

➤ Main Ideas, Key Points, Questions:

After watching the video segment, write down key points, main ideas, and big questions.

➤ Objective(s):

- *Understand how objects become magnetized, and how electrical and magnetic fields affect one another.*
- *Calculate the magnitude and direction of the magnetic force acting upon a moving charge in a magnetic field.*

➤ Notes:

During the video segment, use words, phrases, or drawings to take notes.

➤ Summary:

After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself: "If I was going to explain this to someone else, what would I say?"

Answer the following.

1. How is the Aurora Borealis created?

2. When a compass is used, to what magnetic pole does the needle point?

3. Define electromagnetism in your own words.

4. Describe how magnetic and electric fields interact, specifically with regards to light.

5. Define magnetism in your own words.

6. What happens when two like poles of magnets interact with one another?

7. The areas in which the individual magnetic orientations of atoms line up are called _____.

Answer the following.

8. What makes iron an ideal material to use as a magnet?

9. In the right-hand rule for the magnetic force, identify what each part of the hand represents:

a. Thumb _____

b. Pointer finger _____

c. Middle finger _____

10. What three factors could cause a material to become unmagnetized?

11. What is the unit for magnetic field strength?

12. Complete the equation for the magnetic force:

$$F_{\text{magnetic}} = \underline{\hspace{15em}}$$