

Lesson: What's Magnetic?

Student Worksheet

Name _____

Overview Greetings and welcome to the study of magnetism! This first lesson is simply to get you to play with magnets and decide what it is that you want to learn about magnetism so we can do the really cool stuff later on.

What to Learn Your job is to discover not only what's magnetic, but also what specific kinds of objects are magnetic. Magnetic fields are created by electrons moving in the same direction. Electrons can have a "left" or "right" spin. If an atom has more electrons spinning in one direction than in the other, that atom has a magnetic field. If an object is filled with atoms that have an abundance of electrons spinning in the same direction, and if those atoms are lined up in the same direction, that object will have a magnetic force.

Materials

1 rectangular magnet

1 circular disk magnet

Lab Time

1. When the teacher lets you loose, you are to move around the room with your magnet and test several different objects to see if the magnet sticks to it. Fill out their data sheet as you go along, or do it after you've tested your different objects (teacher's choice).

3. Now move around again and test the materials on the list on the board and identify what kind of metal it is. Write your observations this in the second data table. Check to see if your teacher is wearing metal.

What's Magnetic? Data Table

Metal Object	What kind of metal is it?	Does it stick to the magnet?

4. Sit back down and see if there's a pattern in what you found. What kinds of metal are magnetic? Write it here:

What are ten possible uses for magnetism?

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

What is one thing about magnetism that you now know but didn't before you started this lesson?

Write down three things you really want to know about magnetism.

- 1.
- 2.
- 3.

Exercises Answer the questions below:

1. Which objects are attracted to the magnet?
2. Are all metal objects attracted to the magnet?
3. Does the shape of the magnet matter?
4. Are things attracted to the magnet if they have to pass through something that isn't, like a piece of paper?
5. This evening, find an article or story that describes how magnetism improves our lives. Bring the article to school. If you bring in an article that no one else brings in, you get extra points.