

**CHAPTER 1 REVIEW**

*Matter and Change*

**MIXED REVIEW**

**SHORT ANSWER** Answer the following questions in the space provided.

1. Classify each of the following as a *homogeneous* or *heterogeneous* substance:

- |       |                 |       |            |
|-------|-----------------|-------|------------|
| _____ | a. sugar        | _____ | d. plastic |
| _____ | b. iron filings | _____ | e. cement  |
| _____ | c. milk         |       |            |

2. Select the most appropriate branch of chemistry from the following choices to best describe each of the investigations: organic chemistry, analytical chemistry, biochemistry, theoretical chemistry.

- |       |   |
|-------|---|
| _____ | a. A forensic scientist uses chemistry to find information at the scene of a crime. |
| _____ | b. A scientist uses a computer model to see how an enzyme will function.            |
| _____ | c. A professor explores the reactions that take place in a human liver.             |
| _____ | d. An oil company scientist tries to design a better gasoline.                      |
| _____ | e. An anthropologist tries to find out the nature of a substance in a mummy's wrap. |
| _____ | f. A pharmaceutical company examines the protein on the coating of a virus.         |

3. For each of the following types of chemical investigations, determine whether the investigation is basic research, applied research, or technological development.

- |       |   |
|-------|---|
| _____ | a. A university plans to map all the genes on human chromosomes.                      |
| _____ | b. A research team intends to find out why a lake remains polluted.                   |
| _____ | c. A science teacher looks for a paint that will allow graffiti to be easily removed. |
| _____ | d. A cancer research institute explores the chemistry of the cell.                    |
| _____ | e. A professor explores the toxic compounds in marine animals.                        |