



ECHO School Program Climate Conundrum Grades 5-8



Summary

Students will explore how changes in ocean levels, temperature and global habitats are signaling evidence of global climate change from tropical and polar regions to New England. Group activities help students gain deeper understanding of the causes and effects of global warming on species throughout the world. Explore how people can slow the global warming by learning about new technology and changes in our daily behavior from purchasing power to alternative transportation.

Essential Question:

What are the natural and human influences that effect climate change?

Focusing Questions:

What is the difference between climate and weather?

How are animals indicators of climate change?

How are people able to influence climate change through daily choices?

Vermont Standards and Grade Expectations

7.15 The Universe, Earth and the Environment

Fulfills: S5 – 6: 47, 48 and S7 – 8:47, 48

Forces and Changes on the Earth' Surface

Atmosphere, Water Cycle, Weather and Seasons

Key Program Activities

- ◆ Determining the difference between weather and climate through discussion
- ◆ Stories of indicator species that are being affected by changes in climate around the world
- ◆ Exploration of human activities and how we currently manage resources
- ◆ Experiment with new technologies through props and hands on activities

Pre-Trip Activities:

Visit **World Wildlife Fund for a Living Planet** to learn about biodiversity in your backyard and around the world. See how climate changes are affecting the lives of species world wide.

www.worldwildlife.org

Global Challenges – Related Wild Places; Related Endangered Wildlife

Explore – “Fun and Games” to find learn about biodiversity and check out the Virtual House to see what we do at home can make a difference. Click on “Cooling It! Global Warming”

Environmental Protection Agency

www.epa.gov/globalwarming

Global Warming Wheel Card – Classroom Activity Kit

A lesson plan for teaching about global warming and how to calculate green house emissions in everyday human activities – for grades 6 – 8

Web Sites:

Burlington Electric Department

www.burlingtonelectric.com

Features Energy Efficiency/Energy Savings Tips, Sources of Power, The Alliance for Climate Action, Solar on Schools

Environmental Protection Agency

www.epa.gov/globalwarming

Global Warming maps and publications

New England Science Center Collaborative

www.nescc.info

World Wildlife Fund – the world’s largest private conservation organization

www.worldwildlife.org

Union of Concerned Scientists – Global Warming

<http://www.ucsusa.org/index.cfm>

Global Environment – Frequently Asked Questions about Global Warming

http://www.ucsusa.org/global_environment/global_warming

Recognizing Forests’ Role in Climate Change

http://www.ucsusa.org/global_environment/biodiversity/page.cfm?pageID=526

Greenhouse – Green Planet

<http://www.pbs.org/wgbh/nova/ice/greenhouse.html>

The Big Chill

<http://www.pbs.org/wgbh/nova/ice/chill.html>

Human Impacts on Climate

http://www.agu.org/sci_soc/policy/climate_change_position.html

***New England’s Changing Climate, Weather, and Air Quality

<http://www.neci.sr.unh.edu/neccwaq.html>

ECHO Lake Aquarium and Science Center

1 College Street

Burlington, VT 05401

Toll Free 1-877-ECHOFUN

www.echovermont.org