1. **Changes of state and the particle model**
2. Why is it incorrect to say iron is heavier than wood?

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1. Water has a density of 1000 kg/m3. A piece of rubber has a density of 1024 kg/m3.

Explain what would happen if the rubber was put in a pool of water?

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1. This “ready-mix” concrete waggon contains 9600 kg of concrete.

If the density of the concrete is 2400 kg/m3, what volume of concrete

does the waggon contain?

Volume = \_\_\_\_\_\_\_\_\_\_\_\_\_

1. a. A sheet of insulating foam measures 3 m x 1 m x 0.08 m. It has a mass of 9.6 kg.

Calculate the density of the insulating foam.

Density = \_\_\_\_\_\_\_\_\_\_\_\_\_

b. High density foam is made of the same material and can be used to give better

insulation for the same thickness of foam.

Describe how the arrangement of particles would differ in these two types of foam

(you may draw diagrams to help your answer).

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5. When copper metal is heated to 1100 0C it melts.

a. Is this a chemical or physical change? Explain your answer.

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b. What will happen to the mass of the sample of copper after it has melted?

Explain your answer.

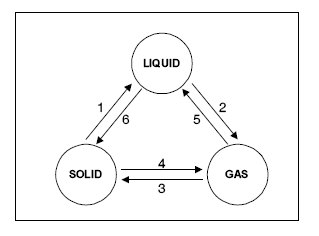
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1. Explain the difference between a physical and a chemical change.

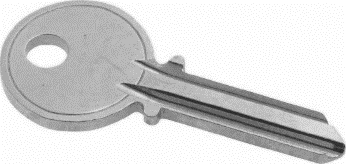
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7. Name the changes in state given in

the diagram by the arrows 1 to 6.

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2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. If you wanted to find the density of a brass key, you first need to

measure its volume. Describe how to determine the volume of a

brass key.

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