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

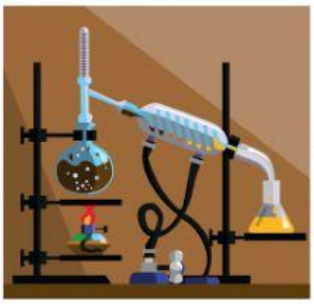
f) strong and does not bend or stretch

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*:**

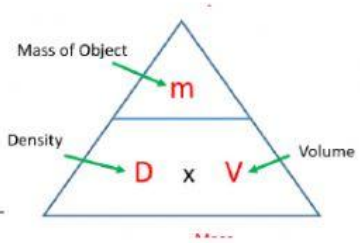
_____

_____

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

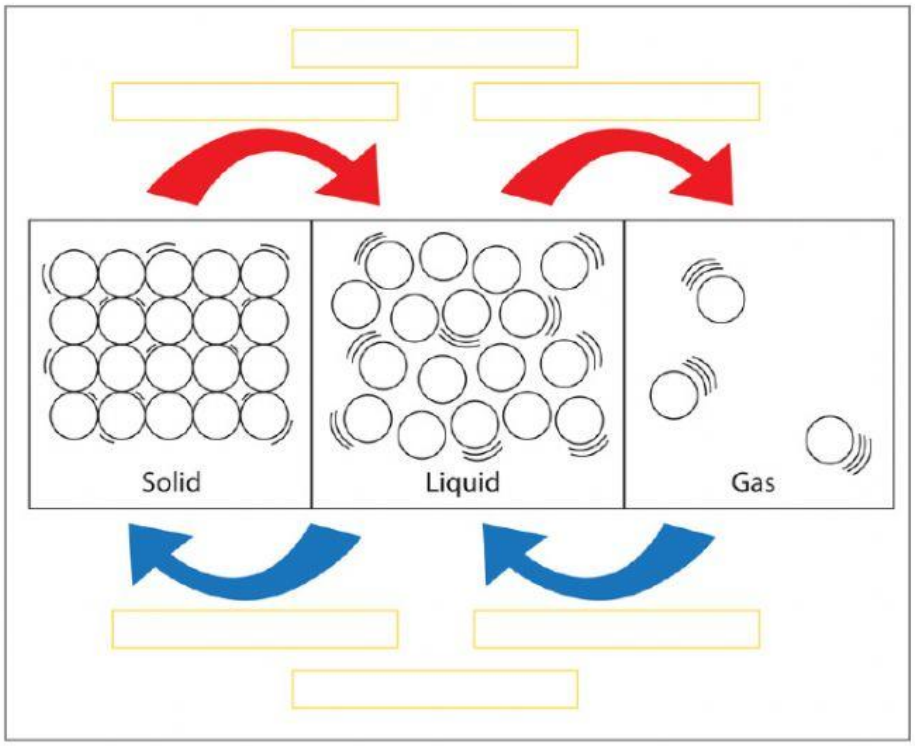
condensation

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.