Year 5 & 6 Science: Home Learning Week 7

Hello Year 5 & 6, this week our focus is on magnets. You should try to complete tasks 1, 2 & 3 if you can.

The rest, including the practical activity, are optional. Remember to get permission from an adult before doing any practical activities and clean up after yourself when you're finished!

Stay at home & stay safe

Miss Johnston ☺

Task	Description
1	Watch the BBC Bitesize lesson on Wednesday. Here's a link to the daily lessons page: https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1 If you have trouble watching online, you can access the Bitesize lessons via the red button on your TV remote. Just switch the TV to BBC1, press the red button and the Bitesize options should come up… It can take a minute or two to load so be patient!
2	Visit BBC Bitesize, read the information and complete the activities on magnets and magnetic materials: https://www.bbc.co.uk/bitesize/topics/zyttyrd
3	Answer the following questions: a) What does attract mean when we are talking about magnets? b) What does repel mean when we are talking about magnets? c) If you put two north poles together, will they attract or repel? d) If you put two south poles together, will they attract or repel? e) If you put a north and a south pole together, will they attract or repel?
4	Write true or false next to the following statements: a) Magnets only attract magnetic materials. b) Magnets can attract and repel other magnets. c) Magnets repel non-magnetic materials. d) Magnetism goes through paper. e) Magnetism goes through iron. f) The two ends of a magnet are called the east and the west poles.
5	Sort the following materials into magnetic and non-magnetic: wood iron plastic aluminium copper steel nickel paper
6	If you have a magnet at home, why not test different materials to see if they are magnetic or not. You might be surprised by the results!
7	**OPTIONAL PRACTICAL ACTIVITY: Making a Compass** Details of the activity, including questions to answer, are on the next page.

Practical details

Making a Compass

About this activity

Every magnet has a north pole and a south pole, just like the Earth. If two magnets are brought together, the north pole of one will attract the south pole of the other. This is why compasses work on the Earth. The Earth's magnetic field is strong enough to make the north pole of a very light compass needle align with the magnetic south pole of the planet. If you're confused (don't compasses point north???), you may not realize that the Earth's geographic North Pole is the opposite of its magnetic north pole! In other words, the planet's geographic North Pole is its magnetic south pole, and vice versa!

In this activity, you will make a magnet and see it respond to the bigger magnet that is our planet. We show you two ways to do this. Either way, it's important that there be no friction on the needle, so that it can respond to the slight tug of the Earth magnet.

Equipment & materials

- A bowl of water
- A paper clip or sewing needle
- A magnet (any type will work for the floating compass)
- A bar magnet
- String
- A drawing pin

Method

To make a floating compass:

1. Magnetize your paper clip or sewing needle by placing one end against the end of your magnet.
2. Float the magnetized needle very carefully on the surface of the water. The end that you magnetized will point north or south, depending on how you magnetized it.
3. If you are having a hard time doing this, try placing the needle inside of a drinking straw, on a piece of cork, or on anything that will help it float.

To make a bar magnet compass:

1. Use a drawing pin to hang a length of string from the top of a doorway
2. Tie a bar magnet to the string so it is evenly balanced.
3. Let go of the magnet. As it turns, it will settle and point north-south.

Did you know?

- A compass responds to the Earth's magnetic field. Scientists believe that field is generated by the churning of very hot liquid iron at the planet's core.
- The Earth's magnetic field does not run exactly from the North Pole to the South Pole, but is a little skewed. That's called the declination, and its effects, which vary depending on where you are on the planet, can be seen on compasses.