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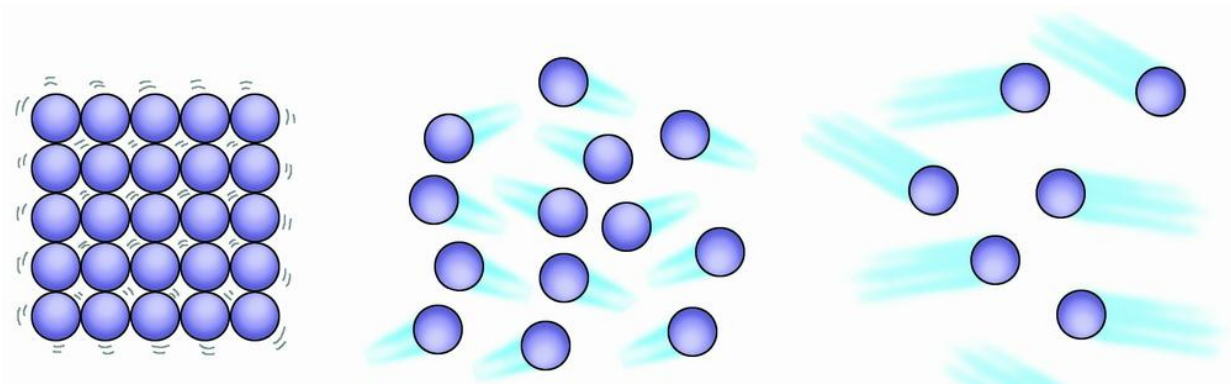
Department of Science 2018 - 2019
Second Term: Worksheet - 3
L-2.4 & 2.5 Water vapour in the air & The water cycle

Grade 5.....

Name:.....

Date:/...../2019

Q.1. Identify the molecular arrangements. Write if it is a **solid**, **liquid** or **gas**.



solid

liquid

gas

Q.2. Why is water so unique?

Water is essential to life on Earth.

Water has unique properties that

allow it to exist in all three states

of matter – ice (solid), water (liquid) and water vapour (gas).



Q.3. When a puddle of water dries up, what happens to the water? Where does the water go?

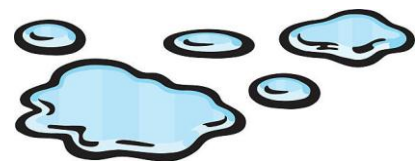
The liquid water molecules at the surface of the

puddle gain heat energy, from the air molecules

in contact with them or from sunlight, and change

into a gas called water vapour. The water vapour molecules rise up into the surrounding

air / atmosphere and the puddle dries up.



Q.4. Fill in the blanks.

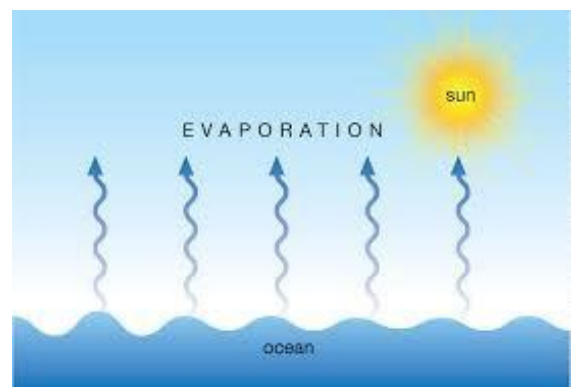
- 1- About 71 % of the earth's surface is covered in water.
- 2- Of this only 3 % is freshwater.
- 3- Water changes states, but these changes are reversible.
- 4- When water is heated it evaporates and rises up into the air as a gas called water vapour.
- 5- Water vapour turns back into a liquid when it is cooled. This process is called condensation.
- 6- Water droplets form in the clouds and fall back to the earth as rain.
- 7- Water on Earth moves around in a cycle due to heating and cooling. This is called the water cycle.
- 8- The processes of evaporation and condensation are essential parts of this cycle.
- 9- The sun is the driving force of the water cycle.

Q.5. What would happen if water did not change state?

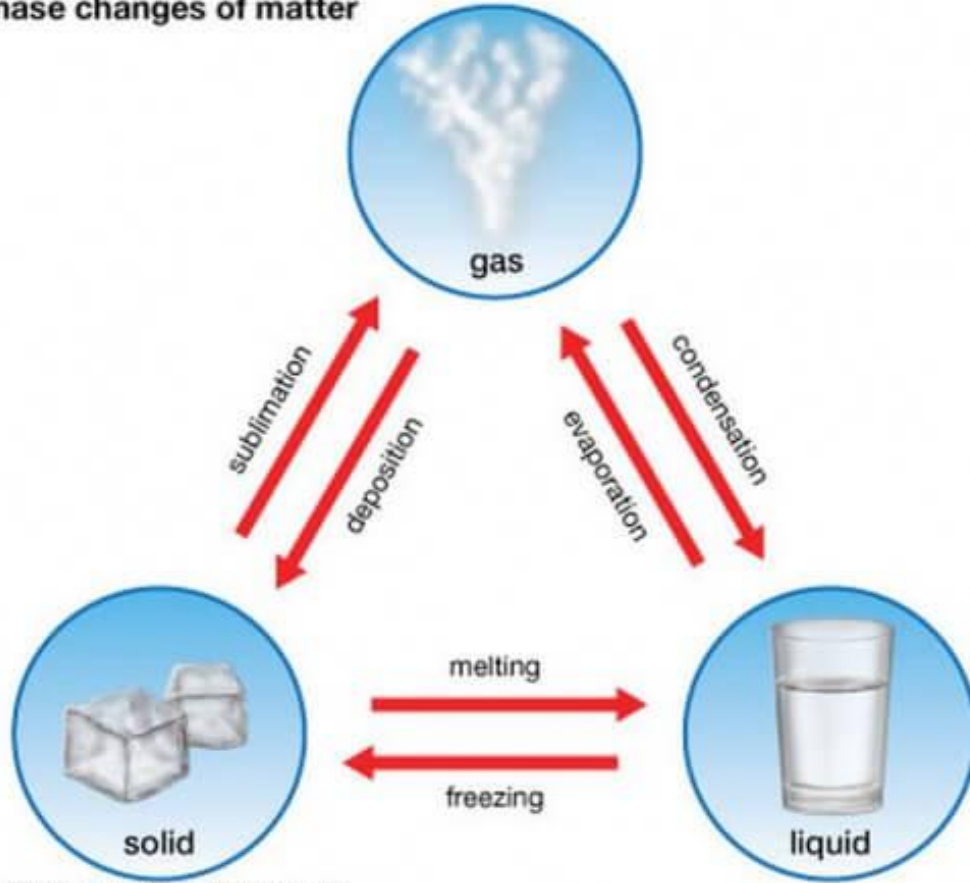
Water is used by living things. If water did not change state, then there would be no water cycle and eventually, there would be no freshwater and no life on Earth.

Q.6. Explain how the sun plays an important part in the water cycle.

The sun drives or makes the entire water cycle work. The sun provides energy or heat and causes the water at the surface of water bodies to evaporate and change into water vapour (gas). Water vapour rises in the atmosphere and cools to form clouds during condensation, and water falls back as rain. Without the sun there would be no water cycle and no life on Earth.



Phase changes of matter



Q.7. Look at the diagram above and define the following:

Freezing: Changing of liquid water into solid ice due to cooling

Melting: Changing of solid ice into liquid water due to heating

Evaporation: Changing of liquid water into gaseous water vapour due to heating

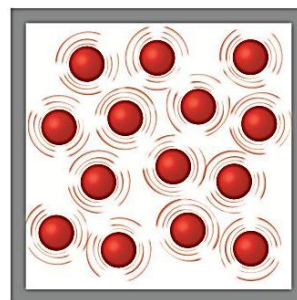
Condensation: Changing of gaseous water vapour into liquid water due to cooling

Sublimation: Changing of solid directly into gas without becoming a liquid

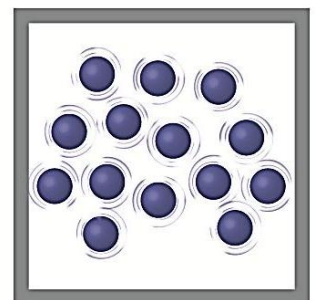
Deposition: Changing of gas directly into solid without becoming a liquid

Q.8. Which molecules move faster? Hot or cold water molecules? Give reason.

Hot water has more heat energy than
cold water. Therefore, hot water molecules
move faster than cold water molecules
as they have more energy.



Hot water



Cold water

.....

Q.9. Tick ✓ the correct answer.

1- During condensation:

A- Water vapour molecules gain energy, move away from each other and change into a gas.

B- Water vapour molecules lose energy, come closer together and change into a gas.

C- Water vapour molecules lose energy, come closer together and change into a liquid.

2- Water that falls back to the earth as rain, snow, etc. is called:

A- Collection

B- Precipitation

C- Run-off

3- During sublimation:

A- Solid turns into a gas without becoming a liquid.

B- Solid turns into a liquid without becoming a solid.

C- Gas changes into a solid without becoming a liquid.

4- What is the most abundant salt in seawater?

A- Sodium chloride

B- Calcium chloride

C- Magnesium chloride

5- The process by which plants release water into the atmosphere by evaporation of water from their leaves is called:

A- Respiration

B- Accumulation

C- Transpiration

6- The process by which molecules at the surface of a liquid gain energy and change into a gas is called:

A- Precipitation

B- Evaporation

C- Condensation

7- What needs to happen for a water molecule to leave the ocean and enter the atmosphere?

A- It needs to gain energy.

B- It needs to lose energy.

C- It needs to keep the same amount of energy.

8- Rain falls and collects into streams and rivers. This is called:

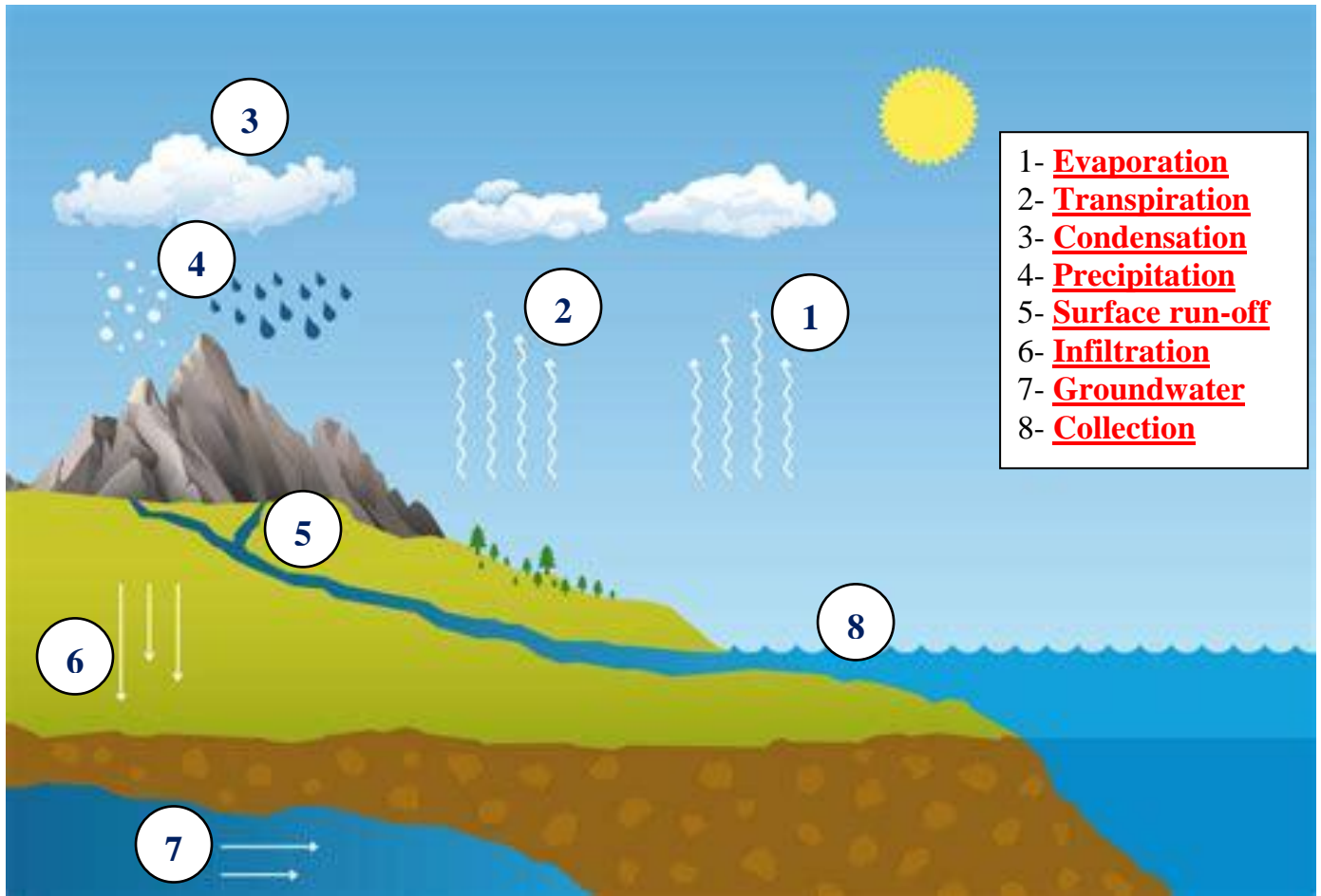
A- Underground run off

B- Surface run off

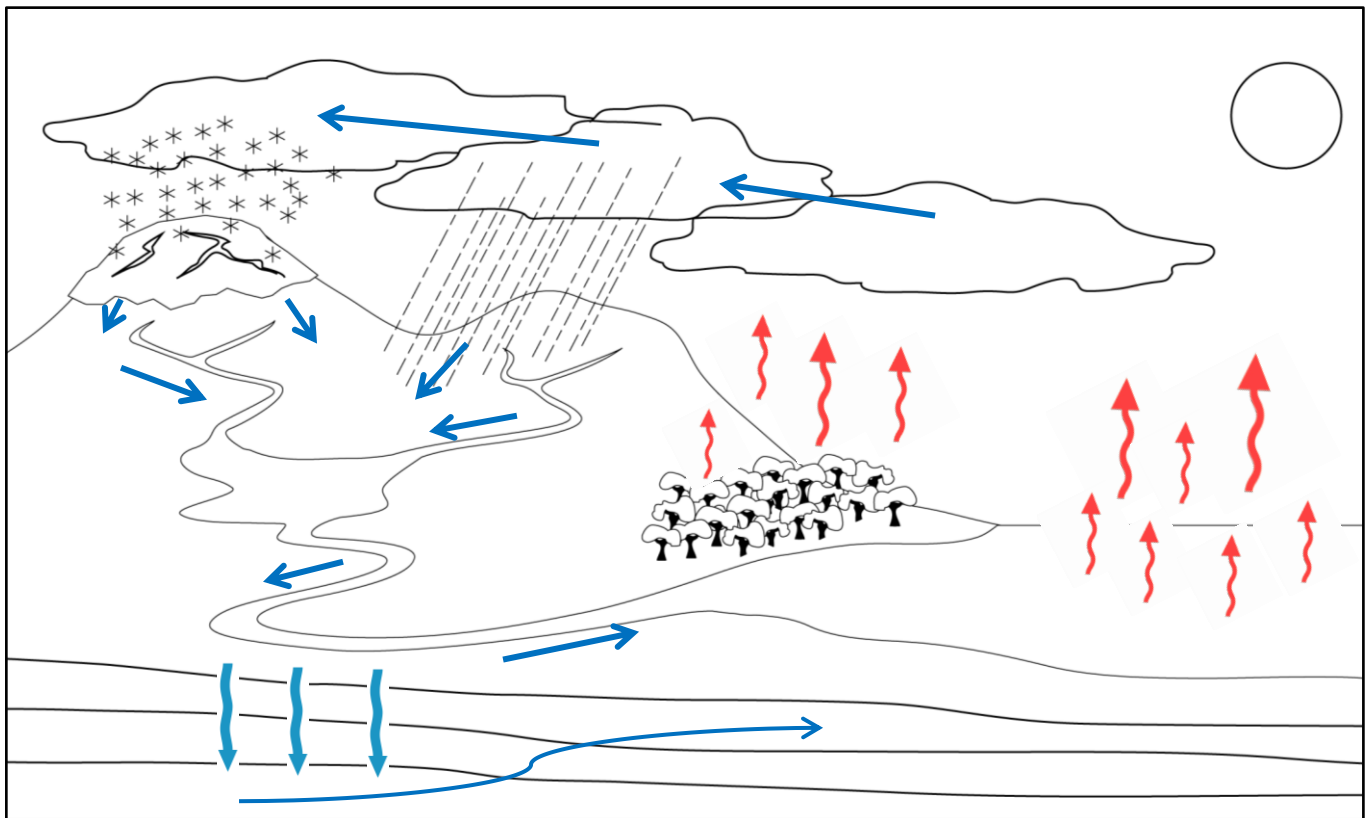
C- Transpiration

Q.10. Identify the processes of the water cycle. Use the given words.

Transpiration, Collection, Surface run off, Infiltration.
 Groundwater Evaporation, Precipitation, Condensation



Q.11. Complete the diagram of the water cycle. Add arrows to show how the water moves.



Q.12. Read these statements. Circle either 'True' or 'False'.

1- Water droplets are formed in the clouds through a process called evaporation. **True** / **False**

2- Water vapour is a solid. **True** / **False**

3- Snow is not part of the water cycle because it is a solid. **True** / **False**

4- Some water seeps into the earth's ground by infiltration. **True** / **False**

Q.13. Write numbers 1 to 4 to match the beginning of each sentence to its end.

1- When water dries up

...**3**..we say it condenses.

2- Factors such as temperature,
air flow and surface area

...**4**..reverse of evaporation.

3- When a gas turns into a liquid

...**1**..we say it has evaporated.

4- Condensation is the

...**2**..affect the speed at which
evaporation takes place.