

# Model the Refrigeration Cycle

## Project Overview:

You will be creating a schematic of the refrigeration cycle. You will then use the schematic to understand the real components of an air conditioning or refrigeration unit.

## Directions:

1. Your instructor will divide the class into pairs.
2. Schematics are technical drawings showing how a circuit works. These drawings are often used for electrical and HVAC systems to help plan out how to install the systems properly and ensure safe and efficient use of the system. If you are unfamiliar with schematic drawings, take a few minutes to familiarize yourself with the purpose and technique for them. When you are ready, draw a schematic of the refrigeration cycle. Label the following aspects of the cycle:
  - Components
  - Refrigeration lines
  - State of refrigerant at each stage
3. You will apply what you have learned about the refrigeration cycle to a real life system. Your instructor will either assign you a classroom refrigeration unit or will have you examine an HVAC system in the school or at your home. Identify as many of the components as you can within your assigned system while following the instructions provided of what type of investigation is safe and possible. Take photos of the different components and create a document where you use photos and descriptions to identify the components, refrigeration lines and explain the state of refrigerant at each stage for this real refrigeration cycle example.