

Push Test Plan

Plan and carry out a fair test to study motion.

S2P2.a "Plan and carry out an investigation to demonstrate how pushing and pulling on an object affects the motion of the object."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the actions Mia used to make her test fair. Circle the words that tell what she changed and what she measured.

Mia Tests a Toy Car

- ① Mia wanted to find out how a push changes a toy car's motion. She made a plan. On a smooth floor, she placed the car at the same starting line each time. She chose to test three pushes: gentle, medium, and strong.
- ② Mia used one hand to push the car. After each push, she measured how far the car rolled with a paper strip. She wrote each distance down. She kept the car, floor, starting line, and person pushing the same.
- ③ The gentle push made the car roll a short distance. The medium push made it roll farther. The strong push made it roll farthest. Mia concluded that a stronger push made this car move farther. A fair test helped her compare the pushes.

2 ANSWER WITH EVIDENCE Use the passage

1 What was Mia trying to find out?

2 Name two things Mia kept the same to make her test fair.

3 What did Mia's results show about a stronger push?

3 YOUR TURN Your own words

Plan your own fair test with a safe object that you can push. Fill in the table for three different pushes. Then carry out your plan with adult help. Use a safe toy car on a clear level floor; keep the car, surface, starting line and pusher the same. Test gentle, medium and stronger safe pushes, two trials each, resetting the car each time. On extra paper record Push / Trial / Distance in cm for all six trials. Compare your actual distances and tell what the pushes changed about motion; support your conclusion with two readings. Do not replace observations with Mia's results.

OBJECT	PUSH	KEEP THE SAME	MEASURE

PART 1 • READ AND MARK

Underline the actions Mia used to make her test fair. Circle the words that tell what she changed and what she measured. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What was Mia trying to find out?	She wanted to find out how a push changes a toy car's motion.
2	Name two things Mia kept the same to make her test fair.	Any two: the toy car, the floor, the starting line, or the person pushing.
3	What did Mia's results show about a stronger push?	A stronger push made the toy car move farther.

PART 3 • YOUR TURN (SAMPLE ANSWER)

OBJECT	PUSH	KEEP THE SAME	MEASURE
small block	gentle	floor, starting line, and pusher	how far the block moves
small block	medium	floor, starting line, and pusher	how far the block moves
small block	strong	floor, starting line, and pusher	how far the block moves

Accept any safe, workable investigation that changes the push and keeps important conditions the same. Students may measure distance moved, time moving, or another clear change in motion. Teacher provides a rolling toy car, tape start line, centimeter ruler or measuring tape, and extra results paper. Clear a short level lane; use controlled pushes that stay in it, never push people or heavy objects. Demonstrate measuring start to stopping position and let each child push or accessibly direct and read a trial. Require the six actual records and evidence-based comparison, accepting variable distances and explaining inconsistent pushes; qualitative strength labels do not measure force exactly. A valid example only if measured: gentle trials 20/22 cm and stronger 40/42 cm support greater travel in this test. Actual repeated push practice satisfies the added investigation; the passage does not establish the learner's result.