

Plan for Arboretum Exploration; Field Trip 1 (Spring)

Objectives:

For children to explore the arboretum, a horse chestnut tree, and the surrounding area

- Make observations of the physical characteristics of trees and other living things, and the behavior of insects and other small animals.
- Think and talk about the characteristics of living things
- **Inquiry skills:** Investigating using all the senses, making close observations using tools, collecting data and recording/representing; comparing and contrasting; looking for patterns; generating ideas based on evidence and communicating them in conversation.

What You Need: For each small group: container for collecting items, magnifying glasses (one per child); 3 spoons or small trowels for digging; clipboard, paper, and markers/colored pencils including many shades of green and brown.

What to Do:

Introductions (5 minutes)

As children come off the bus, introduce yourself to your assigned group, find a tree, spread out a blanket, and invite the children and adults in the group to sit down.

Engage Conversation: Using Our Senses (10 minutes)

Tell children that today they are going to be “naturalists”, scientists who explore nature.

- They are going to observe the living and non-living things they find very carefully.
- They will use all of their senses to explore: listening, smelling, touching, and looking
- *Remind them to keep things they find AWAY from their mouths!*

Tell children that they will begin exploring while they are sitting down.

Invite them to close their eyes and investigate using one sense at a time. *As they respond to the following prompts encourage them to notice and describe the natural sounds, smells, textures, and sights around them and to use descriptive vocabulary.*

- What do they hear? Encourage them to imitate a sound and try to identify its source.
- What do they smell? Invite descriptions and comparisons to familiar scents.
- What do they feel? Encourage them to touch the grass and describe how it feels.

Invite them to open their eyes. What do they see with their eyes? Encourage descriptions of the natural landscape.

Explorations:

Meeting a Tree (5 minutes)

Encourage children to look up at the tree.

- Have they described any sights, sounds, or smells of the tree or something in the tree? Invite them to talk more about what they saw, heard, or smelled.
- Invite them to further explore the tree using all their senses.
- Support them to:

Plan for Arboretum Exploration; Field Trip 1 (Spring)

- Investigate the textures of the trunk, low-hanging branches, twigs, leaves. What textures do they feel?
- Measure their sizes using their hands, arms, or long pieces of string provided. Which part is the biggest? The smallest?
- Look closely at the leaves they find; sizes, shapes, and colors. How are they alike and different? Try to identify which tree the leaves came from.
- Look for other parts of the tree like blossoms and fruit. How can they describe them? What do they notice?
- Look for animal visitors to the tree or evidence that animals have visited. Notice birds, squirrels, insects, and evidence like nests, nuts or nutshells, and holes in leaves. How can they describe how these creatures look and behave?

Making a Natural Collection (10 minutes)

Gather the children together and have a short conversation about what they are noticing.

- Let them know that you have some tools to help them explore further. Pass out the trowels, spoons, and magnifying glasses. Show them that you have a container where they can put things they want to look at more closely. *Remind children that they will be very careful and very gentle with any living things they find, plants and animals, and that anything they find will stay at the arboretum.*
- Invite them to look all around the tree and on the tree to see what kinds of interesting things they find.
- Continue to facilitate their explorations by encouraging them to explore and observe; notice and describe; share and communicate their observations; compare and contrast the physical characteristics of items they find.
- Encourage them to put the most interesting items (tree parts like fruit, blossoms, leaves and any plant materials; small interesting rocks, sticks, or other natural items; small animals like insects, pill bugs, or other critters) in the container.
- Encourage them to collect a variety of items including a selection of tree parts.

Observing and drawing collected items (10 minutes)

Once children have collected some interesting natural items, invite them to the blanket to look at the items more closely. Facilitate an investigation in which you support children to:

- Look at the items closely with a magnifying glass.
- Open up the fruit and look for seeds.
- Compare leaves from the same and different trees. What are some things they notice in all leaves? What are some differences they notice?
- Describe the physical characteristics of fruit, seeds, leaves, and flowers.
- If they have an insect or other small animal, encourage them to describe its characteristics and what it's doing. Where did they find it and where do they think it lives?

Pass out paper and clipboards to each child and provide markers or colored pencils.

- Invite children to draw the tree and choose an item(s) from the container to draw.
- As they draw encourage them to look closely at the item; notice its shape; choose colors intentionally; and include details of the item's physical characteristics.

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Reflect Conversation: (10 minutes)

Once most children have completed their drawings, facilitate a follow-up science talk. Encourage children to refer to their drawings as you help them think about evidence that trees and animals are living things with the characteristics, needs, and a life cycle typical of living things. *Remember that it takes many experiences for children to fully understand the differences between living and non-living. It is important to build their understanding based on their own direct experiences, and maintain them in inquiry throughout.*

Support children's emerging understanding by asking questions like:

- What do they notice about how trees are the same or similar to other plants?
 - Encourage them to think about specific parts
- How do they think trees are different from other plants?
- Do trees grow and change like other plants? How do they know? How could they find out?
- What do they think will come from the seeds they found in the tree's fruit? Why do they think so? What could they do to find out?
- Do they think they could get the tree seeds to grow? How?
- Why do they think a tree is a good place to live or to visit for the insects and other small animals they found? How do they think the tree helps these animals and do the animals help the tree in any way? How do they think so?

Wrap-Up (5 minutes) Invite children to say goodbye to you and the arboretum. Walk them to the bus.