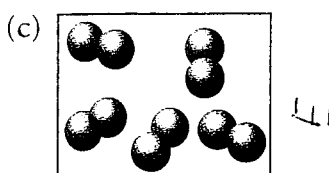
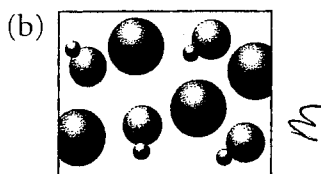
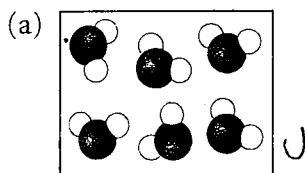
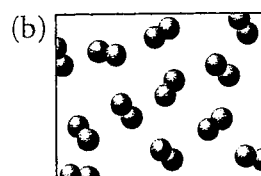
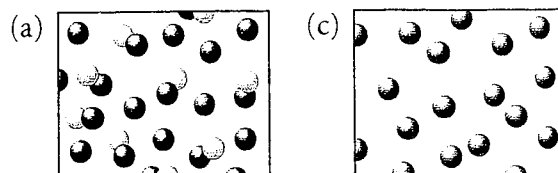


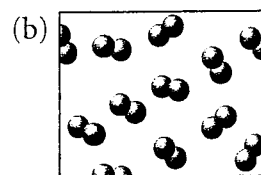
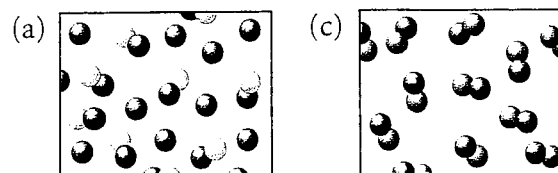
- What are the characteristics of matter?
- What are the two classifications of pure substances? How are they similar? How are they different?
- Give two examples of each of the following:
  - an element
  - a compound
  - a homogeneous mixture
  - a heterogeneous mixture
- Use the terms "element," "compound," "homogenous mixture," or "heterogenous mixture" to classify the following substances:
  - iron
  - the air you breathe
  - soda pop
  - distilled water
- If all the particles in a material are made up of several smaller particles, and every larger particle is identical, is the material a pure substance or not? Explain your reasoning.
- In the Middle Ages, most scientists believed that the world was made from four simple elements and that almost everything was a mixture. Which type of pure substance had they not yet discovered?
- What does each of the following diagrams represent: an element, mixture, or compound? Explain your choice.



- Which of the following diagrams might represent a mixture? Why?



- Which of the following diagrams might represent an element? Why?



- Identify each of the following as an element, mixture, or compound.

(a) salt                      (c) seawater                      (e) gasoline  
(b) silver                      (d) hydrogen                      (f) water

- Is blood a mixture? Explain your reasoning.
- An unknown, clear liquid is given to you in a beaker. You transfer some of the liquid from the beaker to a clean, empty test tube, and begin to heat it. Soon, you observe a vapour leaving the top of the test tube. With further analysis you discover that the vapour is water vapour. Eventually, all that's left are a few crystals stuck to the sides of the test tube. Was the original liquid an element, a compound, or a mixture? Explain your reasoning.
- A shiny magnesium ribbon is burned in air, to form a greyish powder called magnesium oxide. Is this oxide an element, a compound, or a mixture? Explain your thinking.