

Team Name: _____ Date: _____

Names: _____ and _____

Magnetic Attraction Station Worksheet Answers

Station 1: Ring Magnets

Draw a picture of the two ring magnets on the pencil. What happens when you move the lower ring magnet?

The upper magnet moves with the lower magnet.

Station 2: Magnetic Separation

Why can you separate the mixtures using a magnet?

As long as one of the materials is magnetic and the other is not, the magnetic material will be removed by the magnet, leaving the other material behind.

Station 3: Magnetic Pole Identification

Which is the N pole of the large bar magnet, pole 1 or 2?

The N pole is the one to which the S pole of the compass or other magnet is attracted.

Station 4: Magnetic Loops

Draw a picture below showing the shape of the magnetic fields for two different magnets.

Answers will vary and should look like the shapes the iron filings make.

Station 5: Magnetic Prediction

Before you test the objects:

- List in the table below all the objects you are testing.
- If you predict an object will be attracted to the magnet, write YES in the Prediction column. Otherwise, write NO in the Prediction column.

After you test each object:

- If the object is strongly attracted to the magnet write STRONG in the Result column.
- If the object is weakly attracted to the magnet, write WEAK in the Result column.
- If it is not attracted to the magnet at all, write NO in the Result column.

Test Object	Attraction Prediction	Result
	Yes or No	Strong, Weak or No
<p>Answers vary according to the provided test materials; check individually.</p> <p>In general, metal objects (except non-ferrous metals such as aluminum) will register a strong or weak attraction, and non-metal objects will register no attraction.</p>		

Station 6: Make Your Own Magnet

How many paper clips did you pick up with the nail the first time you magnetized it?

Answers may vary.

How can you tell when the nail is demagnetized?

A de-magnetized nail will no longer pick up paper clips.

How can you make the nail a stronger magnet using only the materials at the station?

Describe how you would test your idea.

Answers may vary; check individually. For example, using the permanent magnet, stroke the nail more. Test to see how many paper clips it picks up. Be careful not to accidentally de-magnetize the nail.