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| Name: | Class: | Date: |

**Science 8: Chemistry Review**

Use your textbook and notebook to help you answer the questions in this review package.

# 7.1 States of Matter

1. Matter is made up of what two properties?

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1. State the three states of matter and draw a diagram that shows how differently the particles in each state move.

1. State the four points of the Kinetic Molecular Theory.

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is kinetic energy?

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1. State the four points of the Particle Model of Matter.

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. The diagram below shows the different changes of state. Fill in each box with the correct term.



1. When particles move faster in an object, what happens to:
	1. the temperature of the object? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. the volume the particles occupy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 7.2 Fluids and Density

1. Write out the formula for density.

1. Define the term “*fluid*”.

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1. The diagram below shows three layers of fluids:



* 1. Which layer is the densest? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. The density of the three liquids are: 1.5 g/mL, 0.75 g/mL, and 0.90 g/mL. Match up the density with the liquid.
1. Vegetable oil \_\_\_\_\_\_\_\_
2. Red dyed water \_\_\_\_\_\_\_\_
3. Corn syrup \_\_\_\_\_\_\_\_\_\_
4. What is the difference between thermal expansion and contraction and when does each occur?

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Calculating Density – Practise:

1. Use the given measurements to calculate density:
2. Mass = 7.2 g, volume = 3 cm3
3. Mass = 520 g, volume = 2 mL
4. Mass = 6300 g, volume = 9 L
5. A metal sample has a mass of 35000 g and a volume of 4.0 cm3. What is the density of the metal?
6. A metal sample with a mass of 1498 g occupies a volume of 70 cm3. Use the table below to identify the metal. (Recall, 1 cm3 = 1 mL)

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| --- | --- |
| Type of metal | Density |
| Gold | 19.3 g/mL |
| Iron | 7.9 g/mL |
| Silver | 10.5 g/mL |
| Platinum | 21.4 g/mL |

The metal is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7.3 The Atomic Model

1. a) Draw and label an atom

b) List the 3 subatomic particles & describe their charge, size, and location in an atom.

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1. Describe the difference between atomic number, mass, and weight.

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1. What subatomic particle is gained or lost to create ions? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Why does the atomic number and mass not change in an ion?

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