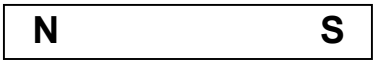
Chapter 11A & B **Physical Science**

Read pages 254 - 262.

1. Every magnet has a north pole and a south pole. If you cut a magnet in half, can you have a piece of metal with just one pole?
2. Do magnetic field lines point toward the north pole or away from the north pole?
3. Draw the magnetic field lines for the magnet shown below:



4. List two similarities between magnetism and electricity.

Matching:

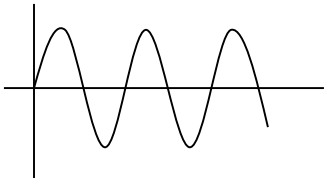
5. Ferromagnetic	a. A substance that can magnetized temporarily, but not permanently.
6. Paramagnetic	b. A substance that can't be magnetized.
7. Diamagnetic	c. A substance that can be made in to a permanent magnet.

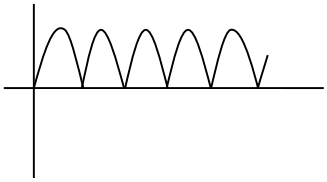
8. How does temperature affect a magnet?
9. What is the difference between a geographic North Pole and a magnetic North Pole?
10. Which type of North Pole can change positions?
11. What is the right-hand rule of magnetism?
12. True or False: Electrical current produces a magnetic field.
13. True or False: A magnetic field can produce an electrical current.
14. Explain how a generator produces electric current.
15. What is alternating current?
16. Is the electricity in your house direct current or alternating current?

Chapter 11C **Physical Science**

Read pages 263 - 271.

1. Which graph shows AC current and which shows DC current? Label each graph.

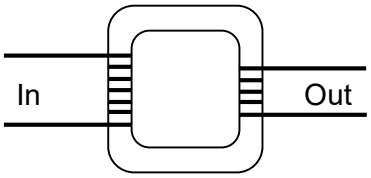
a. 

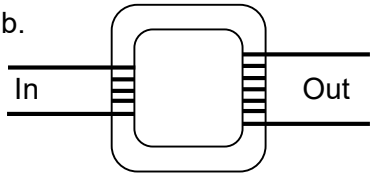
b. 

2. What is the difference between a generator and a motor?

3. Why wouldn't a transformer work if its core was made of plastic (a diamagnetic material)?

4. Circle the picture below that shows the step-up transformer:

a. 

b. 

5. Use the formula on page 267 of your book to solve this problem. The voltage that comes into a house is 120V. The doorbell needs 20V. If the input coil has 300 wraps, how many does the output coil have?

6. Why do electric power companies use extremely high voltage to transport electricity?

7. What do electric power companies use to reduce the high voltage from the power line and bring a safer voltage into your house?

8. List three uses for electromagnets.