

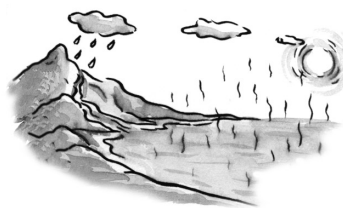


The water cycle

Background knowledge

The process by which water changes from one phase to another is called the *water cycle*. *Evaporation* is when water (a liquid) turns into water vapor (a gas).

Condensation is when water vapor turns back into liquid water. Evaporation increases with heating while condensation increases with cooling. The Sun causes water to evaporate into the atmosphere. Cooling of the atmosphere results in the formation of clouds (water droplets). Rain occurs when the droplets become too heavy for the clouds. Rainwater then soaks into the ground and eventually ends up back in the rivers and oceans.



Science activity

Place a check mark (✓) by the correct statements and an (✗) by the incorrect ones. Then decide whether or not statement 1 happens because of statement 2.

Statement 1	(✓) or (✗)	Statement 1 happens because of Statement 2 – True or False	Statement 2	(✓) or (✗)
Rain falls when clouds are formed.			Water vapor condenses to form water when cooled.	
Water only evaporates from oceans.			Water vapor is formed faster when water is warmed.	
Water vapor condenses faster in the higher regions of the atmosphere.			It is colder in the higher regions of the atmosphere.	

Science investigation

⚠ **Take extra care - ask an adult to supervise you.**

Make your own cloud chamber with a 250 ml glass jar filled 2 cm high with tap water, a large rubber balloon with the mouth end cut off, a match, a rubber band, and a flashlight. Add water to jar. Light match over the jar and blow it out. Place balloon over jar and secure in place with rubber band. Wait 2 minutes. Darken the room. Push down on balloon while shining flashlight on jar. Observe and record what you see when you let go of the rubber balloon. Do this a number of times. Explain your observations.

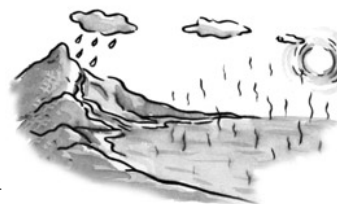


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Science activity

Place a check mark (✓) by the correct statements and a cross (✗) by the incorrect ones. Then decide whether or not statement 1 happens because of statement 2.

Statement 1	(✓) or (✗)	Statement 1 happens because of Statement 2 – True or False	Statement 2	(✓) or (✗)
Rain falls when clouds are formed.	✗	False	Water vapor condenses to form water when cooled.	✓
Water only evaporates from oceans.	✗	False	Water vapor is formed faster when water is warmed.	✓
Water vapor condenses faster in the higher regions of the atmosphere.	✓	True	It is colder in the higher regions of the atmosphere.	✓

Science investigation

❗ The lit match provides particles on which the cloud will form. Pressing on the balloon increases pressure in the jar, which facilitates cloud formation. Water droplets should be seen on the sides of the jar after the balloon has been pushed a number of times.