow in the shade. This pattern shows that sunny places get more heat. I would place two equal cups of snow, one in sun and one in shade, and compare which melts first.

Accept any accurate repeated pattern, a reasonable explanation connected to the pattern, and a test that changes one condition while keeping important features alike. Students may use a different sunlight or shade example than the sample.