

These Lesson Plans are a culmination of school-wide activities and classroom activities, ranging from grades K-12.

## Lesson Plan

### Nature-Oriented Kindness Projects

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#### Type of Activity:

These projects focus on science and nature lessons while having kids work in small groups or in pairs.

**Grade Level:** Elementary/Middle School

#### Overview:

I would like to encourage everyone to have their school become a schoolyard for nature and have it certified through the National Wildlife Federation. My school has just completed the process and benefits are immense in many areas. I worked through the process with the grades preschool through eighth grade. Primarily, I used fourth grade as well as my elementary science club.

We chose many projects that extend throughout the school year because I wanted to continue to work on the project throughout the fall, winter, and spring season. This project can be completed in a shorter time frame. I have listed a few lessons from each subject area to show how outdoor education can benefit the wildlife and the students, as well as be a lot of fun for everyone.

We began in the area of science, however, this project covers and will continue to cover every area of the curriculum math, writing, reading, science, social studies, and art. Computer skills include using the Internet, database and word processing skills. Social skills within a group and responsibly for our actions to the environment are also covered. Outdoor education is a fun and rewarding way to learn.

Most of the class work is completed in small groups or pairs. This is a great way for all learning levels to be successful. There is a leader, an encourager, and a note writer in each group. The leader's job is to make sure everyone participates. Throughout the year everyone has a chance at each of the jobs more than once. I also continually put them in different groups so that everyone gets a chance to learn how to work with each other.

## Lesson 1

Question: What are the 4 main things that everyone needs to survive?  
Materials: Pictures of nature, paper, pencil  
Time: 30 minutes

The students worked in small groups to discuss this problem. They are to list in note form the 4 basic needs: food, shelter, water, and space.

Next day: 30 minutes  
Materials: Paper, glue, color pencils

After the group arrives at the four needs, I ask each student to write a paragraph listing these needs and a drawing showing how we can help an item of nature achieve this goal here at school. As we compiled the lists we decided what type of wildlife we would like to see around the school campus. This gave us the basis for our research.

## Lesson 2

Materials: Bird & butterfly nature guides, plant books, encyclopedia, computer Internet accesses, Encarta  
Time: 2 class periods depending on the age of the groups and the interest of the students

Research on the Internet, in encyclopedias, books, and magazine for types of birds, butterflies, and native plants in our area. I paired the students for this lesson. This was less threatening this way and kept them more on task. The librarian and computer teacher was very helpful in guiding us to the many sources that are out there to use. The students copied pictures off the Internet and then we cut and pasted them on a new paper. Then the students wrote down what type of pant or food source the animal needs to survive. The papers were compiled to make a herbarium. This booklet will be used throughout the school to help students identify the animal and the type of plants around the school. This book is ready to be checked out, not only by any class, but also students who want to take their parents and grandparents around and show them the plants and wildlife we have identified. The children are excited and parents amazed when they call the butterflies, birds, or plants by their proper name.

## Lesson 3

Materials: Flowers, trowels, seeds, water source, journal, camera  
Time: 1 class period

We begin the butterfly garden. After research we identify which butterflies we want to attract and which host plants we need to have. Not only the flowers the butterfly needs, but also the plant the eggs are laid on and the caterpillar eats. We kept daily logs on how long this life cycle process takes. \*\*\* We found that nurseries will donate a few plants or seeds if they know why you are planting the garden. Also seed can be gathered dried and used for the next season. Milkweed, passion vine, and sunflowers were easy to work with. \*\*\* All items planted and dates planted were placed in a journal. Pictures were taken.

Time: Throughout the year  
Materials: Journal, ruler, paper, pencil, color crayons, thermometer

Plants were observed daily. Observations will be written in the journal. Butterfly types were identified around the school.

Materials: We purchased netting and embroidery hoops and made butterfly houses for the caterpillars to make their cocoons in.

As caterpillars arrived the preschool and first grade drew pictures showing the life cycle and host plant for different types of butterflies. Older classes averaged the length of time of the different cycles. We compared the shape of the cocoons of different butterfly types. We compared the weather especially temperature and the effect it has on the length of the butterfly cycle.

#### **Lesson 4**

Time: 1 class period  
Materials: Newspaper, tape, poster board, markers, garbage cans, enamel paint, scale

The Science Club set up a recycling program to fund the wildlife habitat. We contacted an area company for newspaper recycling bin to put recyclable newspapers in. We also made recycling cans for aluminum cans. Our city has a recycling program, but they still allow individuals to set up recycling areas. The money we raise from recycling goes to purchase plants and other items needed for the National Wildlife Habitat. Once a year we have a newspaper drive where we estimate how many pounds each class can bring in, then weigh, and graph the results. This process is for the month of April in celebration of Earth Week. The science club worked in-groups and made newspaper animals to hold signs to encourage the participation of each class.

#### **Lesson 5**

Materials: Various easy reading books, sunflower seeds, pots, potting soil, trowel, water can, water  
Time: 30 minutes a week

The fourth grade meets with a kindergarten class we call our book buddies once a week for thirty minutes. The classes are divided into pairs. This is a wonderful way to encourage older students to learn how to work with younger students and every fourth grader can be successful reading to a kindergartner. This week we read together the book A Tree is Nice by Janice May Udry. Then the students find a place outside and read another book together. We call the pairs up one at a time to plant sunflower seeds and gourds that will later be used to make birdhouses. Each week as we go to the book buddy class we chart the progress of the plants. Throughout the year we read other plant books and take turns weeding the garden area, or drawing pictures of the different stages of the plants. Some other good books are: The Lorax by Dr. Suess, The Tale of Three Trees retold by Angela Elwell Hunt, The Wump World by Bill Peet, The Giving Tree by Shel Silverstein, Arbor Day by Diane L. Bums, Red Leaf Yellow Leaf by Lois Ehlert, The Great Kapok by Lynne Cherry, The Tree by Donald Carrick, The Oak Tree by Laura Jane Coats, The Big Tree by Bruce Hisock, and A Busy Year by Leo Lionni.

This is a great experience for both my fourth graders and the kindergarten class. All students are given a chance over the course of the year to really bond with another child of a different age. The fourth graders are wonderful encouragers as they watch the reading and writing progress their book buddy makes. We have noticed this special bond continues throughout the years of the student's career at our school.

## **Lesson 6**

Materials: Drawing paper, pencils, chalk, clipboard  
Time: 1 class period

The students drew the different gardens in different seasons. We compared the life cycle of the different plants. The older children worked on drawing to scale. During an art show we showed the same plant portrayed by different age groups. It was great seeing how the drawings progressed. Some of these drawings were placed in the herbarium for plant recognition. The upper grades drew a school map to scale with a key. The map of the area you are trying to show for the wildlife habitat needs to go with the application.

## **Lesson 7**

Materials: Clipboard, paper, pencils  
Time: class period

Different times of the year different classes went out for a writing day in the garden. The students listened and observed an area on the school grounds. Then they wrote descriptive paragraphs of their observations. Another class wrote poetry. Some of these were saved for the herbarium.

## **Lesson 8**

Materials: Hammer, nails, precut wood, enamel paint (holes were predrilled where the nails will go.)  
Time: 2 class periods

The science club will follow plans to make bird feeders. The students will build the feeders with some parent help. Some of the feeders will be added in different areas of the school campus, and others will go home to help start a natural habitat there. The wood is purchased from the funds raised from the recycling efforts.

## **Lesson 9**

Materials: Clipboard, journal, metric ruler, graph paper, flower press  
Time: About 20 minutes once a week

The plants are measured once they are planted in the garden. Their progress is checked and noted in a journal. The results are graphed and different types of species are compared. The seeds from the plants are gathered and used next year in the garden. A leaf

and a flower is pressed from each species and placed in the herbarium next to the picture and facts about the plant. (The flower press was made with cardboard cut the size of printer paper, and large rubber bands to keep it tight.)

## **Lesson 10**

Materials: 3 ring binder, plastic inserts, dividers, pictures, materials gathered throughout the year

Time: ongoing project

The science club looked at and compiled the different areas of the herbarium. These items are placed in plastic inserts and then placed in a three ring binder. We have digital camera pictures, researched pieces to help identify the plants, birds, and butterflies that have been located on campus. We have a school map drawing. Also there is a section on poetry and writing in the gardens.