Diversity of Nature

Kindergarten: Gardens and Landscape

School Tour Packet
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INTRODUCTION

With its riverfront campus on the St. John's River and formal gardens, the Cummer Museum of Art & Gardens includes the integration of art and science in its mission. Students will explore the Cummer Gardens through hands on activities, then examine and discuss select artwork that raises awareness about the importance of the St. John's River in the community and its connection to the history and living art of the Cummer Gardens. Kindergarten students will discover the diversity of the natural world. This tour is designed in line with NGSSS.

SCIENCE:

- SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.
- SC.1.N.1.2 Using the five senses as tools; make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.
- SC.K.N.1.4 Observe and create a visual representation of an object which includes its major features.
- SC.1.N.1.4 Ask “how do you know?” in appropriate situations.
- SC.K.N.1.5 Recognize that learning can come from careful observation.
- SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.
- SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.
- SC.1.L.14.3 Differentiate between living and nonliving things.
- SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.
- SC.K.P.8.1 Sort objects by observable properties, such as size, shape, color, temperatures.
- SC.1.E.6.1 Recognize that water, rocks, soil, and living organisms are found on the Earth’s surface.
- SC.1.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold) weight (heavy or light), texture, and whether objects sink or float.
VISUAL ARTS:
- VA.K.S.1.1 Explore art processes and media to produce artworks.
- VA.1.S.1.1 Experiment with art processes and media to express ideas.
- VA.K.O.1.1 Explore the placement of the structural elements of art in personal works of art.
- VA.K.O.2.1 Generate ideas and images for artworks based on memory, imagination, and experiences.
- VA.1.H.1.1 Describe art from selected cultures and places.
- VA.K.H.1.1 Describe art from selected cultures and places.
- VA.1.H.2.2 Identify objects of art that are used every day for utilitarian purposes.

SOCIAL STUDIES:
- SS.1.A.2.1 Understand history tells the story of people and events of other times and places.
- SS.K.G.2.1 Locate and describe places in the school and community.
- SS.K.G.3.2 Identify basic bodies of water.
- SS.1.A.2.2 Compare life now with life in the past.
- SS.1.A.2.4 Identify people from the past who have shown character ideas and principles including honesty, courage, and responsibility.
- SS.1.C.2.4 Show respect and kindness to people and animals.
VOCABULARY

Acorn
The seed of an oak tree that is food for some animals.

Animal
A living thing that gets food by eating plants or other animals.

Bark
The outside of a tree trunk that can be either rough or smooth depending on the tree. The oak tree’s bark is rough. Bark helps protect the tree from insects and helps the tree keep from being too hot or too cold.

Community
People interacting with each other, associated in a common location or interest; an interacting group of various species (plants and animals) in a common location.

Flower
The purpose of the flower is to produce seeds so that there will be more plants; it can produce fruit with seeds inside.

Garden
A piece of ground, often near a house, used for growing flowers, fruit, or vegetables.

Habitat
The area or neighborhood where a plant or animal lives. It provides food, a place to live, water and all thing a plant or animal needs to stay alive.

Nature
The physical world and everything in it that is not made by people.

Neighborhood
A neighborhood is a geographic location with distinctive characteristics; there may be many neighborhoods in a town or a city.

Plant
A living, growing thing this is different from animals. Plants are usually green and make their own food from sunlight, water and air.

Pond
An area of water that is surrounded by land and that is smaller than a lake.
River
A large natural flow of water that crosses an area of land and goes into an ocean, a lake, etc.

Roots
The part of a plant that holds it into the ground and sucks up water and minerals.

Seed
A part of a plant formed in the flower and found inside fruit. Seeds grow into new plants.

Tree
Large plant with a hard stem.

Trunk
The stem of a tree.
The Cummer Oak
About the Tree

The Cummer Oak (live oak/Quercus virginiana) is estimated to be 175 to 200 years old. It has a spread of 150 feet. The gallery nearest the oak is built on pilings to protect the tree’s root system. Live oaks are a long lived native tree in the southern United States with spreading heavy limbs. Old leaves are shed in spring before new growth emerges. Like the Cummer Oak, many live oaks of the southern United States have limbs that are draped with Spanish moss (Tillandsia usneoides).
The St. John’s River
About the River

The St. Johns River is seen from the Cummer Gardens. Running 310 miles, the longest river in Florida, it starts in marshes southwest of Cape Canaveral and flows north to Jacksonville, emptying into the Atlantic Ocean.

The St. Johns, like many Florida rivers, was altered to make way for agricultural and residential centers. It suffered severe pollution and human interference that has diminished the natural order of life in and around the river. Restoration efforts are underway for the basins around the St. Johns.
The English Garden

About the Garden

In 1910, the Cummers decided they needed a new infusion of advice, so they turned to Philadelphia nurserymen Thomas Meehan and Sons. Meehan and his team created the basic design configuration that exists today. Rectangular in shape, with beautifully-laid brick paths alternating with grass walks, this garden space was first known as the Wisteria Garden in honor of the striking semicircular cypress-beamed pergola overlooking the St. Johns River. In later years, Ninah infused the space with azaleas and renamed it the Azalea Garden. Today it is known as the English Garden.
ACTIVITIES

ACTIVITY 1  Manatee Musings

Read aloud a children's non-fiction or fiction book about manatees. After reading, discuss as a class the manatee’s habitat. While still sitting together, have students imagine they are a manatee living in the St. John’s River near the Cummer Museum. They should be encouraged to think about what they would eat, see, do, etc. Have students turn and share their thoughts with a neighbor. When students have shared, they should return to their seats and then write and illustrate a story about being a manatee living in the St. John’s River.

ACTIVITY 2  Tree Study

Take students, with their science notebooks and pencils, outside to find different trees. Let the students feel the bark. Is it rough or is it smooth? Name the parts of the tree. Can they see the roots? Where is the trunk? Where are the limbs or branches? Does it have leaves? Look under the tree, what do you see? Are there fallen leaves, grass or plants or is it just packed dirt? Is the tree alive?

As a class, have students create a Venn diagram in their science notebook comparing trees and flowers. Next, students may work independently to reflect in their notebook about how trees and flowers are alike and how they are different.

Further Questions:
• How do you know if the tree is alive or not?
• Why do you think the tree has something in/on it?
• What do you think would happen if all of the bark from the tree came off?
• How are trees and flowers similar?
• How are trees and flowers different?

ACTIVITY 3  Be Like a Tree

Take your students outside and find a tree. Have the students stand far enough apart so that if they stretch out their arms, they won’t bump into each other.

Ask the students to show you their arms. How many arms does a person have? What can you do with your arms? Trees have arms too and they are
called branches. Ask the students to count the number of branches on the tree. Are they the same size?

Now, ask your students to show you their skin. Ask them to feel the skin of their face, their arms and their hands. Skin helps protect the body. Does the tree have skin? It’s called bark and it protects the insides of the tree like your skin protects you.

Ask the students to stand, if they are not already. Ask the students why they do not fall over. What keeps you from falling over? It’s your feet. What else can your feet help you do? Trees have feet as well. They are called roots. They help the tree stand straight and tall, but different from our feet; roots hold the tree in place and help it get water and food from the soil.

Now, ask the students to pretend they are trees, using their arms as branches. Wind can move tree branches. Ask the students to pretend their branches are getting a gentle wind. What do the branches do? Then ask them to pretend that a brisk, cold wind is blowing; and then winds from a storm. Now ask them how the tree and its branches act in a cold rain? In the hot sun when there has been no rain for a long time? How about after a spring shower when the sun has come out?

Adapted from: “Oak Tree” in Nature for the Very Young: A Handbook of Indoor & Outdoor Activities by Marcia Bowden.

**Further Questions:**
- How are you different than a tree?
- What do you think would happen if all of the bark from the tree came off?

**ACTIVITY 4  Tree Hunt**

For this activity students will work in pairs and each pair will need a crayon (preferably flat sided) and several sheets of paper. The teacher will need a tree identification book.

Bringing their art materials, take the students on a walk around your school to look at different trees. At each tree where the group stops, find a leaf to identify the tree. Ask the students to feel the bark. Is it rough? Is it smooth? Is it scratchy? Now, have each pair make a rubbing of the bark. One student can hold the paper, while the other student rubs the crayon to make the rubbing. Repeat this at each tree where you stop.
When the students return to the classroom, help them label their rubbings. Talk about what they found, then direct the students to make one large collage of their rubbings using butcher paper or large construction paper as the background. They can add shapes they cut from textured paper and use crayons or oil pastels to enhance their rubbings.

Further activities can include an entry in the students’ science notebook, where they sort the names of the trees into categories such as “smooth” and “rough” into a T-chart. This T-chart can also be used to create a bar graph.

**Further Questions:**
- Explain why a different pattern is created for the different rubbings.
- What word(s) best describe the different leaves?
- What word(s) best describe the different patterns?
- Where else could you find similar patterns/textures?

**ACTIVITY 5 Make Your Own Puzzle**

Upon return to your classroom after your Museum visit, give each student a pair of scissors and a square piece of paper. Using crayons have students draw a picture of the gardens at the Cummer Museum. Encourage students to recall different plants and trees they saw at the Cummer Museum and include them in their picture.

Have the students cut the square into four pieces (or more for students who need more of a challenge). The pieces can be cut into any shapes, as long as the student ends up with four puzzle pieces. The purpose of this task is to give students a hands-on experience with composing and decomposing geometric figures. There are many ways to go about this task (see solutions) so students should be encouraged to be creative when cutting their paper.

They should also be encouraged to use language to describe each of the smaller pieces, both as they are making their own puzzle and as they are assembling each other’s. This may be a mixture of informal and formal language; for example the last puzzle in the solutions might be described as “a rectangle, a triangle, and two pieces with wiggly sides.” The envelope may be used to keep the student’s pieces when they are not using them.

Adapted from “Make Your Own Puzzle” by Illustrative Mathematics - [www.illustrativemathematics.org/](http://www.illustrativemathematics.org/)
Further Questions:
• How could you make your puzzle more difficult to put together?
• Describe the shapes you can see in your puzzle.

Four possible solutions:
ACTIVITY 6  Vocabulary Definition Map

Using a concept definition map (see example below), students will define two important words from our vocabulary list: habitat and nature. The definition maps that are provided may be cut out and glued into science notebooks.

Vocabulary

habitat

What is it?

What is it like?

Examples and Illustrations

nature

What is it?

What is it like?

Examples and Illustrations
RESOURCES

Reading Resources:
- Sharing Nature With Children by Joseph Cornell
- Nature for the Very Young: A Handbook of Indoor & Outdoor Activities by Marcia Bowden
- Play Lightly on the Earth: Nature Activities for Children 3 to 9 years old by Jacqueline Horsfall
- Handbook of Schoolyard Plants and Animals of North Central Florida by Peter Feinsinger and Maria Minno
- The Nature of Florida’s Neighborhoods Including Bats, Scrub Jays, Lizards and Wildflowers
- Science is Simple: Over 250 Activities for Preschoolers by Peggy Ashbrook
- Discover the Season by Diane Iverson
- The Tiny Seed by Eric Carle
- On My Street by Eve Merriam
- Red Leaf, Yellow Leaf by Lois Ehlert
- A Tree is Nice by Janice May Udry
- I’m a Seed by Jean Marzollo
- The Giant Encyclopedia of Science Activities for Children 3 to 6

Visual Resources: Artwork by any of the following -
- Edward Hicks, (1878-1849)
- Winslow Homer, (1836-1910)
- Frank Marc, (1880-1916)
- Claude Monet, (1840-1926)
- Frederick Carl Frieseke, (1874-1939)
- Martin Johnson Head, (1819-1904)

Music Resources:
- Birds, Beasts, Bugs and Fishes Little and Big: Animal Folk Songs by Pete Seeger
- Animal Songs by Geoff Johnson
- Musical Beans: Animal Songs for Children by Musical Beans
- Whale Watching Children’s Sea Animal Songs by Mary Lee
- Carnival of the Animals by Camille Saint-Saens

Internet Resources:
- Interactive and detailed information on animals - www.muohio.edu/Dragonfly
• Fun information about animals - www.nationalgeographic.com/kids/
• Learn about the San Diego Zoo - www.sandiegozoo.org/kids/
• Learn about the Jacksonville Zoo - www.jaxzoo.org
• Learn about the St. John’s River - www.stjohnsriverkeeper.org
• Learn about habitats - makemegenius.com/video_play.php?id=233&type=0
• Learn about the parts of a plant - makemegenius.com/video_play.php?id=42&type=0
• Categorize plants and animals - www.sciencekids.co.nz/gamesactivities/plantsanimals.html
• Online source for flower pictures - www.flowerpictures.net
• Information on the town of Giverny, France - www.giverny.org
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