

REVIEW

2

SECTION 2.1

# What Is Matter?

1. **Classify** the following as a homogeneous, *O*, or a heterogeneous, *E*, mixture.

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|-----------------------------------|--------------------------|
| _____ a. a pail of sand and water | _____ d. a banana split  |
| _____ b. air                      | _____ e. chocolate syrup |
| _____ c. human blood              | _____ f. sea water       |

2. **Compare and contrast** atoms and molecules.

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3. **Explain** the difference between a pure substance and a homogeneous mixture.

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4. **Classify** each of the following as an element or a compound.

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| _____ a. benzene, $C_6H_6$    |
| _____ b. aluminum, Al         |
| _____ c. aspirin, $C_9H_8O_4$ |
| _____ d. titanium, Ti         |
| _____ e. acetylene, $C_2H_2$  |
| _____ f. zinc, Zn             |

5. **Explain** why elements and compounds are pure substances.

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6. **Determine** which of the following are pure substances and which are mixtures.

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| _____ a. salt water                   |
| _____ b. isopropyl alcohol, $C_3H_8O$ |
| _____ c. mercury, Hg                  |
| _____ d. ammonia, $NH_3$              |
| _____ e. an egg yolk                  |
| _____ f. honey                        |