Learning Target: I can describe and explain the interactions between magnetic fields and magnetic and nonmagnetic objects.

Magnetic Fields & Magnetic Objects Video Notes

1. A magnet is an object that creates a _____. This field is _____. A magnetic field is the area around a magnet that has _____ force. All magnets have a _____ no matter how _____ they are. What do we call things that are attracted to magnets? _____

2. What is the difference between gravity and magnetism? _____ The amount of gravity is based on an object's _____, while magnetic strength is based on the material that the object is _____.

3. Magnetic poles are the points where the _____ lines begin and end. Field lines _____ or come together at the poles. We normally say that magnetic field lines leave the _____ end of a magnet and enter the _____ end of a magnet. The forces of a magnet are _____ at the poles. This is because the magnetic field tends to be concentrated at the _____ and _____ out and bulges between them.

4. The Earth has a huge _____ as well. Because the core of our planet is filled with molten or melted _____, there is a large magnetic field that _____ the iron from space ___ _____ and particles such as the _____.

5. What do we call the top and bottom parts of the Earth? _____

Quick Check for Understanding! Pause the video and take two minutes to write your responses.

What are three things you learned about magnetic fields?

1. _____

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2. _____

3. _____

6. What happens when you bring two magnets close to each other? _____

7. What are three examples of magnetic metals? _____

8. What are three examples of nonmagnetic metals? _____

9. What are three examples of nonmagnetic materials? _____

Quick Checks for Understanding! Pause the video and take two minutes to answer.

1. What happens to the atoms of nonmagnetic materials when they are brought near the magnetic field of a magnetic substance? _____

2. Why does this happen? _____

10. When you bring a magnetic substance near magnetic materials, all of their _____ domains align in the _____ direction and cause them to be temporarily _____.

11. What happens when you bring a magnet near iron, nickel, cobalt, and steel? _____

_____

12. What effect do you notice in the field lines when you bring a magnet near plastic? _____

_____

Why does this happen? _____

13. What effect do you notice in the field lines when you bring a magnet near iron? _____

_____

Why does this happen? _____

Quick Checks for Understanding! Pause the video and take three minutes to write your responses.

1. How are the magnetic field lines in a magnet affected when a nonmagnetic object is brought near it? _

_____

2. How are the magnetic field lines in a magnet affected when a magnetic object is brought near it? ____

_____

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