Unit 1: Pollution

Content Area: **Science**
Course(s): **Science 5**
Time Period: **September**
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Enduring Understandings

Scientific reasoning is used to support scientific conclusions.

Energy is transferred from place to place. Light energy can be thought of as traveling in rays. Thermal energy travels via conduction and convection.

Various human activities have changed the capacity of the environment to support some life forms.

The number of organisms and populations an ecosystem can support depends of the biotic resources available and on abiotic factors, such as quantities of light and water, range of temperatures, and soil composition.

Investigations of environmental issues address underlying scientific causes and may inform possible solutions.

Essential Questions

How does litter and landfills affect the Earth?

What items are recyclable? What items are not recyclable?

How does particulate matter in the air affect the environment?

What are water pollutants?

Does acid rain affect plants and animals?

Can human and natural activities cause land, air, and water pollution?

What is the difference between renewable and nonrenewable resources?

What are alternative energy sources?

Content

RESOURCES

Acid Rain (Earth Watch)

Sally Morgan. Franklin Watts, 1999.

Acid Rain (Our Planet in Peril)

Louise Petheram. Bridgestone Books, 2002.

Air Pollution (True Books)

Rhonda Lucas Donald. Children's Press, 2002.

Changing Climate (Earth Watch)

Sally Morgan. Franklin Watts, 1999.

Every Kid's Guide to Saving the Earth

Joy Berry. Eager Minds Press, 2001.

Fun with Recycling: Fifty Great Things for Kids

to Make from Junk

Marion Elliot. Southwater Publishing, 2001.

Global Warming (Our Planet in Peril)

Chris Oxlade. Bridgestone Books, 2002.

I Want to Be an Environmentalist

Stephanie Maze. Harcourt, 2000.

Keeping the Air Clean (Protecting Our Planet)

John D. Baines. Raintree/Steck-Vaughn, 1998.

Noise Pollution

Zachary Inseth. Child's World, 1999.

Oil Spills

Lesley A. Dutemple. Lucent Books, 1999.

Oil Spills (Our Planet in Peril)

Jillian Powell. Bridgestone Books, 2002.

Pollution and Conservation

Rebecca Hunter. Raintree/Steck-Vaughn, 2001.

Internet Resources

The International Dark Sky Association

http://www.darksky.org/

Environmental Protection Agency

AIRNow

http://www.epa.gov/airnow/

Environmental Protection Agency

Educational Resources

http://www.epa.gov/epahome/educational.htm

Environmental Protection Agency

Recycle City

http://www.epa.gov/recyclecity/

Environmental Protection

Polluted Runoff

http://www.epa.gov/owow/nps/kids/

Marine Pollution One – Just for Kids

http://seawifs.gsfc.nasa.gov/OCEAN_PLANET

http://dnr.wi.gov/eek/teacher/air.htm

http://www.lessonpaths.com/learn/i/pollution/teachers-domain-snapshot-of-us-energy-use-2

Skills

Predict, compare; classify; collect, record, display, and interpret data on the affects of litter on the environment.

Make inferences.

Measure and predict mass amounts of garbage.

Create solutions to pollution.

Hypothesize outcomes.

Use variables, collect, record, display, and interpret data on experiments.

Gather evidence of pollution.

Explain the impact of meeting human needs and wants on local and global environments.

Communicate and collaborate with peers on experiments and hypotheses.

Use scientific thinking process to create lab.

Design lab by observing, organizing and compare results.

Standards