

Magnet Moves

See how a magnet can move an object from nearby.

SC.2.P.13.2 "Demonstrate that magnets can be used to make some things move without touching them."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each sentence that tells how the magnet makes the paper clip move without touching it. Your marks will show the magnet's pull at work.

The Paper Clip Follows

- ① Ms. Lee puts a steel paper clip on a sheet of paper. She holds a bar magnet above the paper. The magnet does not touch the paper clip. When she slides the magnet to the right, the paper clip slides right, too.
- ② Next, Ms. Lee lifts the magnet farther from the paper. The paper clip stops moving. She brings the magnet close again and moves it in a circle. The paper clip follows in a circle, even though the magnet still does not touch it.
- ③ Magnetic force can pull some metal objects from a short distance away. The force works through the paper. The paper clip moves because the magnet pulls it, not because Ms. Lee pushes the clip with her hand.

2

ANSWER WITH EVIDENCE

Use the passage

1

What does Ms. Lee do to make the paper clip move to the right?

2

What shows that the magnet does not touch the paper clip?

3

What happens when Ms. Lee lifts the magnet farther from the paper?

3

YOUR TURN

Your own words

Plan two tests that show a magnet moving an iron or steel object without touching it. For each test, name the object, tell where you will hold the magnet, and predict how the object will move. Then demonstrate one test with your teacher. Teacher supplies a large classroom bar magnet, a magnetic steel paper clip, thin paper and a flat nonmetal surface. Lay the clip on the paper. Hold the magnet underneath the paper, close to the clip but never touching the clip. Move the magnet slowly sideways; watch the clip. On extra paper draw the starting and ending clip positions and the paper separating it from the magnet. Record what actually moved and explain how you know the magnet did not touch the clip. Keep the two prediction rows separate from your observed result. Keep magnets and small objects away from mouths.

OBJECT	WHERE I WILL HOLD THE MAGNET	WHAT I PREDICT

PART 1 • READ AND MARK

Underline each sentence that tells how the magnet makes the paper clip move without touching it. Your marks will show the magnet's pull at work. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What does Ms. Lee do to make the paper clip move to the right?	She slides the magnet to the right above the paper.
2	What shows that the magnet does not touch the paper clip?	Ms. Lee holds the magnet above the paper, and the passage says it does not touch the paper clip.
3	What happens when Ms. Lee lifts the magnet farther from the paper?	The paper clip stops moving.

PART 3 • YOUR TURN (SAMPLE ANSWER)

OBJECT	WHERE I WILL HOLD THE MAGNET	WHAT I PREDICT
Steel washer	Above a sheet of paper, not touching the washer	The washer will slide toward the magnet.
Iron nail	Beside the nail, not touching it	The nail will move toward the magnet.

Accept answers that identify the magnet's movement or position and the paper clip's matching movement. For the table, accept reasonable plans using an iron or steel object that moves toward a nearby magnet without contact. Teacher pretests that the chosen clip is magnetic and the magnet can move it through the paper; supports each child performing and explaining the observed trial. A magnet touching the underside of paper is allowed, but magnet-to-clip contact is not. Observe the barrier throughout and check that the hand/paper is not pushing the clip. Accept honest no movement; adjust distance/setup and retry rather than invent movement. One successful supported demonstration with an observed position change and noncontact explanation is required; the two plans alone are incomplete. Do not use sharp nails for the added demonstration or loose high-powered magnets.