

Suggested Curriculum links (Grade 5)

104-4: Compare the results of their investigations to those of others and recognize that results may vary.

204.8: Identify appropriate tools, instruments, and materials to complete their investigations.

205-4: Select and use tools for measuring.

205-6: Estimate measurements.

205-10: Construct and use devices for a specific purpose.

300-13: Describe weather in terms of temperature, wind speed and direction, precipitation, and cloud cover.

303-21: Relate the transfer of energy from the sun to weather conditions.

301-12: Relate the constant circulation of water on Earth to the process of evaporation, condensation, and precipitation.

Overview

The constant circulation of water on earth can be broken down as evaporation, condensation, and precipitation. In this activity, students will construct a rain gauge to measure precipitation as an introduction to the water cycle. The final page is a word search to familiarize students with terminology.

Objectives

- To construct and use a rain gauge to measure precipitation.
- To identify precipitation as part of the constant water cycle on Earth powered by the sun's energy.

Materials Per Rain Gauge

- A clear jar or beaker
- A wire coat hanger and/or bricks/rocks
- A ruler
- A rainy day

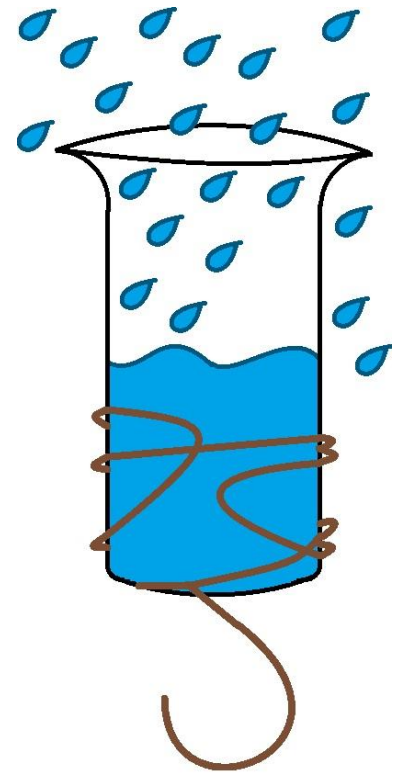
Background

Rain, snow and hail are all forms of precipitation. Precipitation is what occurs when water vapour (gas) accumulates in the form of clouds via condensation. As condensation collides, tiny itty bitty droplets of water are pressed together as to increase their size. Once the raindrops are too heavy they fall from the clouds, and this is what we call precipitation.

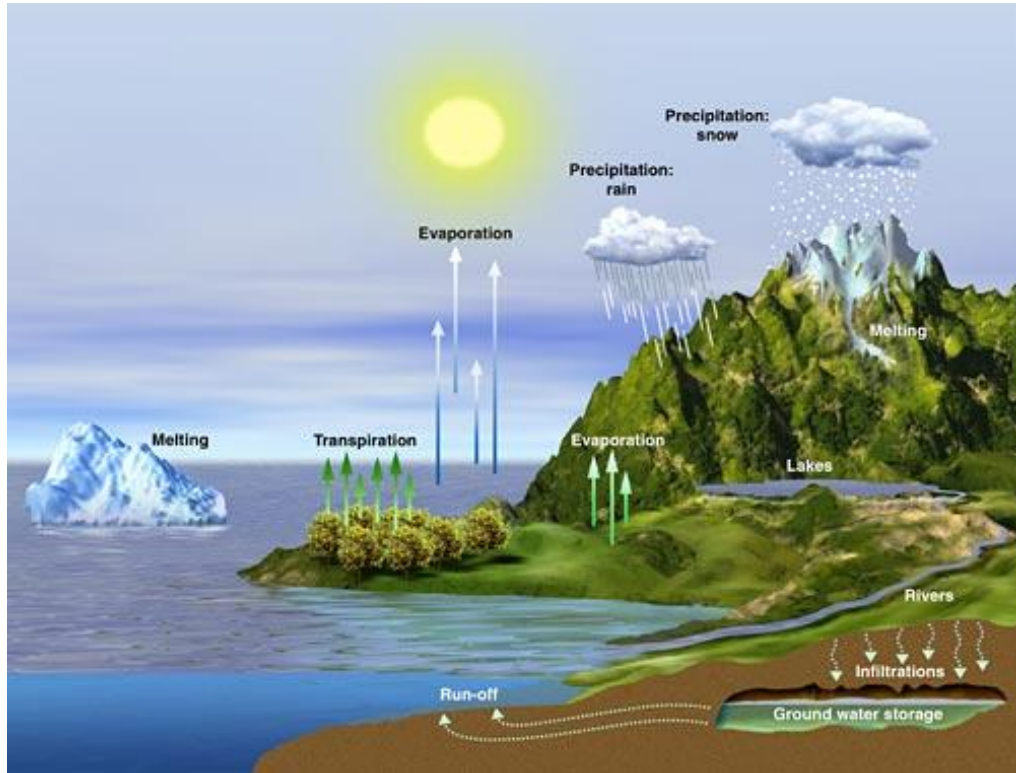
Rain gauges, just like this one, are the current method measuring rainfall. While other gadgets have been tried, sometimes the simplest method really is the most accurate and best.

Snow and ice fall can also be measured in a rain gauge, just be sure to bring it inside and let it melt in order to get the most accurate reading.

As for predicting precipitation before it happens, a barometer and thermometer might help. We'll be using these and other weather instruments at the Fluvarium during our fieldtrip and they will be talking to us more about the water cycle.



At the Fluvarium
Join us for *The Science of Weather!* Students will engage in the basic concepts of 'weather watching' while outside, using simple but effective homemade instruments. Inside, the Grade Fives will explore through visual media, class instruction and activities the formation of clouds and how to 'make' a cloud in a bottle. They will also investigate weather's influence on the animal world; particularly our freshwater friends.



Procedure

1. Wrap the wire hanger, as shown, around the jar with the hook facing down.
2. Find a location away from any buildings or overhead trees. You also however may consider placing it in a shady spot as to avoid evaporation.
3. Use the hook by pushing it underground to secure the jar in case of wind. Alternatively, surround the jar with bricks or rocks to secure it.
4. Ensure the jar is level.
5. To ensure accurate results, check and empty the rain gauge at the same time daily using a ruler to measure the collected rainfall.

Resources

Find more information about weather and the tools we use to measure and predict it from the following sites:

The Weather Network
www.theweathernetwork.com

Weather Wiz Kids
www.weatherwizkids.com

Anemometer

Name: _____

Atmosphere

Date: _____

Barometer

Cirrus

H W I N D C H I L L E O E R C

Compass

E U A T M O S P H E R E C R U

Condensation

M V M T C C R P C A N T E B M

Convections

I T A I E C T O O I O S R A U

Cumulus

E R O P D R E N N T I I U R L

Evaporation

N E S N O I C N V R T G T O U

Forecast

R T R U O R T Y E S A O A M S

Humidity

A E P S R I A Y C T S L R E N

Meteorologist

I M A A W R C T T L N O E T C

Precipitation

N O I T A T I P I C E R P E C

Rain Gauge

G M E E N C S C O O D O M R M

Stratus

A R W I N D V A N E N E E E R

Temperature

U E C O M P A S S E O T T E T

Thermometer

G H S U T A R T S A C E R O F

Water Cycle

E T E C T R E T E M O M E N A

Wind Chill

Wind Vane

