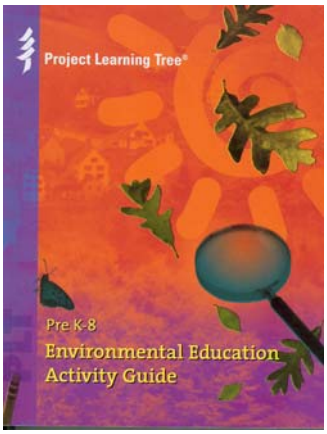
Project Learning Tree

PreK-8 Activity Guide

Activity Descriptions

2003 Edition
PLT PreK-8 Activity Guide



2006 Edition
PLT PreK-8 Activity Guide

1.

Activity Title: **The Shape of Things**
Overview: As humans we depend on all of our senses--touching, tasting, hearing, smelling, and seeing--to gather impressions of our environment. Our brain sorts out the diversity of sizes, colors, and shapes that we see. In this activity, students will focus their eyes on the many shapes that define both our natural and built environment.
Objectives: Students will identify common shapes appearing in the natural and built environment as a way of understanding the function of shapes.
Subject Areas: Visual Arts, Language Arts, Math, Science
Grades: Part A: PreK-K; Part B: K-3

2.

Activity Title: **Get in Touch With Trees**
Overview: In this activity students will explore their sense of touch and discover why touch is important to animals, including themselves.
Objectives: Students will 1) become aware of how the bark of different trees varies in texture and 2) describe a variety of textures found in leaves and other tree parts.
Subject Areas: Science, Language Arts, Visual Arts
Grades: PreK, K, 1, 2, 3, 4, 5, 6

3.

Activity Title: **Peppermint Beetle**
Overview: In this activity students will explore their sense of smell and discover why smell is important to animals, including themselves.
Objectives: Students will 1) describe various ways animals use their sense of smell, 2) explain why some animals use scent marking, and 3) identify the importance of the sense of smell in our daily lives.
Subject Areas: Science, Social Studies
Grades: K, 1, 2, 3, 4, 5, 6

4.

Activity Title: **Sounds Around**
Overview: Our ears are constantly being bombarded with sound--so much that we automatically "tune out" a lot of it. Some sounds are "music to our ear, while others can annoy us and even damage the delicate structures in our ears. Try this activity to help your students "tune in" to the sounds in their environment and to help them identify and lessen local notice problems.
Objectives: Students will 1) identify sounds and map their location in the environment, 2) explain how noise can be a problem in the community, 3) create and carry out a plan to lessen a local noise problem, and 3) study a Greek myth about sounds in nature
Subject Areas: Science, Language Arts, Social Studies, Math
Grades: Part A: 1-6; Variation PreK-K; Part B 6-8; Part C: PreK-K

5.

Activity Title: **Poet-Tree**
Overview: Writing and sharing poems will give you students an opportunity to express their feelings, values, and beliefs about the environment and related issues in creative and artistic ways.
Objectives: Students will 1) express their feelings and attitudes about the environment using various forms of poetry and 2) analyze their own and other people's poetry to discover its full meaning.
Subject Areas: Language Arts, Science, Social Studies
Grades: 3, 4, 5, 6, 7, 8

6.

Activity Title: **Picture This**
Overview: In this activity, students can learn about the diversity of life on earth by looking at different plants and animals from around the world.
Objectives: Students will 1) identify similarities and differences between organisms by collecting pictures and categorizing them and 2) comprehend the connection between diverse organisms and the diverse environments in which they live.
Subject Areas: Science, Visual Arts, Math
Grades: PreK, K ,1, 2, 3

7.

Activity Title: **Habitat Pen Pals**
Overview: From icy tundra to scorching deserts to salty oceans, the world's habitats are diverse and fascinating. Each habitat, with its own special set of conditions, supports animals and plants adapted to living in it. By becoming "habitat pen pals," your students will learn about the diversity of organisms living in these habitats.
Objectives: Students will 1) explain the relationship between climate conditions and habitat, 2) identify relationships between organisms within habitats, and 3) distinguish between kinds of animals that can and can't live in a particular habitat.
Subject Areas: Science, Language Arts
Grades: 3, 4, 5, 6

8.

Activity Title: **The Forest of S.T. Shrew**
Overview: By taking a "shrew's eye view" of life in the woods, your students will gain an appreciation for the variety of living things that make forests their homes, and for the variety of habitats within forests.
Objectives: Students will 1) identify microhabitats in the forest by drawing pictures or writing a story describing a microhabitat and 2) describe some of the plants and animals that characterize several microhabitats within the forest.
Subject Areas: Science, Language Arts, Visual Arts
Grades: 1,2, 3, 4, 5, 6

9.

Activity Title: **Planet of Plenty**
Overview: In this activity, students will pretend they are visitors from outer space, viewing life on Earth for the first time. By describing in minute detail all the life they find in a small plot of land, they will become more aware of the diversity of life on Earth and will better understand its importance.
Objectives: Students will 1) investigate the diversity of plants and animals on a small plot of land and 2) explain the value of a diversity of life forms in a particular ecosystem.
Subject Areas: Science, Social Studies, Language Arts, Visual Arts
Grades: 4, 5, 6

9. (2006 edition only)

Activity Title: ***Planet Diversity***
Overview: *In this activity, students will pretend they are visitors from outer space, viewing life on Earth for the first time. By describing in minute detail all the life they find in a small plot of land, they will become more aware of the diversity of life on Earth and will better understand its importance.*
Objectives*: Students will 1) investigate the diversity of plants and animals on a small plot of land, 2) compare their data with others in the class to conclude what factors influence the abundance or lack of diversity, and 3) explain the value of a diversity of life forms in a particular ecosystem.*
Subject Areas: *Science, Social Studies, Language Arts, Visual Arts*
Grades: *4, 5, 6*

10.

Activity Title: **Charting Diversity**
Overview: By exploring the amazing *diversity* of life on Earth, your students will discover how plants and animals are *adapted* for survival. This activity provides a basis for understanding why there are so many different species and what is the value of biological diversity.
Objectives: Students will 1) organize different species of plants and animals according to various characteristics and 2) determine how certain characteristics help species adapt to environmental conditions.
Subject Areas: Science
Grades: 4, 5, 6, 7, 8

11.

Activity Title: **Can it be Real?**
Overview: A beetle that drinks fog. A flower that smells like rotting meat. A fish that "shoots down" its prey. Are these plants and animals for real? In this activity, your students will discover extraordinary plants and animals and will gain insight on how they are uniquely adapted to environmental conditions.
Objectives: Students will 1) study the characteristics of unusual plants and animals and 2) describe how plants and animal species are adapted to a particular set of environmental conditions.
Subject Areas: Science, Language Arts
Grades: 4, 5, 6, 7, 8

11. (2006 edition only)

Activity Title: Invasive Species
Overview: *Throughout history, people have intentionally and unintentionally moved plant and animal species to new environments. Some of these species have proved beneficial, but others invade natural habitats causing environmental, and sometimes economic harm. Students will research invasive species to determine how these species got to their new locations and what characteristics make them so challenging.*
Objectives: *Students will learn what invasive species are, why they are problematic, and how to prevent their spread.*
Subject Areas: *Science, Math, Social Studies*
Grades: *5, 6, 7, 8*

12.

Activity Title: **Tree Treasures**
Overview: Students are often surprised to learn how many different products we get from trees. Use this activity to help your students learn just how much we depend on trees in our daily lives.
Objectives: Students will 1) identify and categorize products derived from trees, 2) find out which forest products are recyclable or reusable, and recommend actions for conserving forest resources.
Grades: Activity: grades 2-6; Variation 1: Grades 4-6; Variation 2: PreK-1; enrichment: PreK-5

13.

Activity Title: **We All Need Trees**
Overview: It is easy to see that items made of wood come from trees. However, many tree products are not obvious. In this activity your students will discover the diversity and multitude of products that are in some way derived from trees.
Objectives: Students will 1) examine various products and determine which ones are made from trees, 2) describe ways that trees are used to make products and ways that these products can be conserved, and 3) explore methods for recycling and reusing products.
Grades: 4, 5, 6

13. (2006 edition only)

Activity Title: ***We All Need Trees***
Overview: *Students are often surprised to learn how many different products we get from trees. Use this activity to help your students learn just how much we depend on trees in our daily lives.*
Objectives: *Students will 1) examine various products and determent which ones are made from trees, and 2) Students will describe ways that trees are used to make products and ways that these products can be conserved.*
Subject Areas: *Science, Social Studies, Visual Arts, Language Arts*
Grades: *Part A: PreK, K, 1; Part B: 2, 3, 4, 5, 6*

14.

Activity Title: **Renewable or Not?**
Overview: Students often do not know which resources are *renewable* and which are *nonrenewable,* or which are recyclable or reusable. In this activity, students will learn what these terms mean and discover why sustainable use of natural resources is so important.
Objectives: Students will 1) identify renewable, nonrenewable, perpetual, reusable, and recyclable resources and explain the differences among them and 2) play a game that simulates society's use of renewable and nonrenewable resources.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

15.

Activity Title: **A Few of My Favorite Things**
Overview: Here's a way to giver you students a better appreciation for how many *natural resources* they depend on in their day-to-day lives. By tracing the resources that go into making one item, they will learn how the manufacturing of just one product can have an impact on the environment.
Objectives: Students will 1) explain how the different materials that go into making a product all come from natural resources, 2) identify natural resources as being renewable or nonrenewable, 3) identify the steps that go into making a product, and 4) describe some of the impacts from obtaining and processing natural resources for making products.
Subject Areas: Social Studies, Science, Visual Arts
Grades: 4, 5, 6, 7, 8

16.

Activity Title: **Pass the Plants, Please**
Overview: Chocolate candy. Apple pie. French fries with catsup. Thanks to plants, these and many other favorite foods are ours to enjoy. Try these activities to get your students thinking about just how big a part plants play in our daily diets.
Objectives: Students will 1) identify edible plant parts and five examples of each, 2) describe how plants are used to make various kinds of foods, and 3) discuss the importance of plants in peoples' diets.
Subject Areas: Science, Social Studies, Math, Language Arts
Grades: Part A: K-8; Part B: 3-8; Park C: PreK-8

17.

Activity Title: **People of the Forest**
Overview: To the Mbuti Pygmies of Africa, the Yanomami and the Kuna of Latin America, and other peoples around the world, the forest is home. More than just a place to live, the forest provides for all of their needs. By comparing and contrasting different forest peoples, both past and present, your students can learn about some of the ways people have depended on forests throughout history.
Objectives: Students will 1) describe the lifestyles of several forest-dwelling peoples of the present or past and ways that they depend upon the forest, 2) describe some of the effects forest people have on their environment, and 3) write a story focusing on a day in the life of a member of one group of forest people.
Subject Areas: Social Studies, Language Arts
Grades: 5, 6, 7, 8

18.

Activity Title: **Tale of the Sun**
Overview: Every culture in the world has stories that are part of its history and tradition. These stories reveal the beliefs of the people who tell them. For example, many stories teach lessons in proper attitude and behavior. In this activity, your students can analyze a story told by the Muskogee (Creek) Indians of present-day Oklahoma. Later, students can read and discuss stories told in other cultures from around the world.
Objectives: Students will 1) describe how stories reveal the beliefs of the people who tell them and 2) read or listen to an American Indian story to gain insight on the vital importance of the sun.
Subject Areas: Language Arts, Science, Social Studies
Grades: K, 1, 2, 3, 4, 5, 6

19.

Activity Title: **Values on the Line**
Overview: Many people never take the time to explore the underlying assumptions they have concerning the environment. They often form an opinion without understanding all sides of an issue. This activity is designed to get students thinking about their feelings and expressing their views. You may also wish to use this activity on a regular basis to give students a chance to evaluate their opinions as they learn more about environmental issues.
Objectives: Students will 1) examine statements regarding environmental issues and determine the degree to which they agree with them, 2) share their views and opinions with others and gain awareness on the range of values related to environmental issues, and 3) identify the need for balanced information when forming opinions.
Subject Areas: Social Studies, Science
Grades: 6, 7, 8

19. (2006 Edition)

Activity: ***Viewpoints on the Line***
Overview: *This activity is designed to get students thinking about and expressing their views and to listen to those of their classmates. It helps students explore the underlying assumptions that shape our opinions. You may wish to use this activity on a regular basis to give students a chance to evaluate their opinions as they learn more about environmental issues.*
Objectives: *Students will 1) share their views and opinions with others and gain awareness on the range of opinions related to environmental issues, 2) Students will identify the need for balanced information when forming opinions.*
Subject Areas: *Social Studies, Science*
Grades: *6, 7, 8*

20.

Activity Title: **Environmental Exchange Box**
Overview: Preparing an environmental exchange box will give your students a chance to learn more about their own region and the things that are special about tit. Then, when they receive an exchange box from another region, they can compare environments, people, and much more.
Objectives: Students will 1) discover some of the resources, products, and other characteristics of their region and ways that people in their region are trying to improve the environment and 2) describe similarities and differences between their region and another region with respect to these characteristics.
Subject Areas: Science, Social Studies
Grades: K-8

21.

Activity Title: **Adopt a Tree**
Overview: This activity will encourage students' awareness of individual trees over time, as well as incorporate various other subjects. By adopting individual trees, students will gain greater awareness and appreciation of their local environments.

Objectives: Students will 1) describe a chosen tree using personal observation and investigation, and organize information about the tree and other organisms, and 3) put together a book or portfolio about their tree.
Subject Areas: Science, Social Studies
Grades: Activity: 3, 4, 5, 6, 7, 8; Variation 1: PreK-1; Variation 2: 1-4

22.

Activity Title: **Trees as Habitats**
Overview: From their leafy branches to their tangled roots, trees provide a habitat for a host of plants and animals. In this activity, your students will discover how plants and animals depend on trees in many ways.
Objectives: Students will 1) take inventory of the plants and animals that live on, in, and around trees, 2) identify ways those animals and plants depend on trees for survival and, in turn, influence the trees, and 3) for Variation 2, investigate how buildings provide a habitat for plants, animals and people.
Subject Areas: Science, Social Studies
Grades: Activity: 3, 4, 5, 6, 7, 8; Variation 1: PreK-2; Variation 2: 3-8

23.

Activity Title: **The Fallen Log**
Overview: It's amazing how many things live in and on rotting logs. In this activity, your students will become familiar with some of those organisms. They'll gain an understanding of how *decomposition* takes place. And they'll gain a better appreciation for *microhabitats* and *communities*.
Objectives: Students will 1) identify some of the organisms that live in, on, and under fallen logs and explain how these organisms depend on the dead wood for survival, and 2) describe the process of decomposition.
Subject Areas: Science
Grades: 4, 5, 6, 7, 8

24.

Activity Title: **Nature's Recyclers**
Overview: It's amazing how many organisms live off dead organic material and recycle those materials back into life. In this activity, your students will investigate the habits of one of these creatures. They will gain an understanding of how decomposition works and an appreciation for some of nature's less-heralded creatures.
Objectives: Students will 1) understand and describe the process of decomposition, 2) explain the function of scavengers and decomposers, and 3) experiment with sow bugs to determine what they eat and what their role is in the ecosystem.
Subject Areas: Science
Grades: 1, 2, 3, 4, 5, 6

25.

Activity Title: **Birds and Worms**
Overview: Camouflage is an important survival strategy in the animal kingdom. In this activity, students will discover the value of protective coloration as they pretend to be birds in search of colored worms or bugs.
Objectives: Students will 1) simulate how predators use their vision to find prey, 2) describe some different ways animals use camouflage for survival, and 3) invent a fictional animal that is camouflaged for its particular environment.
Subject Areas: Science
Grades: K, 1, 2, 3, 4, 5, 6

26.

Activity Title: **Dynamic Duos**
Overview: Organisms in ecosystem depend on each other for food. But they may also depend on each other for protection, transportation, shelter. A close, long-term relationship between two organisms is called *symbiosis.* In this activity, students will learn about several kinds of symbiosis.
Objectives: Students will 1) examine close relationships that exist between different organisms and 2) explain how partners in these relationships help each other to survive.
Subject Areas: Science
Grades: 5, 6, 7, 8

27.

Activity Title: **Every Tree for Itself**
Overview: Try this activity to give your students an idea of the conditions that trees need to live and grow, and to help your students understand that trees must often compete for their needs.
Objectives: Students will 1) simulate how trees compete for their essential needs and 2) describe varying amounts of light, water, and nutrients affect a tree's growth.
Subject Areas: Science
Grades: K, 1,2, 3, 4, 5, 6, 7, 8

28.

Activity Title: **Air Plants**
Overview: Plants play a part in every breath we take. Use this activity to help your students understand how photosynthesis works and how humans depend on this process.
Objectives: Students will 1) demonstrate and describe the general process of photosynthesis and 2) explore the relationship between the amount of oxygen produced by plants and the amount of oxygen used by humans.
Subject Areas: Science
Grades: 3, 4, 5, 6

29.

Activity Title: **Rain Reasons**
Overview: Rainfall, sunlight, and temperature are important factors influencing where plants can grow and, in turn, where animals can live. In this activity, students will design experiments to see how these climactic factors influence the growth and lives of plants. They will use the learned principles to explore how varying climate conditions have resulted in an astounding variety of forest types in Puerto Rico.
Objectives: Students will 1) explore how variations in water, light and temperature affect plant growth and 2) describe how precipitation and geography can affect the plant and animal species that are found in a particular region.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

30.

Activity Title: **Three Cheers for Trees**
Overview: It's easy to take for granted both trees and the many benefits they provide. Here's a way to start your students thinking about how much trees add to people's lives.
Objectives: Students will 1) describe the ways in which trees benefit people and 2) make pictures or models depicting how trees may be used to improve the human-made environment.
Subject Areas: Science, Social Studies
Grades: 1, 2, 3, 4, 5, 6

31.

Activity Title: **Plant a Tree**
Overview: Never underestimate the power of a tree! Besides giving us an amazing array of paper and wood products, trees provide a host of other benefits--from shading our backyards to assisting in the maintenance of global climate. Students can express their appreciation of trees by planning and carrying out their own tree-planting program.
Objectives: Students will 1) identify ways that urban trees enrich our lives, 2) determine how people care for urban trees, 3) identify areas in the community that would benefit from having more trees, and 4) organize and execute a class tree-planting project in a local area.
Subject Areas: Science, Social Studies
Grades: 1, 2, 3, 4, 5, 6, 7, 8

32.

Activity Title: **A Forest of Many Uses**
Overview: Privately and publicly owned forests are often managed to some degree to provide several different resources. In this activity, students will learn how forests are managed to meet a variety of human and environmental needs.
Objectives: Students will 1) identify ways that people use forest resources 2) explain that forests are managed to satisfy a variety of human needs, and 3) explore how different forest uses can be balanced with each other.
Subject Areas: Science, Social Studies
Grades: Activity: 5, 6, 7, 8; Variation: 1-4

33.

Activity Title: **Forest Consequences**
Overview: Few issues, if any, have simple solutions -- and resolving them usually involves compromise. In this activity, your students will learn about some of the effects that human activities can have on a forest. They will explore some of the trade-offs involved in working out a land-use issue.
Objectives: Students will 1) evaluate the options for managing or using a piece of forested land and 2) make a land-use decision and explore the consequences of that decision.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

34.

Activity Title: **Who Works in This Forest?**
Overview: All kinds of people work in the forest--from foresters to loggers, from scientists to naturalists. Everyone depends on properly managed forests for recreation, essential products, and a healthy environment. This activity provides students with an overview of forest-related careers.
Objectives: Students will 1) explore a variety of jobs that are directly related to forest resources and 2) describe how various professionals work together to care for forests.
Subject Areas: Science, Social Studies
Grades: 3, 4, 5, 6

35.

Activity Title: **Loving it Too Much**
Overview: National parks are the treasures of any nation. Yet national parks today struggle with serious dilemmas. By looking at problems in America's national parks, students can begin grappling with some tough environmental issues that affect parks locally and globally.
Objectives: Students will 1) explain how increased numbers of park visitors and activities outside park boundaries affect ecosystems within national and local parks and 2) offer possible solutions to problems facing national and local parks.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

36.

Activity Title: Pollution Search
Overview: Here's a way for your students to take a closer look at pollution: what it is, what its sources are, and what are some things people can do to reduce it.
Objectives: Students will 1) identify forms of pollution and describe the effects that various pollutants can have on people, wildlife, and plants and 2) describe relationships between various forms of pollution and human factors.
Subject Areas: Science, Social Studies
Grades: Activity: 2, 3, 4, 5, 6; Variation: PreK-2

37.

Activity Title: Talking Trash, Not!
Overview: By taking a look at their own trash, your students can learn a lot about how and why they throw things away. They can find ways to cut down on the waste they produce and to improve the way waste is managed in their community.
Objectives: Students will 1) analyze the solid waste that they generate over a period of time, describe what happens to various types of waste when it's discarded, and 3) develop and implement a plan for reducing the amount of waste they generate.
Subject Areas: Science, Social Studies
Grades: 1, 2, 3, 4, 5, 6

37. (2006 edition)

Activity: Reduce, Reuse, Recycle
Overview: *By taking a look at their own trash, your students will learn a lot about how and why they throw things away. Students will also conduct a service learning project, an din doing so find ways to cut down on the waste they produce and improve how waste is managed in their community.*
Objectives: *Students will 1) analyze the solid waste that they generate over a period of time, 2) describe what happens to various types of waste when it's discarded, 3) develop and implement a plan for reducing the amount of solid waste in their community.*
Subject Areas: *Science, Social Studies, Math*
Grades: *5, 6, 7,8*

38.

Activity Title: Every Drop Counts
Overview: It's easy to waste water and even easier to take water for granted. Water pours out of our faucets as though it were endlessly available. But the truth is that fresh water supplies are dwindling. Fortunately, it's just as easy to conserve water as it is to waste it. Try this activity to help your class (and maybe the whole school) cut back on water waste.
Objectives: Students will 1) monitor their daily actions and estimate the amount of water they use in a day, 2) describe how water is wasted and why it is important to conserve it, 3) design and implement a water conservation plan, and 4) determine the amount of water and money saved through their plan.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

39.

Activity Title: Energy Sleuths
Overview: Important issues revolve around our use of energy. One issue is the growing scarcity of some energy resources. Another is the threat to our environment caused by our current energy systems. In this activity, your students will learn about different sources of energy, as well as how energy is used in their daily lives.
Objectives: Students will 1) identify different energy sources, 2) discuss the pros and cons of various energy sources from economic, social, and environmental perspectives, and 3) describe some of the ways people use energy in their daily lives.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

40.

Activity Title: **Then and Now**
Overview: If your community is like most others, it's now quite a bit different than it was 100, 50, 25, or even five years ago. This activity will help your students to understand how we, as people, affect and alter the environment in which we live.
Objectives: Students will 1) describe the environmental changes that have occurred in their community over the course of time, 2) discuss whether those changes have been positive or negative for the community, and 3) discuss ways to remedy negative changes.
Subject Areas: Science, Social Studies
Grades: Activity: 5, 6, 7, 8; Variation 3-6

41.

Activity Title: **How Plants Grow**
Overview: A plant is a biological system with these basic requirements for functioning and growing: sunlight, water, air, soil, and space. This activity allows students to explore what happens when a plant's basic needs are not met.
Objectives: Students will 1) set up an experiment to determine what factors are necessary for plant growth and 2) measure and compare plant growth under different environmental conditions.
Subject Areas: Science
Grades: Activity: 4, 5, 6, 7, 8; Variation K-2

42.

Activity Title: **Sunlight and Shades of Green**
Overview: This activity introduces students to photosynthesis, the process that enables trees and other green plants to use sunlight to manufacture their own food.
Objectives: Students will 1) test the effects of lack of sunlight on plant leaves and 2) describe the process of photosynthesis and how it enables a plant to survive.
Subject Areas: Science
Grades: 2, 3, 4, 5, 6, 7, 8

43.

Activity Title: **Have Seeds, Will Travel**
Overview: A plant is a biological system. Its processes and components enable it to grow and reproduce. This activity will introduce your students to one aspect of a plant's reproductive system: its seeds.
Objectives: Students will 1) sort or classify plant seeds they have collected, 2) identify varying methods of seed dispersal, and 3) model or design seeds that use varying methods of dispersal.
Subject Areas: Science
Grades: K, 1, 2, 3, 4, 5, 6, 7, 8

44.

Activity Title: **Water Wonders**
Overview: The water cycle is the system by which Earth's fixed amount of water is collected, purified, and distributed from the environment to living things and back to the environment. Plants play a large part in the cycle be absorbing water with their roots and transpiring it as vapor through their leaves. This activity will introduce students to the various steps of the water cycle and to the various paths water can take. They will also make connections between the water cycle and all living things.
Objectives: Students will 1) simulate the paths that water takes in the water cycle, 2) describe the importance of the water cycle to living things, 3) conduct an experiment to discover how plants affect the movement of water in a watershed, and 4) describe how plants are important in maintaining water quality.
Subject Areas: Science
Grades: 4, 5, 6, 7, 8

45.

Activity Title: **Web of Life**
Overview: In this activity, students will take a close look at one particular ecosystem (a forest) and will discover the ways that plants and animals are connected to each other. By substituting the appropriate information, you can also use the activity to study other ecosystems, such as oceans, deserts, marshes, or prairies.
Objectives: Students will 1) collect information about various organisms in an ecosystem, 2) create a mural that depicts the interdependence of various organisms with other components in an ecosystem, and 3) create a simulated web of life using a ball of string.
Subject Areas: Science
Grades: 4, 5, 6, 7, 8

46.

Activity Title: **School Yard Safari**
Overview: Every organism requires a place to live that satisfies its basic needs for food, water, shelter, and space. Such a place is called a habitat. In this activity, students will go on a safari to explore a nearby habitat, the schoolyard, while looking for signs of animals living there.
Objectives: Students will 1) find signs of animals living in the school yard and 2) describe ways the school environment provides those animals with what they need to live.
Subject Areas: Science
Grades: PreK, K, 1, 2, 3, 4, 5

47.

Activity Title: Are Vacant Lots Vacant?
Overview: Look closely and you will see that a vacant lot is not so vacant! Plants of all kinds thrive in vacant lots, along with a host of animals such as insects, birds, and mammals. In this activity, a nearby vacant lot, overgrown strip, or a landscaped area will provide a rich laboratory for students to examine elements of an ecosystem.
Objectives: Students will 1) describe plants and animals that live at and around the study site, and 2) give examples of and describe ecological relationships between biotic and abiotic elements at the study site.
Subject Areas: Science
Grades: 4, 5, 6, 7, 8; Variation K-3

48.

Activity Title: **Field, Forest, and Stream**
Overview: In this activity students will examine three different environments as they focus on sunlight, soil moisture, temperature, wind, plants, and animals in each environment. By comparing different environments, students will begin to consider how nonliving elements influence living elements in an ecosystem.
living, nonliving, sunlight, soil, temperature, wind, plants, ecosystem.
Objectives: Students will 1) investigate and measure components in three different ecosystems, 2) describe similarities and differences they observe among three ecosystems, and 3) identify ways that the abiotic components of an ecosystem affect the biotic components.
Subject Areas: Social Studies
Grades: Activity: 4, 5, 6, 7, 8; Variation: 1-3

49.

Activity Title: **Tropical Treehouse**
Overview: In this activity, studying tropical rainforests and issues involving the use of rainforests will enable yours students to make more informed decisions regarding the future of such regions. While *tropical rainforests* and the *temperate rainforests* of North America operate on many of the same ecological principles, they differ greatly in their climates, and in the types of soil, plants, and animals that make up the forest ecosystems.

Objectives: Students will 1) describe the plants and animals that live in different levels of the tropical rainforest, and 2) examine and discuss a case study that involves the rights of native inhabitants of a tropical rainforest in a national park, 3) describe the sounds they might encounter when visiting a rainforest.
Subject Areas: Science, Social Studies
Grades: Part A: 3-6; Part B: 6-8; Variation: PreK-2

50.

Activity Title: **400-Acre Wood**
Overview: In this activity, students will play the roles of managers of a 400-acre (162-hectare) piece of public forest. Through these roles, students will begin to understand the complex considerations that influence management decisions about forestlands.
Objectives: Students will 1) create a management plan for a hypothetical piece of public forest land, taking into account factors such as ecosystem stability, monetary income or costs, wildlife, water, and visitor and 3) experience the analysis and decision making that goes into managing forest land.
Subject Areas: Science, Social Studies
Grades: 7, 8

51.

Activity Title: **Make Your Own Paper**
Overview: Paper is one of many products that is manufactured from forest resources. In this activity, students investigate the papermaking process by trying it themselves. While papermaking can be rather messy, it is well worth the effort. Students are usually thrilled to find that they can make paper and that their product is practical as well as beautiful paper, art. Students will 1) make recycled paper from scrap paper, 2) describe the steps of the papermaking process, and identify the elements and outputs of the process, and 3) compare making paper by hand to the process used in factories.
Subject Areas: Social Studies
Grades: 1, 2, 3, 4, 5, 6, 7, 8

52.

Activity Title: **A Look at Aluminum**
Overview: This activity will give your students a better appreciation for aluminum, a nonrenewable but recyclable natural resource they use every day. It will also help them understand why the processes of mining, refining, and producing aluminum are so energy-intensive. Finally, they will get a better idea of the environmental impact that using this resource has.
natural resource, aluminum, recycle, nonrenewable
Objectives: Students will 1) understand the difference in the amount of energy needed to produce aluminum from ore as opposed to recycling, 2) appreciate how the unique properties of aluminum make it invaluable for many products and technologies on which we depend, 3) describe the steps involved in extracting bauxite and processing aluminum from bauxite, and 4) explain the environmental impacts of producing new aluminum and recycling aluminum products.
Subject Areas: Social Studies
Grades: 5, 6, 7, 8

53.

Activity Title: **On the Move**
Overview: In this activity, students will examine transportations systems, which are vital to their community.
Objectives: Students will 1) compare various transportation methods for getting to and from school, 2) describe the transportation systems their community uses, and 3) design or propose a practical and efficient transportation system for the future.
Subject Areas: Science, Social Studies
Grades: Activity: 4, 5, 6, 7, 8; Variation: K-3

54.

Activity Title: **I'd Like to Visit a Place Where…**
Overview: In this activity, students will explore the concept that recreation areas are essential elements of a community. By working on a project to improve a local park, they will also learn about the community's system for managing open spaces.
Objectives: Students will 1) describe the characteristics of their favorite recreational area, 2) explain the importance of recreational areas to people and other living things, and 3) conduct a project at a local park to improve a habitat or enhance its suitability to people.
Subject Areas: Social Studies
Grades: 4, 5, 6, 7, 8 Variation: PreK-2

55.

Activity Title: **Planning the Ideal Community**
Overview: In this activity, students will explore the elements that compose a human community. They will survey the area around their school, looking for community systems that help them live there. Then they will plan an ideal community tat meets the needs of its members.
Objectives: Students will 1) map the locations of services and resources in their community, and 2) create a map of an "ideal" community that includes all the services and resources people need to live there.
Subject Areas: Social Studies
Grades: 4, 5, 6, 7, 8 Variation: 1-3

56.

Activity Title: **We Can Work it Out**
Overview: When certain people decide how to use a particular piece of land, the decision can involve and affect many people in many ways. Therefore, groups must establish processes for planning and resolving conflicts about land use. In this activity, students will develop a plan to address a land-use issue. Students will 1) develop solutions to a land-use problem involving urban open space and 2) simulate a city council meeting to discuss and decide on a land-use issue.
Subject Areas: Social Studies
Grades: 5, 6, 7, 8

57.

Activity Title: **Democracy in Action**
Overview: Democratic systems depend on the involvement of citizens in policy making and decision making. This activity will help students learn about the roles and responsibilities of citizens' groups in environmental policies and decision-making, and about how young people can become involved in the process.
Objectives: Students will 1) compare two citizen groups, special-interest groups, or government agencies involved in the same issues, 2) create visual representations of the two groups, and 3) explain ways students can become involved in the civic action process through participation in such groups.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

58.

Activity Title: **There Ought to Be a Law**
Overview: In democratic societies, citizens have the power to influence the lawmaking process. In this activity, students will find out how local laws are made and how they can get involved in the process.
Objectives: Students will 1) describe how a group of students can make and change rules, 2) compare rule-making in a group to the lawmaking process in local government, 3) research the steps necessary to make a proposed change in their community, and 4) create a poster that shows the effects of their proposed change and that depicts the lawmaking process.
Subject Areas: Science, Social Studies
Grades: 3, 4, 5, 6, 7, 8

59.

Activity Title: **Power of Print**
Overview: Newspapers keep the community informed about current events and trends, provide a forum for discussion of public issues, and are a source of entertainment. In this activity, students will examine articles from different sections of the newspaper by comparing and contrasting the different types of words and styles they employ.
Objectives: Students will 1) compare different sections of a daily newspaper, 2) analyze some of the ways the ideas and opinions are expressed through word choice, 3) research opposing sides of a local environmental issues, and 4) write articles on environmental issues using both objective and subjective points of view.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8; Variation: 3, 4, 5, 6

60.

Activity Title: **Publicize It!**
Overview: The news media, including television, newspapers, and radio, provide community members with a system for getting and spreading information about environmental issues. This activity can be done in conjunction with any of the action projects in this activity guide. Students will conduct an environmental action project and use various media to inform others in the community about the project.
Objectives: Students will 1) plan and carry out a community action project and 2) use the media to create public awareness about the event.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

61.

Activity Title: **The Closer You Look**
Overview: All students, no matter how young, have an idea of what a tree looks like. But many are unfamiliar with either the actual structure of a tree or the function of its principle parts. In this activity, your students will take a closer look at trees and their parts.
Objectives: Students will 1) describe the overall structure of a tree, and 2) describe the structure and function of a tree's principle parts.
Subject Areas: Science
Grades: PreK, K, 1, 2, 3, 4, 5, 6

62.

Activity Title: **To Be a Tree**
Overview: By making a tree costume, your students will gain an awareness of a tree's structure and functions.
Objectives: Students will create a tree costume and learn the structure and function of tree parts
Subject Areas: Science
Grades: PreK, K, 1, 2, 3, 4

63.

Activity Title: **Tree Factory**
Overview: By acting out the parts of a tree, your students will see how a tree works like a factory. Afterward, they can create their own "tree factories."
Objectives: Students will 1) describe the general structure of a tree and 2) explain how different parts of a tree help the tree function.
Subject Areas: Science
Grades: 3, 4, 5, 6; Variation: PreK-2

64.

Activity Title: **Looking at Leaves**
Overview: Are leaves ever hairy? Do they have teeth? In this activity, your students will take a closer look at leaves and find out more about leaf characteristics and how leaves can be used to identify trees.
Objectives: Students will 1) describe how leaf shapes, sizes, and other characteristics vary from tree to tree and 2) explain how particular types of trees can be identified by their leaves.
Subject Areas: Science
Grades: K, 1, 2, 3, 4; Variation PreK-8

65.

Activity Title: **Bursting Buds**
Overview: In early spring, the tiny, bright green leaves of many trees burst forth. Where do the leaves come from? How do they form? In this activity, your students will find the answers to these questions on their own by observing tree buds throughout the year.
Objectives: Students will 1) explain the purpose of a tree's buds and their relationship to the leaves and 2 describe the stages that buds go through as the leaves develop throughout the year.
Subject Areas: Science
Grades: K, 1, 2, 3, 4, 5, 6

66.

Activity Title: **Germinating Giants**
Overview: In this activity, students can sharpen their math skills by comparing their local trees to the world's tallest tree, the coast redwood, and to the tree with the largest seeds, the coconut palm.
Objectives: Students will 1) measure certain physical characteristics of at least three different trees and 2) compare various measurements from these trees and draw conclusions about the nature of each tree.
Subject Areas: Science
Grades: 4, 5, 6

67.

Activity Title: **How Big is Your Tree?**
Overview: Trees come in various shapes and sizes. In this activity, students will measure trees in different ways and become familiar with a tree's structure. They will also learn the importance of standard units of measure and measuring techniques.
Objectives: Students will 1) measure and compare trees and tree parts, 2) discuss how and why people measure things, including trees, and 3) explain the need for consistency in measuring.
Subject Areas: Science
Grades: 3, 4, 5, 6, 7, 8; Variation: PreK-2

68.

Activity Title: **Name That Tree**
Overview: Tree species can be identified by looking at several different features; leaves, bark, twigs, flowers, fruits, and seeds. Even the overall shape of a tree can give clues to the tree's identity. In this activity, your students will learn more about trees by identifying features. Afterward, they can play an active game that tests their knowledge of different types of trees.
Objectives: Students will identify several trees using various structural characteristics.
Subject Areas: Science
Grades: 2, 3, 4, 5, 6, 7, 8

69.

Activity Title: **Forest for the Trees**
Overview: In this activity, students will role-play managing a tree farm. By using a piece of land as a tree farm, they will begin to understand the economic factors that influence management decision for private forestlands.

Objectives: Students will 1) participate in a simulation designed to teach how forest resources are managed and 2) simulate managing a piece of land for various products.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

70.

Activity Title: **Soil Stories**
Overview: Students often wonder why certain plants grow in some places and not in others. Climatic factors such as temperature, moisture, and sunlight keep palm trees in Florida and fir trees in Oregon, but subtle differences in soil allow an oak to compete more successfully in one area and a maple in another. In this activity, students will explore differences in soil types and what they mean to us.
Objectives: Students will 1) identify components of soil and how these components determine its function, 2) explain how different soil types determine the characteristics of ecosystems, and 3) predict the influence of soils on water filtration and on human use of an area.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

71.

Activity Title: **Watch on Wetlands**
Overview: If a duck can paddle in it, it's a wetland. If a duck can waddle on it, it's not. If only wetlands could be defined as simply as this, wetlands issues and legislation would be less muddy. In this activity, students will learn more about wetlands and about how land-use decisions and legislation affect these areas.
Objectives: Students will 1) study a wetland ecosystem and 2) analyze the issues and opinions relating to the management and protection of wetlands.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

72.

Activity Title: **Air We Breathe**
Overview: Did you know that the air in our homes, schools, and offices can sometimes be less healthy than the air outside? And that one of the most serious indoor air pollutants, radon, is actually produced naturally from the radioactivity decay of uranium--the same process we rely on for our production of energy in nuclear reactors. In this activity, students will learn more about indoor air quality and what can be done about it.
Objectives: Students will 1) identify various types of indoor air pollutants and their sources, 2) understand ho various pollutants can be harmful to people's health, 3) trace how radon can get into building and eventually into our bodies, 4) learn the connection between how radon is produced naturally and the role of radioactive decay in power production, and 5) take action to improve indoor air quality.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

73.

Activity Title: **Waste Watchers**
Overview: Energy use seems easy, but is often not easy on the environment. When we reduce the amount of energy we use, we decrease the pollution that results from producing that energy. One of the ways to decrease energy use is to cut down on energy waste. In this activity, your students can take a look at how they use energy in their own homes and how they can reduce the amount of energy they waste.
Objectives: Students will 1) identify ways to save energy in their daily lives and 2) explain how saving energy can reduce air pollution.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7 ,8

74.

Activity Title: **People, Places, Things**
Overview: By taking a closer look at their community, students can gain an appreciation for its structure and complexity. In this activity, students will develop a deeper understanding of the many people, places, and things on which they depend every day.
Objectives: Students will 1) explain how human communities are made up of different types of people, places, and things, and how they all fit together and 3) investigate some of the people, places, and things that make up their own community.
Subject Areas: Social Studies
Grades: K, 1, 2, 3

75.

Activity Title: **Tipi Talk**
Overview: Whether it's a 100-room palace or a small hut made of branches, all human shelters serve the same basic purposes: they provide privacy, shelter from inclement weather, and protection from danger. In this activity, your students will take a close-up look at one kind of dwelling--the tipi used by American Indians on the Plains--and will discover how homes can give clues about the lives of people who live in them.
Objectives: Students will describe several different types of American Indian shelters and the materials that were used to make them.
Subject Areas: Social Studies
Grades: 4, 5, 6, 7, 8 M

76.

Activity Title: **Tree Cookies**
Overview: One of the best ways to learn about a tree is to look at its annual rings. Tree rings show patterns of change in the tree's life as well as changes in the area where it grows. In this activity, students will trace environmental and historical changes using a cross section of a tree trunk, or "tree cookie."
Objectives: Students will 1) identify heartwood, sapwood, and a tree's annual rings, 2) infer from a tree's rings what damage or stress might have occurred in its life, and 3) make a timeline of human history that coincides with a tree's rings.
Subject Areas: Science
Grades: 3, 4, 5, 6, 7, 8; Variation: 1-3

77.

Activity Title: **Trees in Trouble**
Overview: Like humans, trees can become weak and unhealthy, suffer injury, and die. People have learned to read the symptoms of unhealthy trees to help them. In this activity, students will examine trees for signs of damage or poor health.
Objectives: Students will 1) cite factors that can cause trees to become unhealthy, 2) describe symptoms of unhealthy trees, 3) compare environmental conditions that affect both human health and plant health, and 4) identify people or agencies that care for trees and forests.
Subject Areas: Science
Grades: 1, 2, 3, 4, 5, 6, 7, 8

78.

Activity Title: **Signs of Fall**
Overview: In temperate regions, people can observe the annual change of seasons. In this activity, students will look for signs of autumn. They will also try an experiment to discover why leaves of deciduous trees change color in the fall.
Objectives: Students will 1) describe some of the differences between deciduous and conifer trees, 2) identify patterns in the changing of seasons, and 3) understand why leave of deciduous trees change color in the fall.
Subject Areas: Science
Grades: K, 1, 2, 3, 4, 5, 6

79.

Activity Title: **Tree Lifecycle**
Overview: In this activity, students will discover that trees have a lifecycle that is similar to that of other living things. They will investigate a tree's role in the ecosystem at each stage of its life.
Objectives: Students will 1) diagram the lifecycle of a tree, 2) compare a tree lifecycle to a human lifecycle, and 3) explain the role each stage of a tree's life plays in the forest (or other) ecosystem.
Subject Areas: Science
Grades: 3, 4, 5, 6; Variation: PreK-2

80.

Activity Title: **Nothing Succeeds Like Succession**
Overview: Succession is a natural pattern of change that takes place over time in a forest or ecosystem. In this activity, students will study the connection between plants, animals, and success ional stages in local ecosystems.
Students will 1) explore basic relationships between species diversity and ecosystem stability, 2) identify success ional stages in ecosystems based on plant and animal species, and 3) draw conclusions about the process of succession based on study test plots in different stages of succession.
Subject Areas: Science
Grades: 3, 4, 5, 6, 7, 8

81.

Activity Title: **Living With Fire**
Overview: The term "forest fire" may conjure up images of fear and devastation. Preventing fires is still important, but times have changed. In this activity, students will learn how fire is a natural event in forests and other ecosystems and how it helps keep plants and other parts of the ecosystems healthy.
Objectives: Students will 1) describe a forest fire, how it starts, spreads, and burns out and 2) explain several approaches to forest fire management.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8; Variation: PreK-2

82.

Activity Title: **Resource-Go-Round**
Overview: This activity gives students the opportunity to explore a variety of natural resources and products that people depend on every day. In addition, students will gain insight into the processes by which these natural resources are turned into products and the energy needed to make the products we use.
Objectives: Students will 1) identify the natural resources from which products are derived, 2) trace the lifecycle of a product from natural resources, to raw materials, to the finish product, and 3) describe how energy is consumed in the manufacturing and transportation of products and how it might be conserved.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

83.

Activity Title: **Reduce, Reuse, Recycle**
Overview: Patterns for reducing solid waste can be seen in community efforts to reduce consumption and recycle resources. In this activity, students will set up a program for reusing, recycling, and reducing consumption of resources at school.
Objectives: Students will 1) learn about ways to reduce solid waste in their community by reducing consumption, reusing products, recycling materials, and composting and 3) communicate to others the importance of recycling their community.

Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

84.

Activity Title: **A Peek at Packaging** ***(Activity #83 in the 2006 edition)***
Overview: Nearly everything we buy comes in some sort of package. Packaging, made from a variety of renewable, and nonrenewable resources, is necessary to protect an item, keep it fresh, make it tamper-proof, and make the item easy to transport and store. In this activity, students will examine the pros and cons of different packaging strategies.
Objectives: Students will 1) describe the different purposes for packaging, 2) identify the pros and cons of different types of packaging, and 3) explore how packaging affects our decision as consumers.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

84. (2006 edition)
Activity Title: The Global Climate
Overview: *Using data collected from Mauna Loa, students will graph changes in atmospheric levels of carbon dioxide (CO2) over a 46-year period, and identify possible reasons for those changes. They will also learn about the relationship between CO2 and the Earth's climate, and explore ways to reduce the amount of CO2 they generate.*
Objectives: *Students will 1) examine and analyze trends in CO2 levels, 2) learn how an increase in temperature can affect ecosystems, 3) identify ways to reduce the amount of CO2 they generate.*
Subject Areas: Science, Math, Social Studies, Language Arts
Grades: *6, 7,8*

85.

Activity Title: **In The Driver's Seat**
Overview: In this activity, students learn about gasoline, then explore fuel conservation and energy efficiency by simulating the distance they can travel on a set amount of gasoline using different vehicles.
Objectives: Students will 1) gain knowledge about the differences in fuel economy between different vehicles and 2) explain strategies for reducing the amount of fuel used by vehicles.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

86.

Activity Title: **Our Changing World**
Overview: Patterns of change are evident in the Earth's global systems, particularly as they relate to both energy and resources. By exploring the issues of global change, students will gain an understanding of how we must deal with the possibility of global environmental changes today. Students will 1) identify some global environmental patterns relative to energy and natural resources, 2) discuss issues related to global change, and 3) describe actions that people can take to improve the environment and quality of life.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

87.

Activity Title: **Earth Manners**
Overview: Children are naturally curious about their environment. They should be encouraged to explore the out-of-doors, while having respect for living things and their habitats. In this activity students will develop a set of guidelines for exploring and enjoying nature.
Objectives: Students will express appropriate ways to treat living things and to act in forests, parks, and other natural areas.
Subject Areas: Science, Social Studies
Grades: PreK, K, 1, 2, 3, 4

88.

Activity Title: **Life on the Edge**
Overview: Patterns of change can be observed in the diversity of species on Earth. In this activity, students will become advocates for endangered species of plants or animals, and create "public relations campaigns" on behalf of these species.
Objectives: Students will 1) identify environmental factors that can cause species to become endangered, 2) research the current status of several endangered plants or animals, and 3) present persuasive arguments for the protection of a particular plant or animal species.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

89.

Activity Title: **Trees for Many Reasons**
Overview: By reading fables such as *The Lorax* by Dr. Seuss or *The Man Who Planted Trees* by Jean Giono, students can examine the importance of conserving natural resources.
Students will discuss and analyze a fictional story relating to the proper and improper use of natural resources.
Subject Areas: Science, Social Studies
Grades: 2, 3, 4, 5, 6, 7, 8

90.

Activity Title: **The Native Way**
Overview: Patterns of change can be observed in human uses of natural resources. In this activity, students will explore some traditional American Indian attitudes and lifestyles with respect to the land and its resources and will compare those attitudes with their own.
Objectives: Students will describe traditional American Indian lifestyles and their use of natural resources and the land.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

91.

Activity Title: **In the Good Old Days**
Overview: Human attitudes and values, and therefore behavior, with regard to the environment can change over the course of generations. In this activity, students will study the writings of men and women who have shaped the way people think about the environment.
Objectives: Students will 1) describe important events in the history of conservation, 2) explain how environmental problems and perceptions of environmental quality have changed through history, and 3) express the point of view of a famous figure in the history of conservation.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

92.

Activity Title: **A Look at Lifestyles**
Overview: By examining the historical attitudes of American Indians and American pioneers towards the environment and natural resources, students can reflect on their own lifestyles, and identify trade-offs between simple subsistence and the modern technology-based living.
Objectives: Students will 1) analyze and American Indian legend and discuss their attitudes toward using the land, 2) identify some of the values of the early American pioneers, and 3) create a chart comparing our own lifestyles with those of traditional American Indians and early pioneers.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8

93.

Activity Title: **Paper Civilizations**
Overview: Humans have always had a strong need to record the events of their lives. From cave painting to writing paper, humans have preserved their history in many ways. In this activity, students will discover how the development of paper revolutionized the way people communicate and record information.
Objectives: Students will 1) chronicle the major events in the history of papermaking and 2) create a pictorial representation of the history of paper.
Subject Areas: Science, Social Studies
Grades: 4, 5, 6, 7, 8

94.

Activity Title: **Where are the Cedars of Lebanon?**
Overview: Throughout history, people have depended on natural resources for survival. The availability of food, water, and resources to build shelters has generally determined where humans have settled and how cultures evolved over time. In this activity, students will explore how ancient civilizations developed systems for using their natural resources.
Objectives: Students will 1) investigate how ancient civilizations used natural resources and affected the environment and 2) apply environmental lessons learned in the past toward solving current environmental problems.
Subject Areas: Science, Social Studies
Grades: 6, 7, 8

94. (2006 edition)

Activity Title: By the Rivers of Babylon
Overview: *Throughout history, people have depended on natural resources for survival. The availability of food, water, and other resources has generally determined where humans have settled and how cultures evolved over time in this activity, students read about an ancient civilization and create "before" and "after" pictures that describe its decline.*
Objectives: *Students will 1) analyze how an ancient civilization changed over time and explain possible causes for that change, and 2) apply environmental lessons learned form past civilizations to understand current environmental problems.*
Subject Areas: *Social Studies, Science*
Grades: *6, 7, 8*

95.

Activity Title: **Did you Notice?**
Overview: In this activity, students will study changes in their local environment over short and long periods and will identify patterns of change.
Objectives: Students will 1) identify changes in their local environment of the course of time, and 2) create a timeline to illustrate patterns of change over time.
Subject Areas: Science, Social Studies
Grades: K, 1, 2, 3, 4, 5, 6, 7, 8

96.

Activity Title: **Improve Your Planet**
Overview: Each living thing has a habitat--a place to live that suits its needs. For human beings, the community they live in is their habitat. In this activity, students are encouraged to take action to improve their community by making some positive environmental changes.
Objectives: Students will 1) identify ways they can improve their local area, and 2) carry out plans to improve the area.
Subject Areas: Science, Social Studies
Grades: 5, 6, 7, 8