

Weather

Overview: *These learning profile-based RAFT assignments give students an opportunity to apply their knowledge of weather conditions and phenomena that occur across the planet and to examine how these conditions and phenomena can be measured and predicted.* Students may complete their chosen tasks either individually or with partners, and it is left to the teacher to decide how many tasks each student must complete over the course of a unit on weather.

Standards:

- Investigate and understand basic types of, changes in, and patterns related to weather
- Investigate and determine how temperature, wind direction and speed, precipitation, cloud cover, and air pressure are affected by predictable patterns of weather
- Identify and explain the use of weather measurements and meteorological tools
- Describe and analyze the formation of various types of clouds and their relationship to weather fronts and storms

Objectives:

The students will **KNOW**

- The Earth's weather changes continuously from day to day.
- Extreme atmospheric conditions create various kinds of storms.
- Cloud formations are varied and can be used to predict short term weather conditions.

The students will **UNDERSTAND THAT**

- Changes in the weather are characterized by daily differences in wind, temperature, and precipitation.
- Weather data is collected and recorded using instruments that provide information useful for predicting weather and determining weather patterns.
- Meteorologists use data to predict weather patterns.
- Weather influences human activity.
- Extremes in the weather, such as too little or too much precipitation, can result in droughts or floods.

The students will **BE ABLE TO**

- Measure and record weather data using a variety of weather instruments, including (dependent upon grade level) a thermometer, rain gauge, weather vane, barometer, and anemometer.

- Differentiate between cloud types and the weather associated with each.
- Recognize a variety of storm types, describe the weather conditions associated with each, and explain when they occur.
- Compare and contrast droughts and floods.
- Identify common types of storms.

Materials:

- Reference materials about weather and storms
- Internet access for research and to download pictures
- Art materials to create picture books, including textured materials such as cotton or cloth
- Magazines with weather-related images and/or weather visuals downloaded from the Internet

Closure: Create mixed-learning profile groups, including a variety of different RAFT options in each group, and allow time for the students to share their work in these smaller groups.

Weather

ROLE	AUDIENCE	FORMAT	TOPIC
Mother Nature	All types of weather	Song or rap	Love Us or Hate Us, You Can't Live without Us
Temperature	Thermometer	Friendly email	Ways We Influence the Human Population Every Day
Hurricane	Tornado	Debate	I'm More Powerful Than You Are!
Severe Drought	Farmers	Letter of apology	Reasons Why You Are Not Getting Any Rain
David Letterman	Late Night TV Audience	Top Ten List	The Most Destructive Storms on Earth in the Last 100 Years
Artist	Visitors to an Art Gallery	Collage	Weather, Weather Everywhere!
Weather Instruments	Meteorologist	Conversation	Without Us, You Wouldn't Have a Job
Clouds	Earth's Human Population	A Picture Book	How to Visually Identify Our Types and Predict the Weather Conditions that Follow Us