Pencil Push Test

Students test how push strength and direction change a pencil's motion.

K.1 "Plan and carry out investigations to determine the effects of forces of different strengths and directions on the motion of an object, including speed, direction, and distance traveled."

NAME _____ DATE _____

Teacher: this page is run aloud. The script and answers are on the guide page.

1 PUSH STRENGTH

(a) **shorter** | **farther** | **same**

(b) **faster** | **same** | **slower**

2 PUSH SIDES

(a) **right** | **up** | **left**

(b) **right** | **down** | **left**

Pencil Push Test

HOW TO RUN THIS PAGE

Give each student a pencil and room to move it on a desk. Read the directions aloud, then watch students make gentle and firm pushes and pushes from two sides before they record what they observe.

Students never read directions on this sheet. Read each part's script aloud, then each prompt, giving think time before students mark.

PART 1 · PUSH STRENGTH

SAY "Lay your pencil flat in the middle of your desk, with one end pointing away from you. Push its long side gently with one finger. Put it back in the same spot and push the same side more firmly. Watch how fast it moves and how far it goes."

ROW	SAY	STUDENTS CIRCLE
a	With the firmer push, did your pencil go shorter, farther, or the same distance? Circle what you saw.	**farther**
b	With the firmer push, did your pencil start moving faster, slower, or at the same speed? Circle what you saw.	**faster**

PART 2 · PUSH SIDES

SAY "Put your pencil back in the middle, with one end pointing away from you. Push its long side from the right. Put it back, then push its long side from the left. Watch which way it moves each time."

ROW	SAY	STUDENTS CIRCLE
a	When you pushed from the right, which way did your pencil move? Circle left, right, or up.	**left**
b	When you pushed from the left, which way did your pencil move? Circle left, right, or down.	**right**

WHAT TO ACCEPT

Expected answers in order: farther, faster, left, right. If a student's strength-test results differ, check that the pencil starts in the same spot and is pushed from the same side, then let the student repeat the test and record what they observe.