

# Project Based Learning First Grade: Science- Plants and Animals

By: Nikki DiGiacomo

## Essential Question

How do plants and animals live?

## Sub Questions

What are plants?

What are animals?

What are the basic needs of plants and animals?

Do different species need different things to survive?

Do people need the same things as plants and animals to survive?

## Real World Connection

All around us are plants and animals. We see plants and animals at school, at our homes, and while we are in our cars. In this unit we will explore the world around us through a visit to the zoo and by growing our own plants.

## Objectives

### Science

1.01 Investigate the needs of a variety of different plants:

- Air.
- Water.
- Light.
- Space.

1.02 Investigate the needs of a variety of different animals:

- Air.
- Water.
- Food.
- Shelter.
- Space.

1.03 Observe the ways in which humans are similar to other organisms.

1.04 Identify local environments that support the needs of common North Carolina plants and animals.

1.05 Discuss the wide variety of living things on Earth

## **VISUAL ARTS**

1.01 Understand the purpose of the activity.

8.01 Recognize the difference between manmade objects and natural objects.

## **COMPUTER/TECHNOLOGY SKILLS**

2.03 Identify, discuss, and use word processing as a tool to enter numbers, words, and phrases.  
(4)

2.05 Locate and use letters, numbers, and special keys (e.g., arrow keys, space bar, insert Enter/Return, Backspace, Delete) on the keyboard.

## **LANGUAGE ARTS**

**2.05** Predict and explain what will happen next in stories.

**2.07** Respond and elaborate in answering what, when, where, and how questions.

**2.08** Discuss and explain response to how, why, and what if questions in sharing narrative and expository texts.

**4.06** Compose a variety of products (e.g., stories, journal entries, letters, response logs, simple poems, oral retellings) using a writing process.

**5.02** Apply phonics to write independently, using temporary and/or conventional spelling.

**5.04** Use complete sentences to write simple texts.

**5.05** Use basic capitalization and punctuation:

- first word in a sentence.
- proper names.
- period to end declarative sentence.
- question mark to end interrogative sentence.

**5.06** Self-monitor composition by using one or two strategies (e.g., rereading, peer conferences).

**5.07** Use legible manuscript handwriting.

## **Activities:**

### **Day 1: Introduction of plants and animals**

#### **Materials:**

markers

pictures of different plants with names written on it

pictures of different animals with names written on it

big chart paper

pencil

**Duration:** 1 hour

In order to introduce the topic of plants and animals to the class I will split them up, as evenly as possible, into two groups. To split them up I will hand out pictures to each student and they will have to sort themselves using their picture. Animals will be on one side of the room and plants

on the other side. These will be the groups for the rest of the unit. One group will be Animals and the other group will be the Plants. The first thing they will do is decide on a group name. After they decide on a group name, I will assign someone in their group to be the recorder and the group will discuss what they Know about the subject. Once both groups are done we will gather together as a class. I will already have the KWL charts prepared and will ask for each group to share what they Know about their group. After I have written down what they know we will discuss what we all Want to learn about plants and animals. I will write this down on the KWL chart also and then post both KWL charts at the front of the classroom.

The homework they will be doing for the week is based on what picture they received when they were sorting into groups. They will have four full nights to do a small project telling about their plant or animal.

## Day 2: Plants

### **Materials:**

[Plant worksheet](#)

straws

3-4 pieces of 2 inch string for each student

a large bag of sunflower seeds

crayons

large white construction paper

liquid glue

6 oz styrofoam

potting soil

grass seed

**Duration:** 1-1.5 hours

To start the lesson read the book The Magic School Bus- Plants and Seeds. Discuss the different parts of the flower that the bus is exploring. After reading give each child the plant handout and read over the description of each part out loud. Using the above materials and the handout as a guide instruct the children to make their own flower on the construction paper. Hand out all of the materials and keep a close eye on glue use. Set the flower aside and have everyone gather at the front of the room to discuss what keeps plants alive. Ask what they think helps a plant grow and live. Discuss what would happen if plants didn't have enough of what they needed. Discuss the two types of plants (flowering and non-flowering). Come up with a list of plants for each category. The glue on the paper has probably dried enough by now to go back and let the students create a scene around their flower that shows at least 2 of it's major needs.

As a follow up activity, to physically see a plant grow, fill a styrofoam cup with potting

soil 1/4 way full. Add grass seeds and cover with potting soil to halfway up the cup and add enough water to get the soil damp. Have the students put their cups in a sunny spot inside the room. Take care of these until the grass has grown and let students decorate the cups and take them home.

### Day 3: Animals

**Materials:**

[Crossword Puzzle](#)

Computer Lab

**Duration:** 45 minutes

Split the class in half. One side will be deer and the other side will be the basic needs. They start off facing opposite directions and both groups will pick a need (water, food, or shelter) and then they will turn to face each other. Putting your hands in a triangle is for shelter, pretending to hold a glass in one hand is for water, and putting your hand to your stomach is for food. The deer have to find the same need that they have and if they can pair up with someone then they don't "die", but if they can not find their need they will "die" and have to sit out. Do this a few times changing the number of students in the groups. Discuss what happened and why some of the deer died off.

Go to computer lab and work on crossword puzzle.

### Day 4: Are our needs similar or different from plants and animals?

**Materials:**

SMART board

computers

white construction paper

**Duration:** 45 minutes

Put a Venn diagram on the SMART board and label one side as plants and the other side as animals. Have students tell how they are different. Then have students give ways that plants and animals are alike. Discuss what we need to stay alive everyday. Ask if they can find similarities and differences between people, animals and plants. Write about the differences and similarities and why people, animals, and plants need these things to survive.

## Day 5: Field Trip!

**Materials:**

Zoo

Activity busses

[Worksheet](#)

Digital Cameras

**Duration:** All day

On the last day of the unit take a field trip to the zoo. Have students in groups of three, if possible, and have them fill out the worksheet. They will each do two animals. Have them pay special attention to the vegetation around each animal. Enjoy the day outside observing animals and plants. Take a lot of pictures!

The take home research project should be completed and turned in. Post the individual research projects up in the hallway for everyone to look at and learn from.

## Day 6: What I learned!

**Materials:**

Pictures from zoo trip

computers with iPhoto, iMovie, and ComicLife

SMART Board

**Duration:** 3 hours

Allow groups to put their photos from the zoo trip into iPhoto and let them decide if they would like to do a slide show using iPhoto or iMovie or make a comic using ComicLife. Let the students do their presentations using the SMART board.