

# Brain-Targeted Teaching<sup>®</sup> Arts Integrated Learning Unit



Lesson Title: **What's Sprouting this Spring?**

Unit Title: **Seasons and Senses**

Grade: Pre K

Author(s) T. Jackson/M. Mundie

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## Overview

### Learning Goals:

1. Students will understand the physical characteristics of spring and describe them using their senses.

This learning goal fits in with the larger themes of seasons and senses which we have been discussing throughout the entire year.

2. Students will understand the life cycle, habitat, body parts and needs of insects.

3. Students will evaluate and synthesize the knowledge they learn in this unit to create their own anatomically correct plants and insects. Having students use the knowledge they have gained to create their own insect and plant models allows us to see that they have internalized the information they were taught in a meaningful way.

4. Students will understand the life cycle, habitat, body parts and needs of plants.

5. Students will apply their knowledge of plants needs in order to grow their own plant. Having students watch and care for their very own plant allows them a sense of responsibility and ownership over their learning. It also allows them to become emotionally invested in their projects and shows them real life applications of the information they are learning.

## BT1: Setting the Emotional Climate for Learning

In order for students to be fully engaged in what they are learning they must make an emotional connection with the material. Even more importantly we have learned about the long term impact emotional connection can have on learning and memory. Pre-K students are just beginning to form their lifelong relationship with school and learning. Therefore this early time in education is one of the most important for ensuring that students become invested in their own learning and willing and excited to become deeply involved in academics. With this in mind we have mindfully created ways to ensure our students are emotionally connected to our unit "What's Sprouting in Spring".

Here are some of the ways we have done that:

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- Give students cameras to take pictures on their spring walk and displayed the pictures in the room
  - Sang spring songs and recited spring poems
  - Created a Think, Know, Wonder chart that allowed us to incorporate answering their questions into our unit
  - Hung student work in the room
  - Had students grow their own plants
  - Had caterpillars and larvae that we watched grow into butterflies and ladybugs

## BT2: Creating the Physical Environment for Learning

**Spring** is a very tactile subject. It is one of the most pleasant times of the year for our senses; the days stay light longer, the weather becomes warmer, blooming flowers are beautiful and fragrant. Therefore incorporating the physicality of spring with our academic unit was something we were both looking forward to doing. The students were also excited by all the new sights, sounds and smells that we were able to bring into the classroom. To do this we:

- Add floral and other spring scented candles
- Grew flowers and vegetables in our classrooms
- Exhibit student writing and drawings
- Display our Spring collage
- Add spring themed books to our classroom libraries
- Incorporat Spring themed songs into our psychomotor breaks

## BT3: Designing the Learning Experience

### Introductory “Big Picture” Activity/Assessment of Prior Knowledge

As a class students will complete a “Think, Know, Wonder” chart. At this point students will be given the opportunity to activate their prior knowledge of seasons and senses. This will also allow us as teachers to have an understanding of the knowledge; misconceptions and questions students have about spring. It will also allow us to tailor our unit to answer any questions students brought up, encouraging them to become more emotionally invested in the material.

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## Unit Standards:

**Standard 3.0 Life Science: The students will use scientific skills and processes to explain the dynamic nature of living things, their interactions, and the results from the interactions that occur over time.**

### A. Diversity of Life

1. Observe a variety of familiar plants and animals to describe how they are alike and how they are different.

- Gather information about how some animals are alike in the way they look and in the things they do.
- Gather information about how some plants are alike in the way they look and in the things they do.
- Draw a picture of two animals that look alike (or plants) and of two animals (or plants) that look different and respond to questions that are raised by those who observe the pictures.
- Identify some of the things that all animals do, such as eat, move around and explain how their features (observable parts) help them do these things

### C. Genetics

1. Observe, describe and compare different kinds of animals and their offspring.

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1. Observe, describe and compare different kinds of animals and their offspring.

a. Recognize and describe the similarities and differences among familiar animals and their offspring.

Describe how offspring are very much, but not exactly, like their parents and like one another.

### Standard 1.0 Skills and Processes

Students will demonstrate the thinking and acting inherent in the practice of science.

### A. Constructing Knowledge

Describe what can be learned about things by just observing those things carefully and adding information by sometimes doing something to the things and noting what happens.

Seek information through reading, observation, exploration, and investigations.

Use tools such as thermometers, magnifiers, rulers, or balances to extend their senses and gather data.

Lesson graphic organizer

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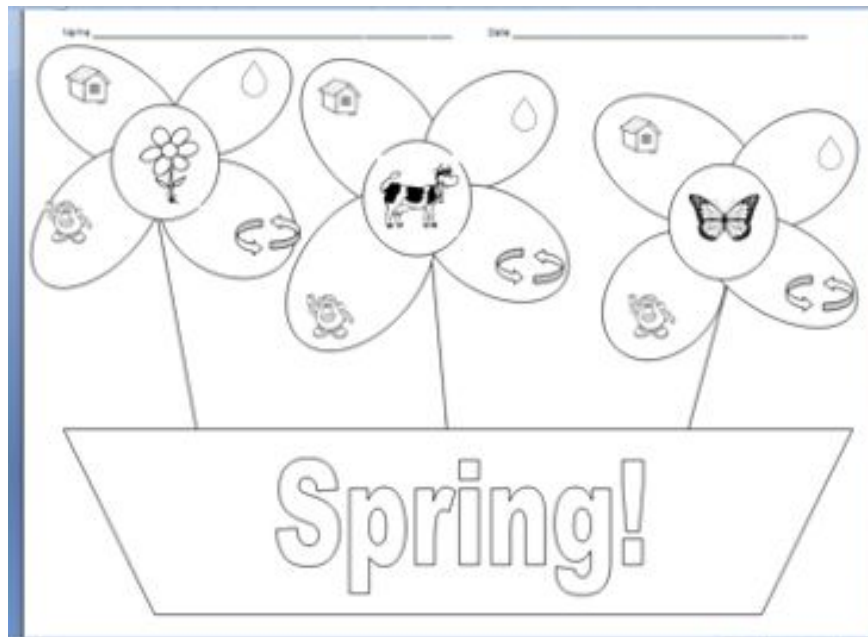


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Although Pre-K students are too young to understand a topic first on a large scale then in its complexities we found that making a concept map helped us teach in a more organized manner and helped the students keep track of what they had already been taught. We had a large copy of the map for ourselves and smaller copies for the children. As they learned new information they colored in the blank spaces on the map.

## **BT4: Teaching for Mastery of Skills, Content, and Concepts**

### **Learning Tasks:**

#### **Read Aloud**

This spring themed science unit aligns with our literacy unit "Spring has Sprung", therefore we will have several opportunities to read the children both fiction and nonfiction books about insects and plants. Through the read alouds students will have the opportunity to analyze illustrations of bugs and plants, use research methods to find relevant information in the books, participate in discussions

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about our topic and compare and contrast similarities and differences between insects and plants.

## **Shared Writing**

These shared writing activities will help students understand how to write with clarity when answering questions, how to include relevant details when discussing a topic and how to use examples from real life to support their topic.

## **Creating Scientific Drawings with labels**

Scientific drawings and labels are always a great way to integrate arts and have children visually show what they know.

## **Spring Walk/Collage Creation**

During our Spring Walk students will be allowed to collect materials from outside and take pictures. When we come back we will write a story about our Spring Walk and use the materials we collected to make a multimedia spring collage.

## **Growing plants from seeds**

Another fun, hands on way for children to experience what they are learning. Growing plants gives the students the opportunity to take responsibility for fulfilling the needs of a plant and allows them to clearly see all stages of the plant's life cycle.

## **Observing bugs**

The students love to catch and observe bugs we find around the room. This also gives us an opportunity to look up information about the bugs we find (what kind of bug is it? Is it an insect? What does it eat? Etc.)

## **Poems/Songs about spring**

Fun and engaging! Young students love to sing and recite rhymes.

## **Meaningful dance movement**

Students will use their bodies to show how a seed begins small and slowly sprouts then blooms into a flower. Allowing students to act out a seeds life cycle with their bodies allows for them to really grasp the changes a plant goes through. It also provides meaningful psychomotor breaks. Students can choose which type of plant they are going to become and compare if they grow differently or the same.

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## BT5: Teaching for Extension and Application of Knowledge

**Learning Tasks: Students will create their own insect out of paper.** On a paper plate they will draw the habitat for the insect and then they will use edible materials to create their own anatomically correct insect. This will show students fully understand all parts of an insect and the concept of a habitat. It will allow students to be creative and have fun.

**Students will create a storyboard showing the growth of a seed into a plant**

This will come from students watching the plants they have grown over several weeks. They will have to include at least 4 different pictures of the various stages the plant went through.

**Students will create a storyboard showing the transformation of a caterpillar into a butterfly, or the larva into ladybug.** Students will create these storyboards as they watch the insects transform in their habitats. It will allow them to have a completed project and come to understand that some things happen slowly over time.

## BT6: Evaluation of and for Learning

The students and teacher will use a rubric to score their final model of the bug and flower. They will first self-check their models by completing the rubric.

Teachers will keep anecdotal notes on student interviews and class discussions.

Students' storyboards will be scored using a rubric. This will ensure that they fully understand each step of both processes.

Students will complete shared writing and reading assignments as we move through the lesson to allow for constant monitoring of understanding.

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## **Materials:**

Bug habitats – ladybugs and caterpillars  
Read aloud books  
Disposable camera for Spring Walk  
Paper for storyboards  
Paper plates and different snacks to create bug models  
Exemplars for scientific drawings/labeling  
*Teachers Helper Magazine*  
InsectLore.com  
Grow Up Wild  
Paper plates for habitats  
Seeds for planting  
Beans  
Cups  
Soil