35.1 Magnetism



Summarize main points from each video.

Video Title / topic	
Video Title / topic	
Video Title / topic	

Topic Introduction



Summarize your understanding of each paragraph.

Magnetism is a physical phenomenon produced by the motion of electric charge, resulting in attractive and repulsive forces between objects.					
The most familiar magnetic effects occur in <i>ferromagnetic</i> materials, which are strongly attracted by magnetic fields and can be magnetized to become permanent magnets, producing magnetic fields themselves.					
Although ferromagnetism is responsible for most of the effects of magnetism encountered in everyday life, all materials are influenced to some extent by a magnetic field, by several other types of magnetism.					
An electromagnet is a type of magnet in which the magnetic field is produced by an electric current. The magnetic field disappears when the current is turned off. Electromagnets usually consist of a large number of closely spaced turns of wire that create the magnetic field.					

Read/Summarize Text



- 1. Read the passage.
- 2. Underline key expressions in each sentence.
- 3. Re-write each word (or expression) you underlined.
- 4. Summarize the passage.

Types of magnetism.

There are several types of magnetism. For example, diamagnetism appears in all materials. In this introductory topic, it is not necessary to understand the different types of magnetism. But, it is important to begin recognizing the words used to describe the different types of magnetism. Read through this list. Notice each of these begin with a prefix followed by the word "magnetism."

- Diamagnetism
- Paramagnetism
- Ferromagnetism
- Antiferromagnetism
- Ferrimagnetism
- Superparamagnetism

Re-write words	you underlined	1			
Jsing a comple	te sentence, su	mmarize or	rephrase the	e passage	

Read Text for Comprehension

Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

What is magnetism?

Playing with magnets is one of the first bits of science most children discover. That's because magnets are easy to use, safe, and fun. They're also quite surprising. Remember when you first discovered that two magnets could snap together and stick like glue? Remember the force when you held two magnets close and felt them either attract (pull toward one another) or repel (push away)? One of the most amazing things about magnets is the way they can attract other magnets (or other magnetic materials) "at a distance," invisibly, through what we call a magnetic field.

To ancient people, magnetism must have seemed like magic. Thousands of years down the line, we understand what happens inside magnetic materials, how their atomic structure causes their magnetic properties, and how electricity and magnetism are really just two sides of the same coin: electromagnetism. Once scientists would have said magnetism was the strange, invisible force of attraction between certain materials; today, we're more likely to define it as a force created by electric currents (themselves caused by moving electrons).

Almost everyone knows these six basic facts about how magnets behave:

- 1. A magnet has two ends called poles, one of which is called a north pole or north-seeking pole, while the other is called a south pole or south-seeking pole.
- 2. The north pole of one magnet attracts the south pole of a second magnet, while the north pole of one magnet repels the other magnet's north pole. So we have the common saying: like poles repel, unlike poles attract.
- 3. A magnet creates an invisible area of magnetism all around it called a magnetic field.
- 4. The north pole of a magnet points roughly toward Earth's north pole and viceversa. That's because Earth itself contains magnetic materials and behaves like a gigantic magnet.
- 5. If you cut a bar magnet in half, it's a bit like cutting an earthworm in half! You get two brand new, smaller magnets, each with its own north and south pole. (This is, of course, a joke. You don't get two worms if you cut a worm in half. But you do get two magnets.)
- 6. If you run a magnet a few times over an unmagnetized piece of a magnetic material (such as an iron nail), you can convert it into a magnet as well. This is called magnetization.

Copy This



The Earth as a Magnet

- Earth itself is a magnet.
- N and S poles do not correspond exactly to the geographic poles. The discrepancy is called magnetic declination.
- Strength of Earth's field varies with time.
- N/S Poles have switched in the past.

Draw (Copy) the text here

Interpret a Graph



Write the title of the g	raph

Circle the type of chart this represents

Bar Chart Line Chart Pie Chart Other

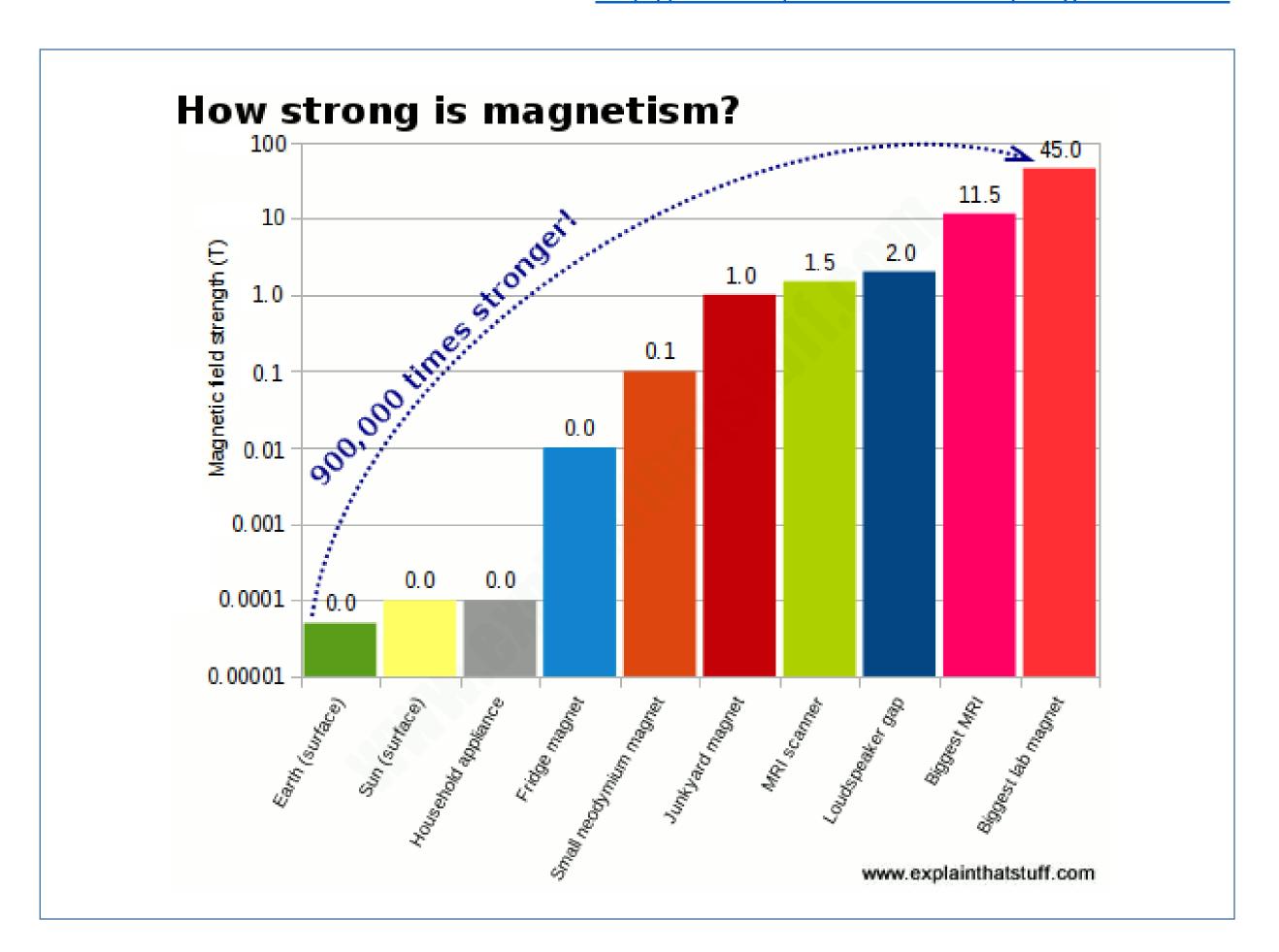
If applicable,

What does the X-axis represent _____

What does the Y-axis imply ______

Summarize what this graph represents or conveys

http://www.explainthatstuff.com/magnetism.html



Show-Off Your Smarts!



Instructions

- Complete as an individual or small group.
- Discuss your ideas/answers/responses in a small group.
- Select one person to present your responses to the class.

Q1. How can this information be applied to a young-person's life?
Q2. How does this information apply to (or impact) communities?

- Q3. When do scientists need to apply this information? How?
- Q4. How would a person from 100 years ago view this information?
- Q5. How does this topic connect to other science topics or math?

Write down at least three words introduced or covered by this topic.

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Make a Poster

