

Eco=Kids

(For Elementary Grades)

Teacher's Guide

The Eco=Kids series is designed to encourage your students to become more eco-friendly by identifying the things we do that cause POLLUTION and GLOBAL WARMING, the destruction of the RAIN FORESTS and MELTING of the ICE CAPS, along with many other problems facing our environment.

In the first of three programs, students are exposed to the various causes of pollution and the terms used to describe environmental problems. Then they are asked to discuss how these problems arose and what they might do to help correct them.

In the second program, students conduct an Eco-Investigation of their home, your school, and the community to determine whether they are being friendly to the environment or not.

In the third program, based on their Eco-Investigations, students are given many concrete ways they can help reverse the effects of pollution and help create a more healthy planet on which to live.

Program One - The Earth Needs Your Help

What is making the earth sick: GLOBAL WARMING, POLLUTION, the MELTING ICE CAPS, the VANISHING RAIN FORESTS?

Here are some terms we discuss: ENVIRONMENTAL PROBLEMS, CLIMATE and WEATHER, the ATMOSPHERE.

What is a GAS? What are GREENHOUSE GASSES? Can Greenhouse Gasses cause the Earth to get WARMER.

What is CO₂, or CARBON DIOXIDE?

What is OZONE? What, and where, is the OZONE LAYER?

What is ULTRAVIOLET LIGHT, and what does it do for the Earth?

What are FOSSIL FUELS?

What is the difference between a RENEWABLE, and a NONRENEWABLE resource?

What is a CARBON FOOTPRINT?

What do the terms REDUCE, RELEASE and EFFICIENT mean when you talk about pollution?

What's Going On?

What is the "GREENHOUSE EFFECT", and what effect does it have on the Earth?

What are CHLOROFLUOROCARBONS, and what do CFCs do to the environment? How do CFCs effect the OZONE LAYER?

What happens when you burn FOSSIL FUEL? How does burning fossil fuel effect the environment?

Air Pollution and Acid Rain

What causes ACID RAIN, and how does it harm the environment?

Water Pollution

What pollutes our water supply?

How do we WASTE water?

Because water is a RENEWABLE RESOURCE, is it important not to pollute it?

The Ground

What are NATURAL RESOURCES?

Are coal, iron ore and natural gas RENEWABLE, or NONRENEWABLE resources?

Too Much Trash

When we throw away TRASH, what are we doing to our NATURAL RESOURCES? How does that effect our environment?

The Bottom Line

What would happen if we switched from burning fossil fuels to some LESS POLLUTING energy source?

What Can You Do?

What are the "Three R's"? How can you start to REFUSE, REUSE and RECYCLE? How would that help the environment?

Program Two - How "Eco" Are You?

Using an ECO-INVESTIGATION LOGBOOK, have your students record their observations and come to some conclusions regarding:

How Green Is Your Home?

Let's start in the KITCHEN. How much GARBAGE do you create? Can some of your trash be REUSED or RECYCLED?

How much of your trash is just PACKAGING? Discuss how many OVER-PACKAGED products the average family buys.

How much POLLUTION is caused, and NATURAL RESOURCES used, to simply make PACKAGING?

Have your students MAKE A LIST of the things that would be just as good if they had LESS PACKAGING.

SHOPPING BAGS - which are better for the environment, PAPER or PLASTIC?

Does your trash contain materials that could be POISONOUS - or materials that could be RECYCLED? What can be REUSED?

You might ask your students to investigate what happens to all the TRASH in their home, and how they might reduce the amount they create.

Food

How many NATURAL RESOURCES does it take to produce your food?

How much WATER and FERTILIZER is used while making FOOD for both animals and humans?

How much ENERGY does it take - and how much POLLUTION is created - when food is transported?

How much ELECTRICITY or NATURAL GAS does it take to cook your food?

Are there more ECOLOGICAL ways you can eat? How do VEGETARIAN or ORGANICALLY GROWN foods effect you and the environment?

Food Containers

What containers leave a smaller CARBON FOOTPRINT on the Earth;

Discuss with your students the advantages and disadvantages of ALUMINUM CANS vs. GLASS BOTTLES? Individual JUICE BOXES and PLASTIC BOTTLES? BOTTLED water and TAP water? CARDBOARD and PLASTIC cartons? PLASTIC WRAP or butcher PAPER?

How Clean Is Your Home

How eco-friendly are the CLEANING PRODUCTS your family uses? What happens to the CHEMICALS in those cleansers once they are used?

Discuss how used cleaning PHOSPHATES can affect fish, plants and other things.

What CLEANING PRODUCTS are best for the environment?

The Bathroom

How much WATER does your family use in the BATHROOM?

Which uses less WATER - a BATH or a SHOWER? What about DRIPPING faucets or LEAKY toilets?

Ask your students what are some of the things they can do to CUT DOWN on the amount of water they use at home?

Energy Efficiency

List the things in your home that use ELECTRICITY. Which items use the MOST electricity? How often are those items USED in a typical week? Who uses them?

Based on this information, have your students ESTIMATE how much ELECTRICITY each member of their family uses in a typical week.

Discuss what steps each family member could take to cut down on the electricity he or she use. How could they make their home more ENERGY EFFICIENT?

How Green Is Your School?

Discuss what steps your school has taken to become eco-friendly. Does the school RECYCLE trash, REUSE classroom supplies whenever possible, and REFUSE to buy things that are harmful to the environment?

Stress to your students that their Eco-Investigation at school should cover many of the same things it looked at at home.

How Eco-Conscious Is Your Community?

What is your COMMUNITY doing to protect the Earth and our environment?

Are SIGNAL LIGHTS set to keep traffic moving and reduce pollution? Does your community encourages CAR POOLING?

Are there enough streets with BICYCLE LANES, to make it safer for people to ride bikes?

Does your community encourage MASS TRANSIT, or could you have a better BUS or SUBWAY system?

Do local governments insist that businesses live up to pollution standards?

And, do local grocery stores promote "Eco-Friendly" products and feature "ORGANIC" foods?

Ask your students to identify what other things your community could do to help the Earth?

Program Three - The Things You Can Do

Based on the observations and conclusions recorded in their ECO-INVESTIGATION LOGBOOKS, have your students determine how they can be more eco-friendly.

Become The Power Police

Discuss the many ways they can STOP WASTING ENERGY; Turn off LIGHTS when you don't need them. Use COMPACT FLUORESCENT bulbs. Run FULL LOADS in your washers. Put thermostats on ENERGY SAVING settings.

What else can we do to conserve energy?

Use Green Power

What is GREEN POWER? Review the difference between RENEWABLE energy sources, and NONRENEWABLE sources.

Why is energy produced by HYDROELECTRIC DAMS, WINDMILL FARMS and SOLAR COLLECTORS better for the environment?

What are the DISADVANTAGES of GREEN POWER?

Cut Down On Packaging

Discuss OVER PACKAGING, and determine if there are environmentally BETTER WAYS to package products.

For example; why are SPRAY BOTTLES, LIQUIDS, POWDERS and ROLL-ONS better for the environment than AEROSOL CANS?

List other forms of packaging, and have your students suggest ECO-FRIENDLY ALTERNATIVES.

Reusing & Recycling

How many of the things we use can be REUSED? How many can be RECYCLED?

Of those, discuss with your students IF they are ACTUALLY reusing and recycling? What happens to old TOYS and ELECTRONICS, are they recycled?

Get Water Wise

Based on their Eco-Investigation, ask your students how they would cut down on the amount of water they use?

Plugging leaks? Shorter showers? TURN OFF the WATER while you wash hands or brush teeth? Use a TOILET DAM?

What other ways can we save water?

The Food We Eat

Discuss the amount of ENERGY used, and POLLUTION created, to raise food for humans and animals.

What do PESTICIDES do? What are the advantages of ORGANIC food?

Why grow your own GARDEN? What are the advantages and disadvantages of making a COMPOST PILE. What about putting a BIRD FEEDER or BIRDBATH in your back yard, how are they eco-friendly?

Keep The Car At Home

Discuss the pollution caused by CARS, TRUCKS and BUSSES. Then, discuss alternatives to using the family CAR.

Walking or biking? Skateboarding, roller-skating or taking the BUS to school? Depending on where you live, what are the advantages and disadvantages of keeping the family CAR in the garage?

What about CARPOOLING?

Is Your School Eco-Friendly?

Ask your students to refer to their Eco Investigation Logbooks, and determine where your school is being eco-conscious, and where it is not.

Is school REFUSING to buy products that are bad for the environment? Is it cutting down on waste by REUSING everything it can? Is it RECYCLING it's trash?

Learn About Your Community

Ask your students, IF their eco-investigation has identified a business that is polluting the environment, what should they do NEXT?

Organize your friends? Notify the authorities? Talk to the NEWSPAPERS and TV NEWS reporters? What else could they do?

Talk to your students about a BOYCOTT. What is a boycott and how does a boycott work?

Talk to your students about writing a PETITION. What is a petition and how do petitions work? Once a petition is signed, how do students get it to the people who can do something to change things?