

Changing State Quick Assessment

1. Identify the change of state happening:

a. Chocolate being left in a warm room:

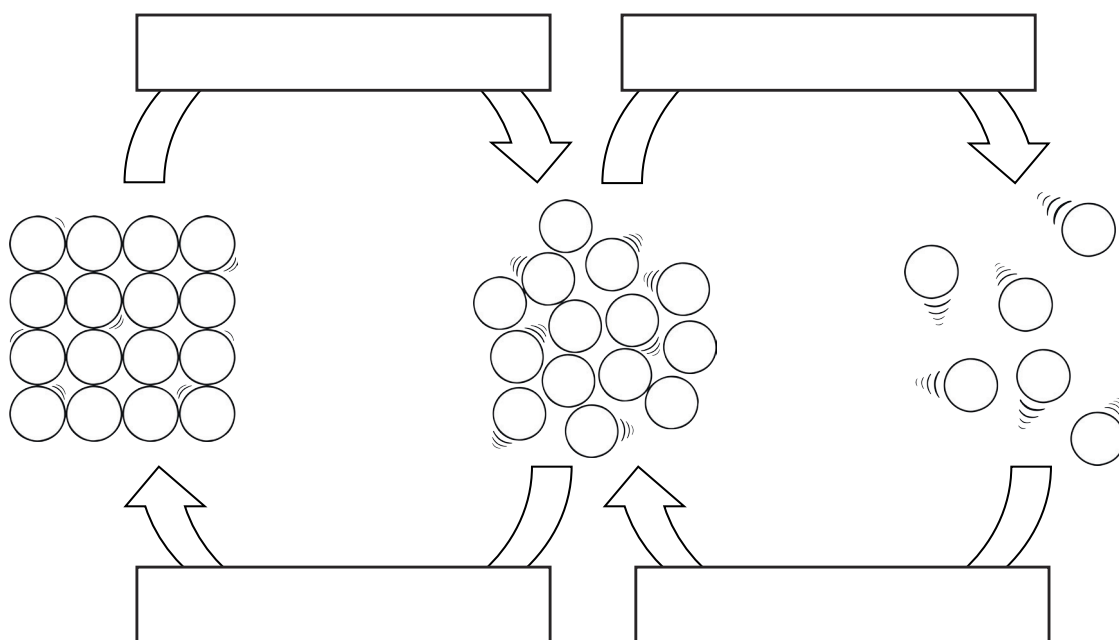
b. Water being placed in the freezer:

c. A puddle disappearing:

d. Water droplets on the outside of a cold drinks can:

e. A hairdryer being used on wet hair:

2. In each box, write the change of state that is taking place:



Challenge: Can you add your own extra arrows to show the changes of state called:

- Sublimation?
- Deposition?

3. Rahul takes a shower, makes a cup of tea and then hangs his washing outside to dry. For each scenario **identify** the change(s) of state happening and **describe** what is happening to the water molecules:

a. Turning the shower on and the mirror 'misting' over:

Change(s) of state:

Description of what is happening to the water molecules:

b. Turning the kettle on and steam appearing out of the spout:

Change(s) of state:

Description of what is happening to the water molecules:

c. Hanging wet washing outside to dry on a sunny day:

Change(s) of state:

Description of what is happening to the water molecules:

Learning Objectives:

- I can identify everyday changes of state.
- I can identify which change of state is happening.
- I can describe what happens as matter changes between states.

Changing State Quick Assessment Answers

1. Identify the change of state happening:

a. Chocolate being left in a warm room: **melting**

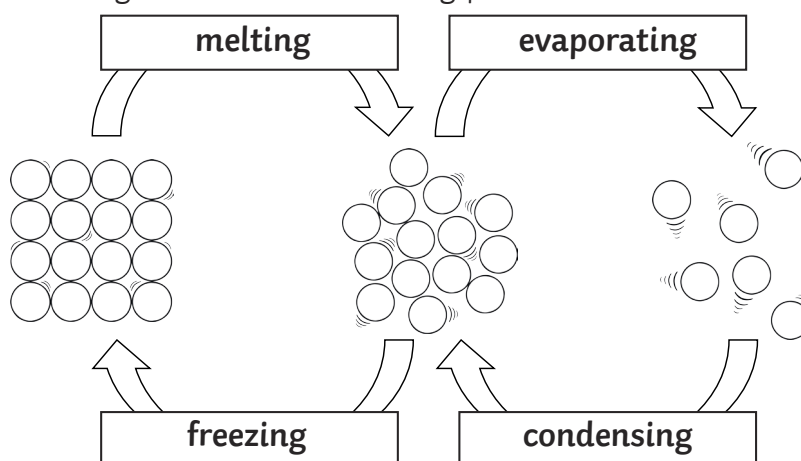
b. Water being placed in the freezer: **freezing**

c. A puddle disappearing: **evaporating/evaporation**

d. Water droplets on the outside of a cold drinks can: **condensing/condensation**

e. A hairdryer being used on wet hair: **evaporating/evaporation**. This evaporation process would happen naturally, but hairdryers accelerate it. However, when there is high humidity and water already in the air, this happens at a low rate, if at all.

2. In each box, write the change of state that is taking place:



Challenge:

For sublimation an arrow should be drawn from solid to gas, bypassing liquids.

For deposition an arrow should be drawn from gas to solid, bypassing liquids.

3. a. Turning the shower on and the mirror 'misting' over:

Change(s) of state: **Evaporation from the hot water and then condensation**

Description of what is happening to the water molecules: **The water molecules gain kinetic energy and move apart, some gain enough energy to change from a liquid to gas state. When they collide with a cold mirror, they lose this energy and collect as liquid water droplets.**

b. Turning the kettle on and steam appearing out of the spout:

Change(s) of state: **Evaporation**

Description of what is happening to the water molecules: **The water molecules gain kinetic energy and move apart, some gain enough to change from a liquid to a gas state.**

c. Hanging wet washing outside to dry on a sunny day:

Change(s) of state: **Evaporation**

Description of what is happening to the water molecules: **The water molecules on the clothes gain kinetic energy and move apart, most gain enough to change from a liquid to a gas state and thus move off the clothes. Similar to the hairdryer scenario, if there is high humidity and water already in the air, this happens at a low rate, if at all.**

Changing State Quick Assessment **Teacher Feedback**

Effort: 1 2 3 4 5

You can identify some everyday changes of state.	You can identify most everyday changes of state.	You can identify all everyday changes of state.
You can use some keywords to define simple changes of state.	You can use most keywords to define the most common changes of state.	You can use all keywords to define all changes of state including sublimation and deposition.
You can describe how particles are arranged differently in each state of matter.	You can describe how the arrangement of particles changes from one state to another.	You can describe and explain how the arrangement of particles changes from one state to another.

Next Steps:

