

Catch the Drips

Read how a team builds, tests, and improves a water-catching device.

3.1.b.vi “planning and carrying out investigations use tools and/or materials to design and/or build a device that solves a specific problem”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the problem the team needed to solve, circle each tool or material, and number the actions they took to test and improve the device.

A Device for Drips

- ① After rain, water dripped from Mia’s classroom plant shelf onto the floor. The puddle made the floor slippery. Mia’s team decided to build a device that would catch the water and guide it into a cup. First, they named the problem: keep water off the floor while the plant was watered. They listed limits: use only classroom materials and make a device small enough for the shelf.
- ② They chose a plastic bottle cut by the teacher, tape, a paper towel, and a cup. The bottle half became a funnel. The paper towel sat inside it to slow splashes. The team placed the cup under the funnel. They used a ruler to check that the funnel reached over the cup. Then they slowly poured the same small amount of water near the plant shelf and watched where the water went.
- ③ On the first test, some water missed the cup because the funnel opening was too short. The team used the ruler again and moved the cup closer. They also added one more strip of tape so the funnel would not tip. In the second test, the water landed in the cup and the floor stayed dry. Mia’s team recorded the change and result. Testing helped them improve their device before using it every day.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What problem did Mia’s team want their device to solve?

2 Name two materials the team used. Tell how each material helped the device work.

3 Why did the team use a ruler before the first test?

4 What did the team change after the first test, and what result showed the change worked?

3 YOUR TURN _____ Your own words

Draw a device that keeps pencils from rolling off a slanted desk. Use at least two classroom materials, label the materials, and draw arrows to show where the pencil goes. In the second panel, show how you would test it. Write two sentences that name the problem and explain your test.



PART 1 • READ AND MARK

Underline the problem the team needed to solve, circle each tool or material, and number the actions they took to test and improve the device. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What problem did Mia's team want their device to solve?	They wanted to keep dripping water off the floor while the plant was watered.
2	Name two materials the team used. Tell how each material helped the device work.	Answers may include: The bottle half made a funnel. The paper towel slowed splashes. The cup caught water. Tape held the funnel steady.
3	Why did the team use a ruler before the first test?	They used it to check that the funnel reached over the cup.
4	What did the team change after the first test, and what result showed the change worked?	They moved the cup closer and added another strip of tape. In the second test, water landed in the cup and the floor stayed dry.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1 label: folded index-card ramp taped to the desk edge, paper cup at the end, and arrows showing a pencil rolling into the cup; Panel 2 label: pencil on the slanted desk, arrow toward the ramp, and cup catching the pencil; The problem is pencils falling from a slanted desk. I would roll three pencils down the desk and check whether each pencil lands in the cup.

Accept any accurate problem statement, materials, test action, and result supported by the passage. For the open task, accept a labeled design using at least two materials, a clear pencil path, and a test that checks whether the device catches pencils.