

SPEAK FOR THE TREES, Boston

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Tree Identification

Grades: 5 - 12

Setting: Outdoors

Purpose of Lesson:

Students will be able to:

- Identify the common trees in Boston.
- Discuss the benefits of trees.
- Understand the field of urban forestry and the work done by those in the field.
- Teach students how to identify trees

Essential Questions:

- 1. What is urban forestry?
- 2. What is tree blindness?
- 3. How do I identify a tree by its leaves?
- 4. What are the different kinds of leaves?
- 5. What trees will I see most in Boston?

Materials:

- Tree ID Guide
- Pen
- Notebook

Program Session Schedule [~90 mins]:

Self Introduction & Group Check-ins: 10 mins

Icebreaker: 15 mins

Discussion of lesson topic: 30 mins

Activity: 20 mins

Review & Wrap-Up: 10 mins

Lesson Implementation

Self Introduction & Group-Check-ins (5 mins): Take this time to introduce ourselves and our organization. Who we are, what we do, and our goal for today's lesson. Use this time to let the students share their names and grades as well.

Icebreaker (5 mins):

Guided Discussion (20 mins):

- 1. Ask students if they can tell us some of the benefits of trees or why trees are so important:
 - a. "Does anyone here have a favorite tree?"
 - b. "Can you tell me why it is that you like trees?"
 - c. "So who can tell me why trees are important? Maybe just give me one benefit that trees provide us?"
- 2. List some of the more important benefits that trees provide and why they are so

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important in an urban space.

- 3. Explain the concept of "tree blindness." The reality is that most people go about their everyday lives without even noticing the trees outside of their homes or offices or schools, let alone knowing anything about their importance or biology.
- 4. Explain that we hope to tackle that by instructing how to identify trees. By knowing the different types of leaves, fruits, etc. that trees produce we will be able to then educate others on trees.
- 5. Now, explain some basic points of tree biology, including:
 - a. Deciduous vs evergreen trees
 - i. <u>Deciduous trees:</u> These trees are those leaves "fall off" during the fall months and return in the spring. (i.e. Maple, Oak, Honey Locust)
 - ii. <u>Evergreen trees</u>: These trees are ones which do not lose their leaves during the fall (i.e. Fir, Pine, Spruce)
 - b. Simple vs compound leaves
 - i. <u>Simple leaves:</u> Leaves which are one piece, divided down the middle by the midrib (i.e. Maple, oak, Gingko).
 - ii. <u>Compound Leaves:</u> consisting of several or many distinct parts (leaflets) joined to a single stem (i.e. Honey Locust).
 - c. Palmately vs pinnately leaves
 - i. <u>Palmate Leaves:</u> Leaves in the shape of an open hand, resembling a palm.
 - ii. <u>Pinnate Leaves:</u> Type of compound leaf that has a central stem with small leaves arranged on either side of it.
 - d. The anatomy of a leaf
 - i. Midrib
 - ii. Lobes
 - iii. Sinuses
 - iv. Stem

Activity (30 mins):

- 1. Now, we are able to go outside and begin to identify some of the trees around us. Activity will begin with the instructor identifying the first few trees and explaining how exactly they are the species of those trees.
- 2. Allow students the time to identify trees now on their own, by breaking into groups and having them try to find as many of the trees from the Tree ID Guide as possible.

Review & Wrap-Up (5 - 10 mins):

- 1. After students have had enough time to identify trees on their own, have the groups share some of the species that they found.
- 2. Ask a few questions about their exploration to engage further:
 - a. What was your favorite tree that you identified?
 - b. What did you think of the books that we used? Were they helpful?
 - c. Pointing to a few of the trees, ask them what the tree species is.
 - d. Using a leaf, ask them to name the components of that leaf.