



Ice

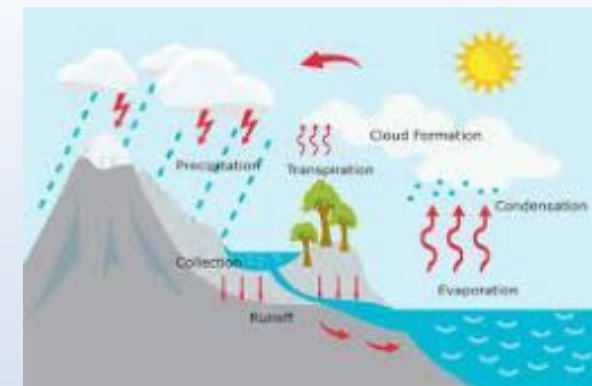


Water



Steam

# Science

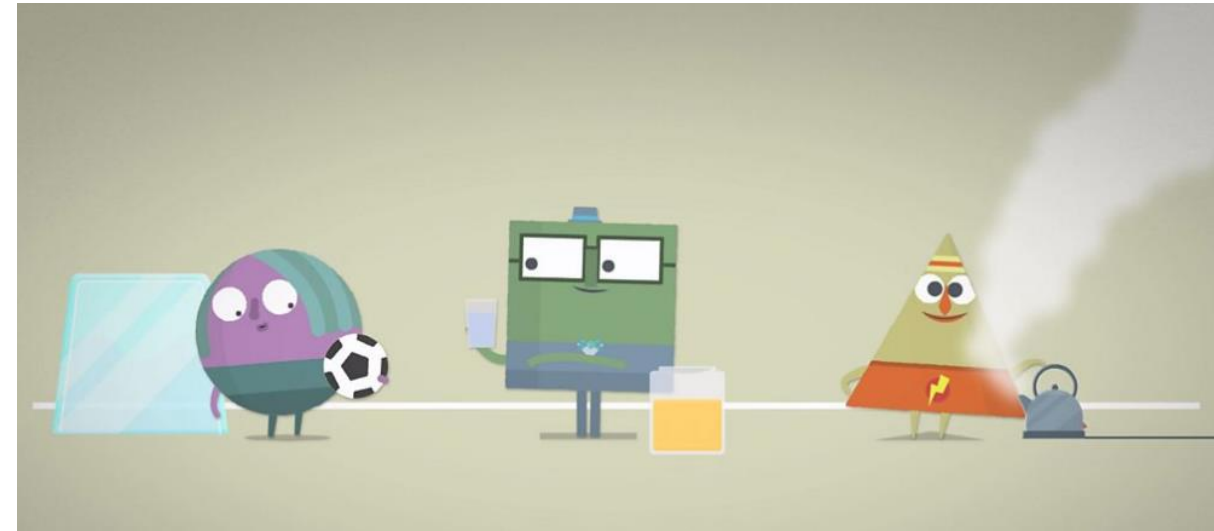


## States of Matter

Class Tamar

Summer 2 2023

We discussed as a class what we already know about liquid solids and gasses. We had a think about how we could classify these.



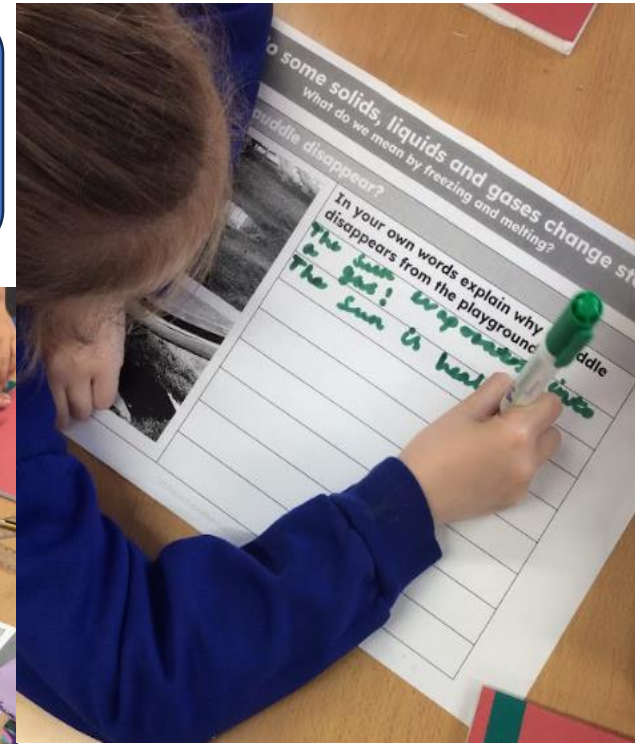
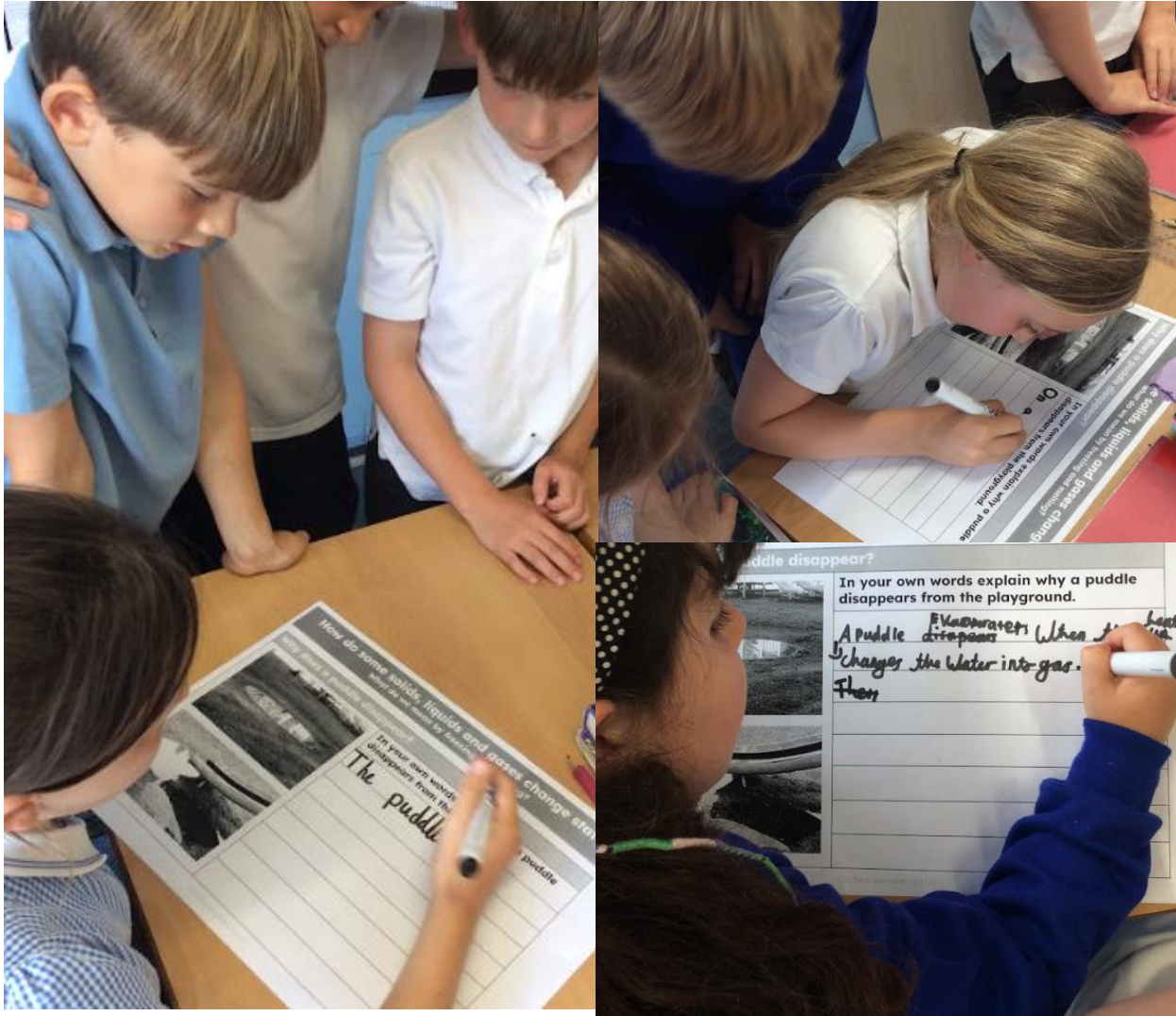
There were a couple of examples of solids that we found tricky to explain why they were solids: ice and sand.

Sand is a solid even though it can pour like a liquid and can't hold its shape. It is lots of tiny solid parts together.

Ice is a solid, it is hard and can hold its shape when cold. It was a liquid once and it can turn into a liquid again.



We learnt about the process of melting, freezing, evaporation and condensation. We used what we had learnt to explain why a puddle disappears in small groups.



After it has rained a puddle is left behind on the ground. Over time the puddle evaporates when it is warmed up. The water changes into a gas.

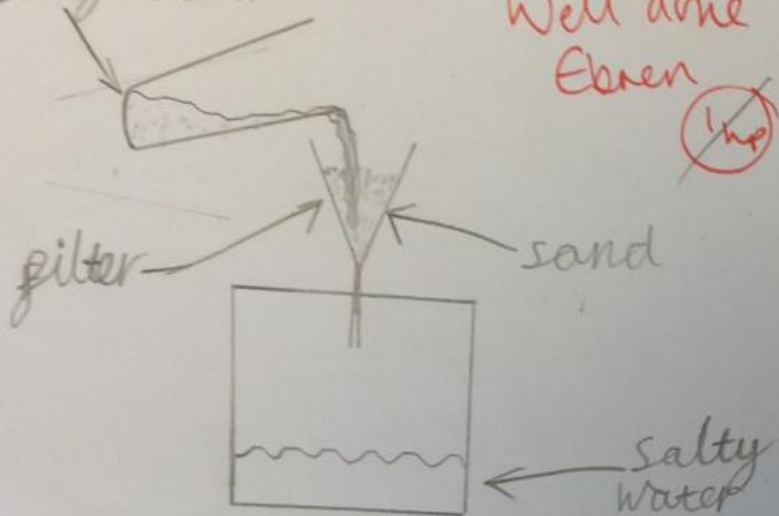
Melting is when a solid becomes a liquid by heating it and freezing is when a liquid becomes a gas by cooling it.

Monday 12<sup>th</sup> June (C)

① Sandy, salty water

Well done  
Eben

~~Imp~~

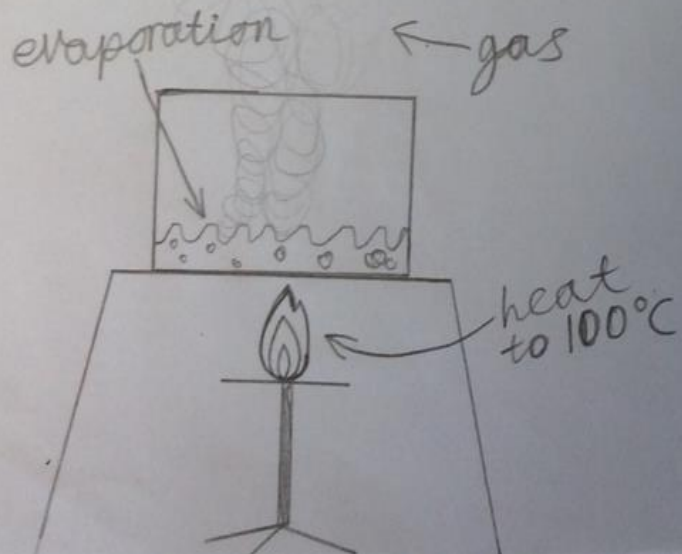


LO: I can plan how to separate sand, salt and water.

②

To separate the sand from the water get a filter and ~~pour~~ pour the sandy, salty water in so the sand stays in the filter leaving ~~salty water~~.

③



④

To ~~separate~~ the salt from the water ~~so water~~ ~~eva~~ heat to 100°C and when the water has evaporated only salt will stay.

Using what we have learnt, we planned how we would separate sand water and salt if they were all mixed together. It was a tricky one at first but we soon all agreed on our method. Once we agreed on our method, we illustrated this using diagrams.

First, we will need to separate the sand and salty water using a filter.

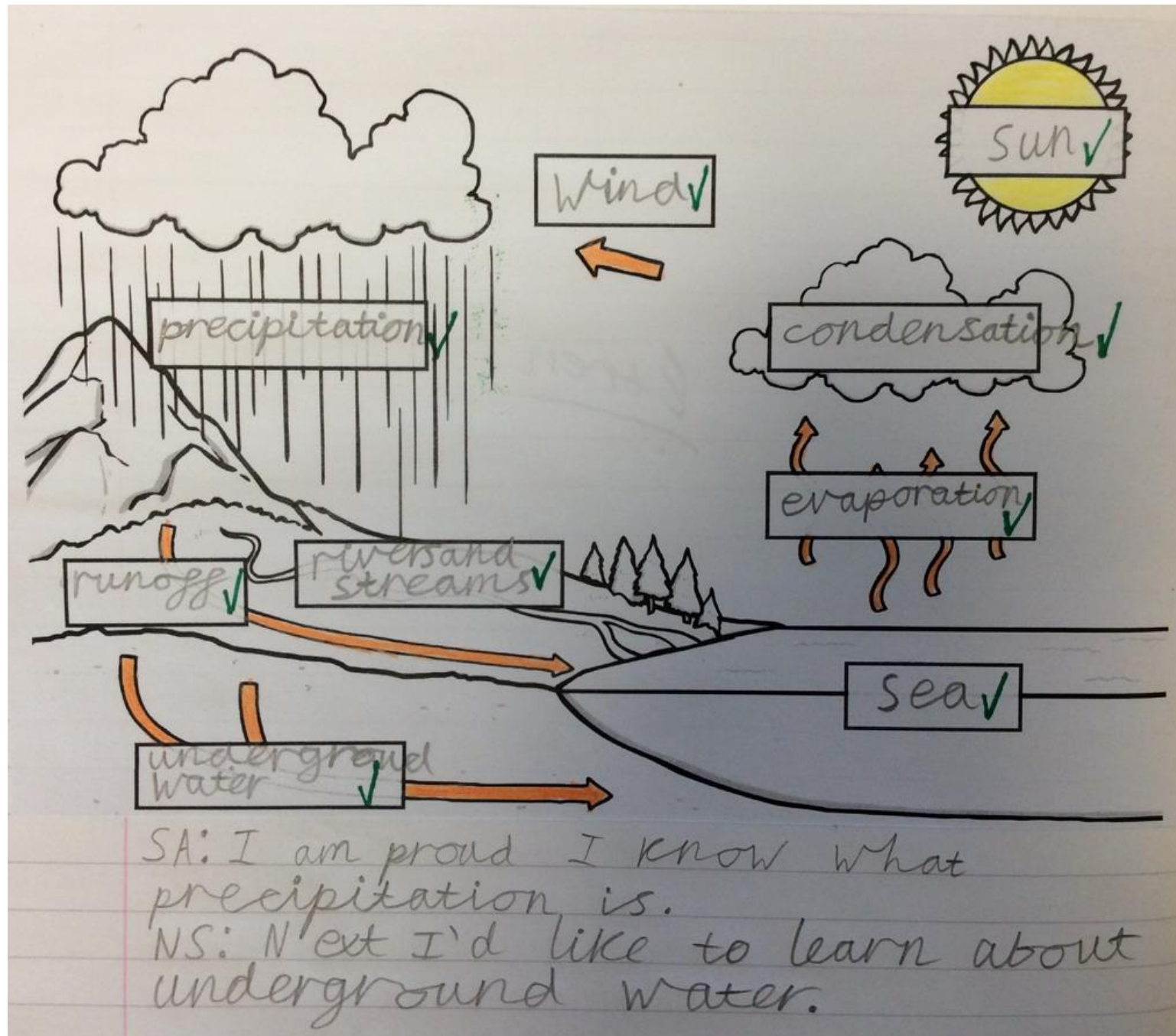
Then we will need to heat the salty water, so the water evaporated leaving the salt behind!



We learnt about the water cycle we were all able to describe the different stages of the water cycle and explain the role of evaporation and condensation.

Some of the water on the earth evaporates in the heat of the Sun. When the water has evaporated, it becomes water vapour.

I didn't know that clouds were made of clumps of water droplets!

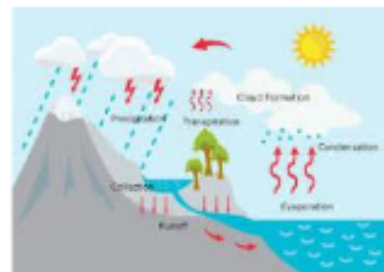


# Science Year 4 Knowledge Organiser

## Main Learning: States of matter

Key knowledge	Vocabulary	
<b>Know that some solids, liquids and gases change states</b>	<b>evaporation</b>	when a liquid changes to a gas
Know that certain materials can change state	<b>condensation</b>	when a gas changes into a liquid
Know what the temperature of water is when it boils or freezes	<b>melting</b>	when a solid becomes a liquid
Know which materials, other than water, changes state	<b>solidifying</b>	when a liquid becomes a solid
Explain the differences between solids, liquids and gases	<b>precipitation</b>	rain, snow, sleet and hail
Know what is meant by the terms: condensation, and evaporation	<b>degrees - Celsius</b>	the most common unit of temperature

**Personal development:** Awareness of the world around them. Jobs you could do: working within science, geography, education.



Ice



Water



Steam



### Prior Knowledge–

**Within the same subject**

**Within another subject**

**From personal experience**