Electric Motor, Generator and Transformer

Name _____

Period _____

1. Make a sketch of an **electric motor**. Label magnet, coil of wire and electric current.

2. Explain how an electric motor operates.

3. List at least 3 other items that could be powered by an electric motor.

4. Make a sketch of a **generator**. Label magnet, coil of wire, mechanical input, electric output (light bulb).

5. Explain how a generator works. How does it differ from an electric motor?

6. List 3 items that generators are used for.

7. Make a sketch of a **transformer**. Label primary coil, secondary coil and iron core.

8. How can a change in voltage in a coil of wire (the primary) be transferred to a neighboring coil of wire (the secondary) without physical contact?

9. What does a transformer actually transform?

10. If the number of secondary turns is 10 times the number of primary turns and the input voltage to the primary is 6 volts, how many volts will be induced in the secondary coil?