

Magnetism

Has anyone ever told you that you have a magnetic personality? Well, if someone ever says that to you, thank him or her. It's a **compliment**.¹ Having a magnetic personality means that people are drawn to you, just like magnets.

Magnetism is the force that electric **currents**² **exert**³ on other electric currents. This force can be created by the motion of **electrons**⁴ in the atoms of certain materials, which are called magnets. The force may also be produced when an electric current flows through a coil of wire, called an *electromagnet*. In either case, the force can cause an attraction or a **repulsion**⁵ of two magnets. It may pull them together or push them apart.

Some objects are natural magnets. The planet Earth is a gigantic magnet. So are all of the planets in our solar system, as well as their moons and the sun. Because of their magnetism, the planets rotate around the sun (the strongest magnet). The moons (the weakest magnets) orbit around the planets. Certain rocks and minerals are natural magnets, too.

Magnets are also in living things. Animals like dolphins and pigeons have extremely small magnets in their bodies. Scientists believe they can sense the magnetism in the earth. They use the magnetism to find their way when traveling, especially for long distances.

¹ **compliment** –something good said about someone

² **currents** – a flow of electricity through a wire

³ **exert** – to thrust forth

⁴ **electrons** – a tiny particle that carries a negative charge and moves around the nucleus of an atom

⁵ **repulsion** – the act of driving or forcing something back

Name: _____ Date: _____

1. A good example of someone with a magnetic personality is
 - a. a criminal.
 - b. a bus driver.
 - c. a TV talk show host.
 - d. an electrician.

2. Which of the following is not a quality found in magnets?
 - a. Magnets are sometimes attracted to each other.
 - b. Magnets have an electrical charge.
 - c. Sometimes magnets repel each other.
 - d. Magnets are made of plastic.

3. Which of the following is the most powerful magnet?
 - a. The Earth
 - b. The Moon
 - c. Mars
 - d. The Sun

4. How do the animals in this passage use magnets?
 - a. to hang up pictures on the refrigerator
 - b. as an alternate power source
 - c. to fight each other
 - d. to find their way around

5. Why would telling a person that they have a magnetic personality be a compliment?
 - a. People are attracted to that person.
 - b. People are repulsed by that person.
 - c. That person is good with directions.
 - d. That person thinks the earth revolves around them.

6. What is the author’s purpose in writing this passage?

7. What are two ways that magnetism is produced?

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The planets in our solar system rotate around the sun _____ the moons orbit around the planets.

- a. since
- b. while
- c. because
- d. so

9. Answer the following question based on the sentence below.

Dolphins and pigeons have extremely small magnets in their body to help find their way when traveling.

In the sentence, the phrase to help find their way when traveling best answers which question?

- a. Who?
- b. What?
- c. Where?
- d. Why?

10. **Vocabulary Word:** compliment: something good said about someone.

Use the vocabulary word in a sentence: _____

Teacher Guide and Answers

Passage Reading Level: Lexile 810

Featured Text Structure: Descriptive – the writer explains, defines or illustrates a concept or topic

Passage Summary: The passage defines magnetism and provides examples of natural magnets such as the planets and moons in our solar system and living things such as dolphins and pigeons.

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6. What is the author's purpose in writing this passage?

Suggested answer: Answers may vary but should include that the author's purpose is to inform the reader about magnets. The author is teaching the reader about how magnets work and giving examples of natural magnets.

7. What are two ways that magnetism is produced?

Suggested answer: According to paragraph 2, magnetism is a force that is produced by the motion of electrons in the atoms of magnets or when an electric current flows through a coil of wire, called an electromagnet.

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

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Use the vocabulary word in a sentence: answers may vary.