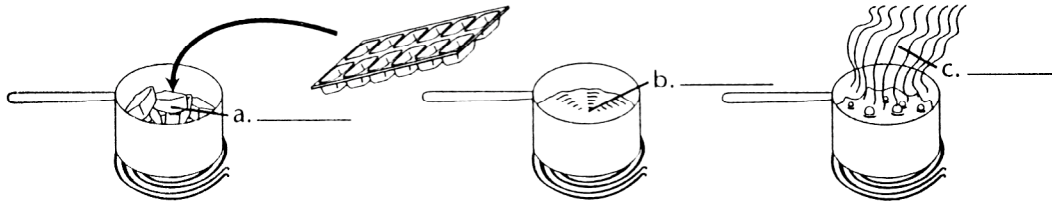


**SECTION 1-1 DESCRIBING MATTER**



Use the illustration above to answer the following questions.

1. Each container in the figure above contains water. Label the state of matter of the water in each container in the blanks provided above.
2. Are the changes from *a* to *b* and from *b* to *c* physical or chemical changes? Explain your answer \_\_\_\_\_

\_\_\_\_\_

3. Define: characteristic property \_\_\_\_\_

4. Name two characteristic properties of water

a) \_\_\_\_\_

b) \_\_\_\_\_

Define **and give an example of** the following terms:

5. chemical change \_\_\_\_\_

\_\_\_\_\_

6. physical change \_\_\_\_\_

\_\_\_\_\_

7. an element \_\_\_\_\_

\_\_\_\_\_

8. a pure substance \_\_\_\_\_

\_\_\_\_\_

9. a mixture \_\_\_\_\_

\_\_\_\_\_

10. a solution \_\_\_\_\_

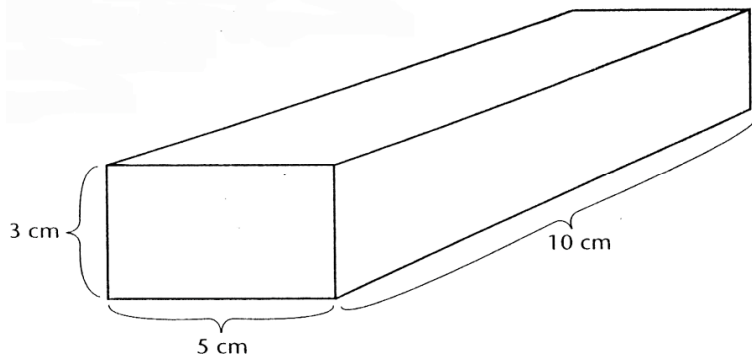
\_\_\_\_\_

11. a compound \_\_\_\_\_

\_\_\_\_\_

**SECTION 1-2 MEASURING MATTER**

Use the figure below to answer the following questions.



1. What is the volume of the solid in the figure? Show your work and use correct units.

2. The solid has a mass of 180g. What is the density of the solid? Show your work and be sure to include units.

3. Would the above solid have a mass of 180 g on the moon? \_\_\_\_\_  
Explain your answer. \_\_\_\_\_

---

4. What is the density of water? \_\_\_\_\_

5. The solid above sinks to the bottom if placed in a container of water. What does that fact tell you about its density? \_\_\_\_\_

6. Will every solid with the same dimensions have the same density? \_\_\_\_\_  
Explain your answer. \_\_\_\_\_

---

*Define the following terms*

7. mass \_\_\_\_\_

8. volume \_\_\_\_\_

9. density \_\_\_\_\_

9. give two common units for mass \_\_\_\_\_ and \_\_\_\_\_;  
for volume \_\_\_\_\_ and \_\_\_\_\_; for density \_\_\_\_\_ and \_\_\_\_\_

Name \_\_\_\_\_ Period \_\_\_\_\_

**SECTION 1-3 PARTICLES OF MATTER**

*LOOK AT DALTON'S THEORY OF MATTER ON PAGE 31. If the statement below correctly describes Dalton's ideas, write **true**. If the statement does not describe Dalton's ideas correctly, **change the underlined word or words** to make the statement true. **Then** write the statement (one of the bulleted items on p. 31) from Dalton's theory that supports your answer. (not all statements will be used)*

\_\_\_\_\_ 1. The element oxygen and the element hydrogen are made from the same kind of atom.

Now copy the statement from p. 31 that supports your answer.

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\_\_\_\_\_ 2. The hydrogen and oxygen atoms chemically bond to form the mixture called water.

Now copy the statement from p. 31 that supports your answer.

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\_\_\_\_\_ 3. The hydrogen atoms in the water molecule are identical to all other hydrogen atoms.

Now copy the statement from p. 31 that supports your answer.

---

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\_\_\_\_\_ 4. Dalton believed that atoms could be divided into smaller pieces.

Now copy the statement from p. 31 that supports your answer.

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\_\_\_\_\_ 5. The mass of a hydrogen atom is different from the mass of an oxygen atom.

Now copy the statement from p. 31 that supports your answer.

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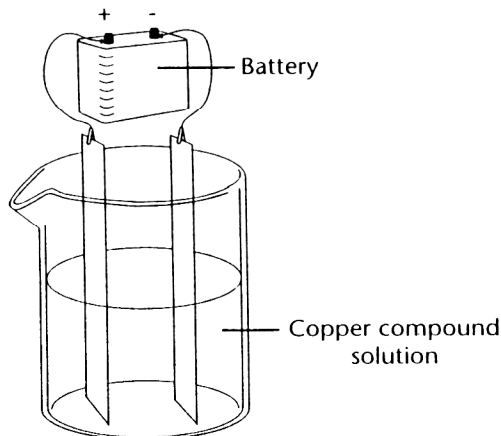
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Name \_\_\_\_\_ Period \_\_\_\_\_

**SECTION 1-4**

Use the illustration below to answer the following questions.



1. What process is illustrated in the figure above? \_\_\_\_\_
2. Explain how the above process separates copper from a solution of copper compounds. \_\_\_\_\_  
\_\_\_\_\_
3. What are the metal strips called that are inside the copper compound solution? \_\_\_\_\_

Answer the following questions.

4. What is an ore?  
\_\_\_\_\_  
\_\_\_\_\_
5. Describe how gold can be separated from a mixture of sand and dirt.  
\_\_\_\_\_  
\_\_\_\_\_
6. What characteristic property of gold allows it to be separated by the process you described in question #5?  
\_\_\_\_\_  
\_\_\_\_\_
- 7 Describe how iron can be separated from its ores.  
\_\_\_\_\_  
\_\_\_\_\_
8. What characteristic property of iron allows it to be separated by the process you described in question #7 ?  
\_\_\_\_\_  
\_\_\_\_\_