Water From the Air

Indonesia Team

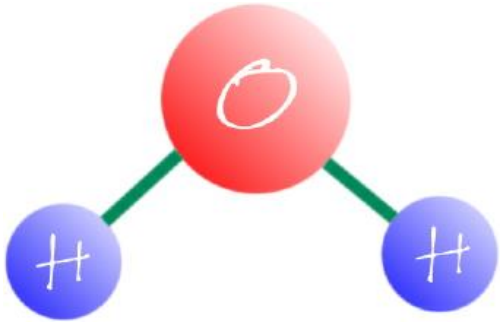
Problem

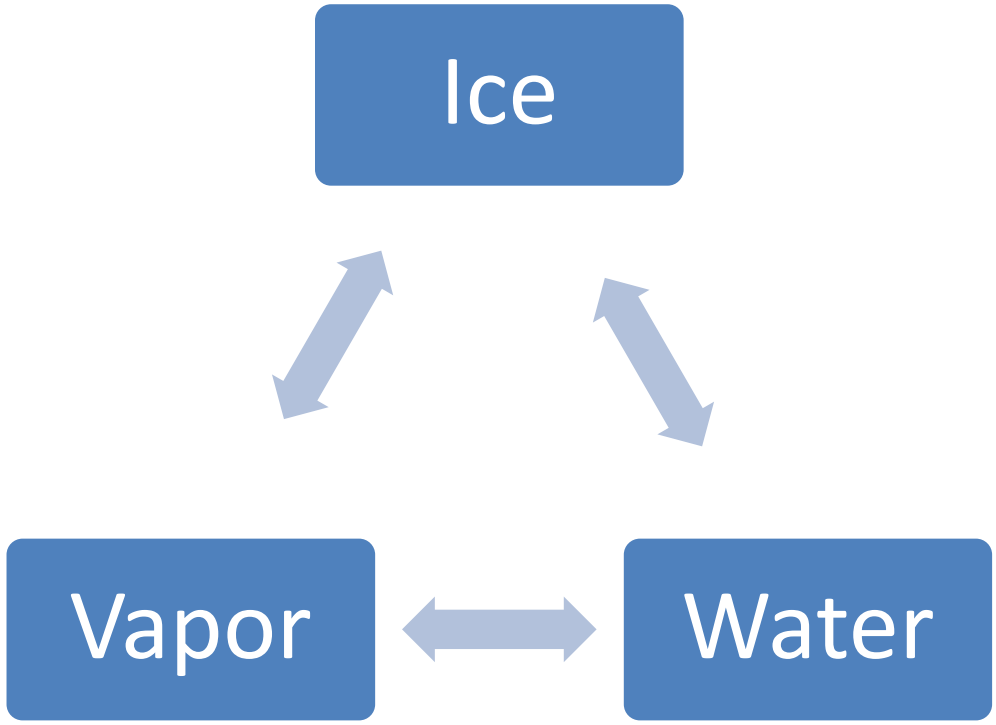
- *Design and construct a device allowing collection of water by condensing moisture from air.*
- *Determine if the water obtained with your device is suitable for drinking.*
- *What amount of water is possible to collect during one Science Fight?*

What is Water?

A transparent, colorless, odorless and tasteless chemical substance

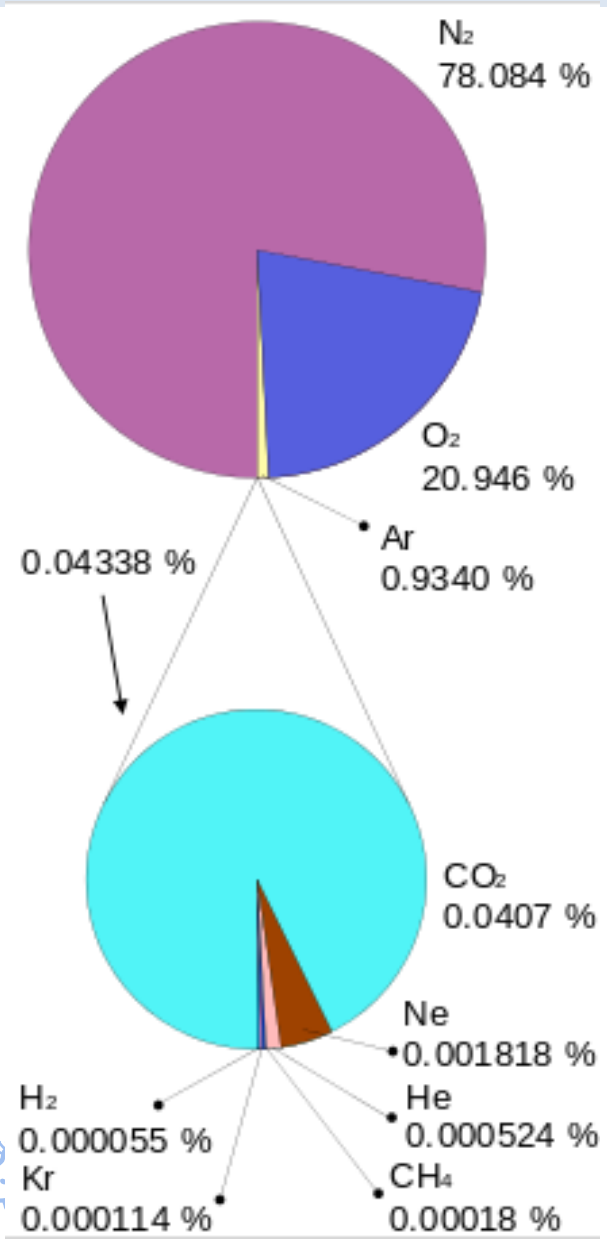
Chemical Formula : H_2O





Composition of air

Gas	Percentage
Nitrogen	78.084 %
Oxygen	20.946 %
Argon	0.934 %
Carbon dioxide	0.0407 %
Neon	0.001818 %
Helium	0.000524 %
Methane	0.00018 %
Water vapor	0.001 - 5%

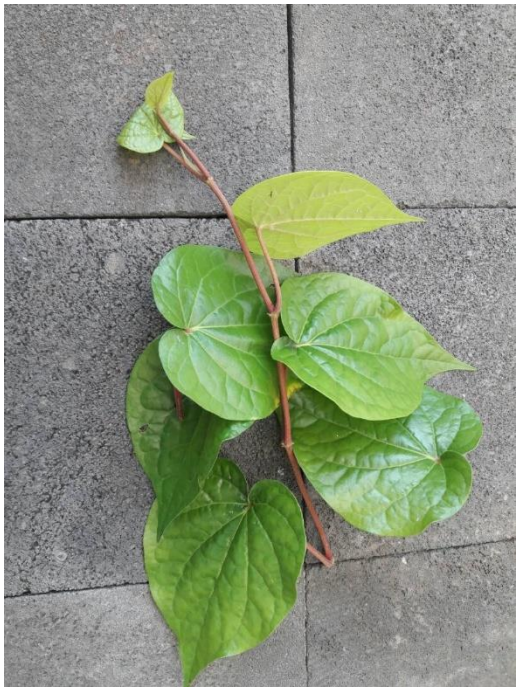


Condensation

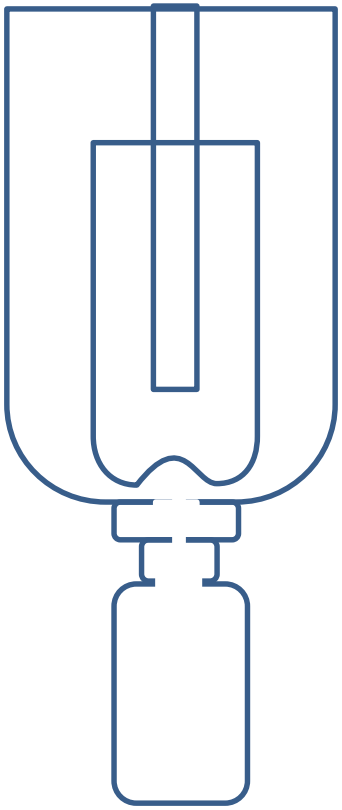
Change of the physical state of matter from gas phase into liquid phase

Experiment

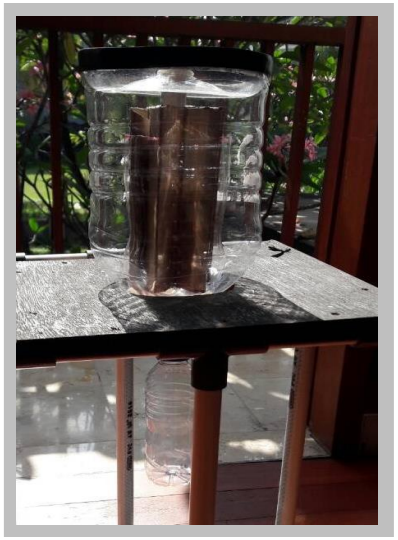
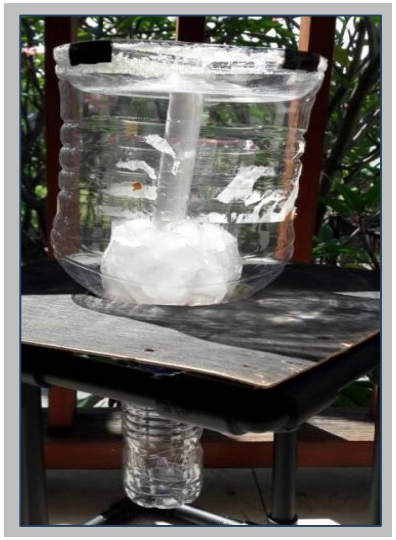
- Tools
  - 1 gallon plastic bottle
  - 1500 ml Plastic bottle
  - 330 ml Plastic Bottle
- Material
  - Carton
  - Ice cubes
  - *Piper betle*



Design

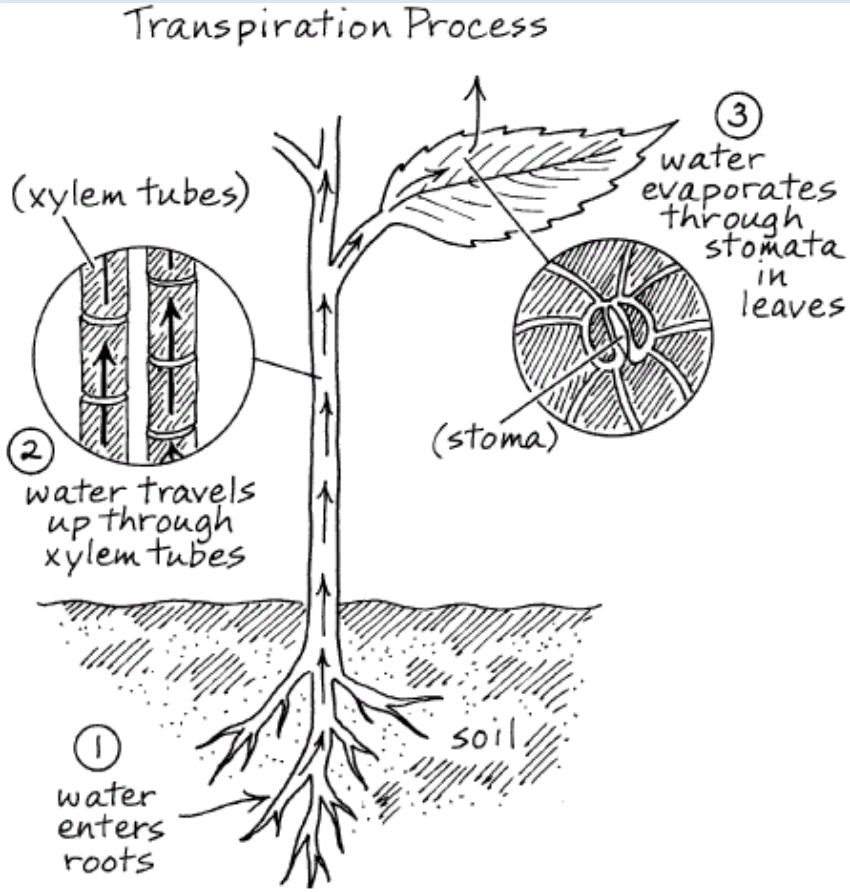


Results

	Carton	Ice Cubes	Piper Betle
			
Day 1	0	0	Small droplets
Day 2	0	0	Huge droplets
Day 3	0	0	2,5 ML

Transpiration

- *process of water movement through a plant and its evaporation from aerial parts, such as leaves, stems and flowers.*



Conclusion

- The water is safe to drink
- Amount of water collected : 0,125 ML / SF (3 hrs)

Sources

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Thank
you