

Motion Test Lab

Teacher-led pencil investigation for predicting and observing motion changes.

1.7.B “plan and conduct a descriptive investigation that predicts how pushes and pulls can start, stop, or change the speed or direction of an object's motion.”

NAME _____

DATE _____

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

1 PREDICT _____

a	START	STOP	FASTER	LEFT
b	STOP	FASTER	LEFT	START
c	RIGHT	STOP	LEFT	FASTER

2 OBSERVE _____

a	STOP	START	LEFT	FASTER
b	LEFT	STOP	FASTER	START
c	LEFT	FASTER	RIGHT	STOP

HOW TO RUN THIS PAGE

Use one pencil on a smooth desk for the three tests. Read Part 1 before testing, then perform each test in Part 2 so students can compare their predictions with 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 • PREDICT

SAY “Before I test the pencil, listen to each test plan. Circle the word that tells what you think will happen.”

ROW	SAY	STUDENTS CIRCLE
a	A pencil is resting on the desk. I will hold it and pull it straight toward me. What do you predict will happen? Circle START, STOP, FASTER, or LEFT.	START
b	A pencil is moving slowly to the right. I will push it to the right again. What do you predict will happen? Circle STOP, FASTER, LEFT, or START.	FASTER
c	A pencil is moving slowly to the right. I will push it strongly to the left, with enough force to reverse its direction. What do you predict will happen? Circle RIGHT, STOP, LEFT, or FASTER.	LEFT

PART 2 • OBSERVE

SAY “Now watch each pencil test. After you see what happens, circle the word that tells your observation.”

ROW	SAY	STUDENTS CIRCLE
a	Watch as I pull a pencil straight toward me while it is resting on the desk. What did the pencil do? Circle STOP, START, LEFT, or FASTER.	START
b	Watch as I push a pencil to the right while it is moving slowly to the right. What did the pencil do? Circle LEFT, STOP, FASTER, or START.	FASTER
c	Watch as I push a pencil strongly to the left while it is moving slowly to the right. My push has enough force to reverse its direction. What direction is the pencil moving after my push? Circle LEFT, FASTER, RIGHT, or STOP.	LEFT

WHAT TO ACCEPT

Part 1 intended predictions are START, FASTER, and LEFT. Part 2 observations are START, FASTER, and LEFT, provided the teacher performs the stated pencil tests on a smooth desk.