

# Pure Substances and Mixtures Review

1. In your classroom, identify something made of a material that is heterogeneous. To show you can be *sure* that the material is heterogeneous, list a set of properties for each different kind of matter in the material.
2. In your classroom, identify something made of a material that *might* be homogeneous. List its properties. Explain why further investigation would be needed to be sure that the material really is homogeneous.
3. Are heterogeneous materials more common in the natural environment than homogeneous materials? Why?
4. Are heterogeneous materials more common in the human-made environment than homogeneous materials? Why?
5. Explain how an understanding of mixtures and pure substances can help people make decisions about what to do when:
  - handling materials in the school laboratory
  - handling materials, such as paint thinner, at home
  - hearing about an "air quality advisory" on the news
6. Use the particle theory to explain why a mixture can be either homogeneous or heterogeneous.
7. Are the particles in each of the following identical or not identical? Give reasons for your answers.
  - the bubbles of soda water
  - the fat blobs of milk
  - the pulp bits of orange juice