



WEATHER AND CLIMATE

Grade 4 – 6 | 90 Minutes

Teacher's Guide

Description

What is the climate and why is it changing? In this field trip students will participate in experiments, interactive activities, and group demonstrations to learn about Earth's climate and how climatic changes impact our weather. *Available during the school year in the months of September, October, April or May.*

Adult chaperones recommended: 4

Content Standards

Subject	Gr	Standard
Earth/Space	4	The surface of Earth changes due to weathering
Earth/Space	5	Most of the cycles and patterns between the Earth and the sun are predictable.
Climate Literacy Principles		<ol style="list-style-type: none">1. Sun is primary energy2. Climate is complex3. Life affects climate; climate affects life4. Climate is variable5. Our understanding of climate6. Humans affect climate7. Climate change has consequences.

Pre-Trip Activities

Vocabulary

atmosphere	greenhouse
barometer	gas
carbon dioxide	liquid
cirrus	oxygen
climate	precipitation
condensation	water vapor
cumulus	weather
evaporation	wind

Books

- Weather Words and What they Mean by Gail Gibbons. Holiday House, 1990.
- What is a Forecast? By Jennifer Boothroyd. Lerner Publishing Group, 2015.

Post-Trip Activities at School

Design and construct an instrument that can measure wind speed and wind direction, such as an anemometer. Properties of the chosen materials and design must be evaluated as part of the testing and decision making process. Demonstrate final product to the class.

Extentsion Activities

- Build a model (kit) that can collect or use solar energy (simple, small devices, such as a solar oven, solar wind chimes or solar water heating devices)
- Graphing climate vs weather using M&Ms:
<https://study.com/academy/lesson/weather-vs-climate-activities.html>
- Plan and implement an experiment to investigate what factors contribute to water evaporating into the atmosphere. Discuss the different results with the class to generate a list of all the possible methods that were tested.
- Design and construct a community in an aquarium that is enclosed and has soil, plants and water. Test the effects of the sun on evaporation and condensation rates and the air and/or water temperature. Evaluate the findings and discuss with the class.