

Name: _____

Exam for Unit 5: Matter and Energy

1. Use the words in the box to complete the text.

heat	temperature	separated	cool	mix
heterogeneous	liquid	homogeneous		

Matter exists in 3 states: solid, i) _____ and gas. To change from one state to another, we change the ii) _____ of the material. To change a solid into a liquid, we must iii) _____ the material. To change a gas into a liquid, we must iv) _____ the material. When we v) _____ two or more materials, we create mixtures. In a vi) _____ mixture, we can see different materials in the mixture. In a vii) _____ mixture, all parts of the material look the same because the materials are well combined. Many mixtures can be viii) _____ using different methods.

2. Choose the **odd one out**.

- a) ice / water / water vapour / chocolate
- b) solid / oil / liquid / gas
- c) combustion / evaporation / condensation / solidification
- d) kinetic / potential / mechanical / distillation
- e) evaporation / chemical / filtration / decantation



3. How can knowing the **properties** of a material help us?

Explain and give an example.

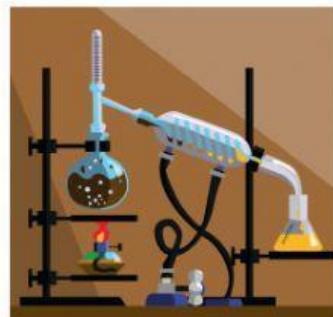
4. Read the definition. **Choose the correct property:**

- a) light passes through easily and objects are seen clearly
- b) will stop energy such as heat from transferring through
- c) will bend easily
- d) will not allow light energy to pass through
- e) transfers energy such as heat or electricity through the material
- f) strong and does not bend or stretch
- e) can produce electricity when light touches the surface

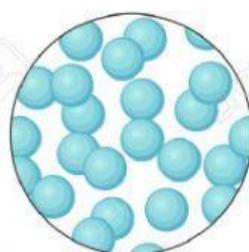
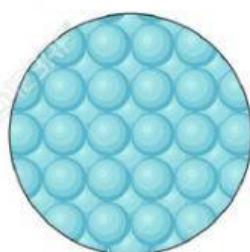
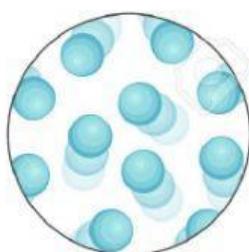
5. Read the descriptions of these mixtures. **Choose the best method to separate the materials:**

- a) Iron and sand
- b) Sand and water
- c) Water and ethanol
- d) Salt and water
- e) Coronavirus and air

6. Look at these examples of separation methods. **Identify the separation method:**



7. a) Look at the 3 diagrams of states of matter. **Choose the correct state.**

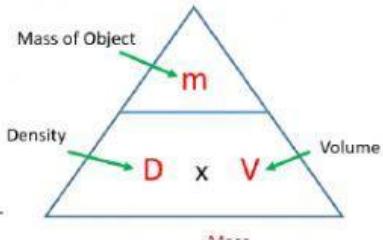


b) Explain how we change **a solid into a liquid:**

c) Explain how we change **a gas into a liquid:**

8. Write a definition for these three things:

a) Mass is _____

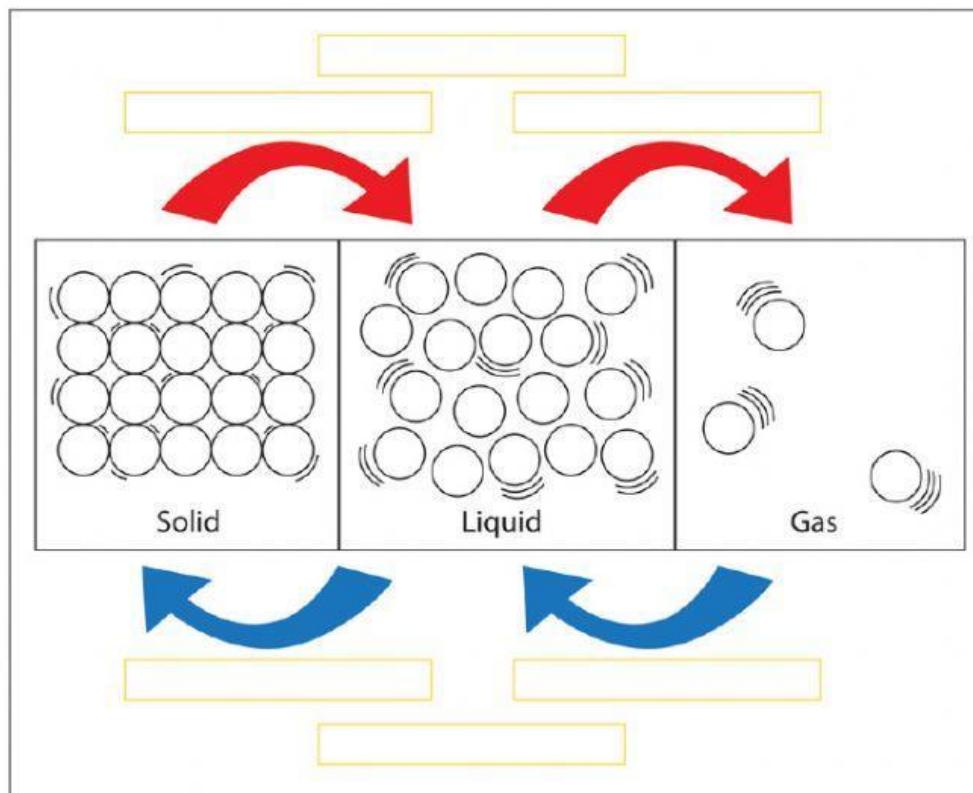


b) Volume is _____

c) Density is _____

9. Complete the diagram of changing states by moving the words.

melting
condensation
evaporation
cooling
heating
freezing/solidification



10. Complete the sentences with **chemical or physical**:

a) _____ changes are irreversible, eg. fermentation of milk.

b) _____ changes can sometimes be irreversible but this depends on the material, eg. melting chocolate.

c) Changes of state are _____ changes, eg., changing ice into water.

