**BRAIN-TARGETED TEACHING**

**LEARNING UNIT**

**Name: Meghan Shea Parker Dates (Allocated Time): 3/18/12-4/1/12**

**Unit Topic: Botany vocabulary**

**Title: Under the Cherry Blossom Tree**

**Grade Level: Preschool**

**Content Standard(s):**

* Botany Standard

Make observations about Cherry Blossom trees in nature.

* Language Standard

Apply botany vocabulary to real-world examples, visual representations, and self-created works of Cherry Blossom trees.

**Learning Unit Overview:**

This botany unit is designed for preschool aged children. The students will learn about the Cherry Blossom tree and will apply targeted botany vocabulary throughout the unit of study.

***Brain Target #1***

**Emotional Connection:**

My children are fascinated with nature and the visible changes that occur throughout the year. The blooming Cherry Blossom trees in Maryland signify the beginning of spring and have sparked the curiosity of my young learners. On our daily walks they smile, laugh and point at the beautiful pink trees and enjoy exploring their dainty petals as they flutter to the grass below. This unit honors my little learners’ special love of nature. In order to set a positive emotional climate for learning and as a way to foster competence I posted our daily educational routine on a chart with photographs to provide my learners with order, predictability, and transitional support. Our routine provided my students with learning experiences in both indoor and outdoor classrooms, which helped them remain focused and engaged. As these learners are my personal children I gave lots of smiles, hugs, kisses, and words of praise when they applied the botany vocabulary from our unit and made safe choices in our outdoor classroom. Their beautiful Cherry Blossom artwork was displayed and added a cheerful touch to our indoor classroom. The prominent location of their personal work enabled teachers, fellow students, and visitors opportunities to praise and complement my little learners on their hard work, which gave a boost to their self-confidence! Elements of art, music, and dance were incorporated throughout the learning day providing my children with opportunities for self-expression and reflection on their connection to nature.

***Brain Target #2***

**Physical Environment:**

Our indoor learning environment featured inspirational images and real-life examples of Cherry Blossom leaves, flowers, petals, and trees as well as changing displays of student work hung at eye level for the students to access. A Cherry Blossom reading tent was sent up with imitation blossoms dangling from the ceiling.
In order to foster attention, a soothing Japanese piece entitled, “Sakura” or Cherry Blossom, was played during daily Art Exploration time. Cherry Blossom scented lotion was applied to the “blooms” on their artwork to create a visual and olfactory sensory experience for the viewer. A Cherry Blossom scented candle was lit before starting our Good Morning Stretch and Song to prepare the learners for acquiring new information and promote a stress-free learning environment. Our Daily Routine Board featured pictures of the students in our indoor and outdoor classrooms and was posted for all to access and reference throughout the day. Having both indoor and outdoor learning spaces appealed to my students’ love of nature and allowed for the natural occurrence of novelty as our outdoor classroom changed daily. Inspirational images of Cherry Blossom trees were also changed daily to maintain student interest and create new opportunities for them to apply botany vocabulary to photographs, sketches, and paintings.

***Brain Target #3***

**Concept Map / Advanced Organizer
(feel free to use an online tool):**

**Learning Goals:**

During our unit of study I used the Three Part Montessori framework for teaching my students important botany terminology relating the Cherry Blossom trees including tree, trunk, branches, leaves, flowers, and petals. By learning these botany terms in relationship to the Cherry Blossom tree, my students may also be able to generalize the application of these vocabulary words to all trees and possibly flowers. I planned to present each term by telling my students the names of each part of the tree. After providing multiple and varied examples of the tree parts I planned to ask students to show me or indicate by pointing to the tree parts in different contexts including real-life examples, models, images, and their personal artwork. After the students had demonstrated complete mastery of the terminology I planned to ask them to isolate the objects by telling me the name of the object. As one of my students is non-verbal I planned to modify this portion my instruction by using a picture exchange on a slant board and an iPad application called WordSlapps.

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

To assess my students’ schema of botany terminology we visited our outdoor classroom and I monitored their use of vocabulary. I also used images to collect information about their prior knowledge using picture exchange strategy on a slant board and by using an iPad application called Word Slapps as an accommodation for my student who is non-verbal. I observed that my students were able to correctly apply and identify “trees” and “leaves” using real-world examples and photographs prior to receiving instruction. One of my students had also visited the National Cherry Blossoms in Washington, DC and had experienced their visual beauty. This information helped inform my instructional decisions for the remainder of our unit study. When we returned to our indoor learning space I presented my students with a diagram of a Cherry Blossom Tree and helped them label the parts of the tree we were going to be learning about using matching overlays.

***Brain Target #4***

**Activities for Teaching Mastery of Declarative/Procedural Knowledge**

I developed two objectives for our unit of study including the appropriate use of Cherry Blossom terminology and the generalization of botany terms in relation to trees and other flowering plants. To facilitate my students’ learning and mastery of botanical vocabulary, I developed a range of engaging activities that allowed for repeated rehearsal of terminology, highlighted multiple modalities, and catered to the learning needs and preferences of my students. The activities I developed for our unit of study included making handprint Cherry Blossom Trees, recycled material three dimensional tree models, taking terminology visits in our outdoor classroom, reading books about the Cherry Blossom tree, visiting the National Cherry Blossom trees in Washington, DC, examining real-life examples, playing matching picture games with terminology photographs cards, making a model Cherry Blossom tree using branches and tissue paper, singing Cherry Blossom counting songs and listening to Japanese Cherry Blossom inspired music, dancing to Cherry Blossom music while imagine to be a falling petal being blown by the wind, eating Cheerio Cherry Blossom creations made with pretzels, mint leaves, and cheerios dipped in yogurt, applying Cherry Blossom scented lotion to their artwork, examining and reflecting upon Cherry Blossom photographs and images, and stretching daily while imagining to be a Cherry Blossom tree blossoming in the spring.

***Brain Target #5***

**Activities for Extension and Application of Knowledge**

Extension Questions

-What happens when the wind blows on the Cherry Blossom Trees?

-Where do the petals go?

My little students applied their knowledge of botany terminology by engaging in a simulation of wind blowing the petals from the branches of a Cherry Blossom tree. This simulation was designed to mimic the real-life experience of my students when they witnessed the dropping of the tiny petals of the Cherry Blossom flowers on a windy day. My students noticed the changes taking place as the flowers began to disappear or become “all gone” as shared by one of my students. Providing opportunities to review the video of the simulation highlighted the application of their botany terminology in a novel way, and demonstrated an example of cause and effect in the natural world. They enjoyed setting the blossoms on the tree model and using the hairdryer or “wind” to blow the blooms from the tree. My students already had a schema for “down” and were able to combine their understanding of the botany terminology with this early gravity lesson.

***Brain Target #6***

**Evaluating Learning**

Based on my observations of my students and their application of the botany terminology taught during out unit of study I was able to determine which terms needed to be taught again and those they had mastered. My students demonstrated their mastery by pointing to and naming the real-world objects in our outdoor classroom, verbally labeling their artwork or photographs, using a picture exchange strategy on a slant board, and choosing the correct image from a field of two using an iPad application.