

Chapter 12, Lesson 4 Notes

The Relationship Between Magnetism and Electricity

Electromagnets

- **Electromagnets use electricity to produce a temporary magnet by passing electric current through a wire wrapped around an iron core.**
- **An electromagnet works as long as current flows through it.**
- **An electromagnet can be switched off and on.**

Using Electromagnets

- **Salvage yards use large electromagnets to pick up and move items made of metal.**
- **Many appliances use electromagnets, such as telephones, speakers, and earphones.**
- **Telephones use electromagnets to change electric currents to sound waves.**

Motors

- **The changing poles in a motor's electromagnet are alternately attracted and repelled by the poles of a permanent magnet in the motor, causing the motor to turn.**
- **The turning of the motor can be used to operate a device.**