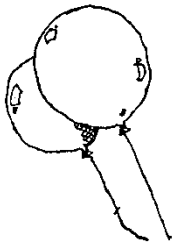

Air Supply System

Brainstorm and write your answers on a separate sheet of paper.

1. Our earthly atmosphere is a combination of several gases; research what gases are in Earth's atmosphere. What gas do humans need to breathe in? What primary gas do humans and animals breathe out?
2. What is *photosynthesis*? During the process of photosynthesis, what gas must green plants take in? What gas do they produce?
3. A process called *electrolysis* can separate water (H_20) into hydrogen gas (H) and oxygen gas (O_2). Another process is being developed which can extract oxygen from rocks and soil that contain it. Do you think these processes could be useful on Mars?
4. Research Mars facts. Will the Mars **colony** inhabitants automatically be able to breathe the atmosphere or will special provisions need to be made?

   Identify and write down four "Mars Facts" that impact the design of an Air Supply System.

   1.
   2.
   3.
   4.

5. Design an Air Supply System to be used by the Mars colony inhabitants, which will rely on oxygen and carbon dioxide available only from Martian resources. You may want to sketch a blueprint showing how your design will look and how it will work.