

## TREES OF BROOKLYN BRIDGE PARK

### LESSON OVERVIEW

#### OBJECTIVE

Students will review parts of the tree and identify leaf shapes.

#### RECOMMENDED GRADE LEVELS

K-1

#### DURATION

15-30 minutes

#### MATERIALS

- White board & marker
- Leaf shape cards (provided)
- Guess the tree game boards (provided)
- Guess the tree game cards (provided)
- Small items to use as game markers (6 per person)

### TOPIC BACKGROUND

Trees are a special group of plants that grow very tall and have a thick **trunk** which supports the tree.

Like all plants, trees contain **roots** under the ground which pull in water and help hold the tree in place. A tree's trunk is covered in **bark** which protects the outside of the tree, similar to how skin protects our bodies.

Trees contain many **branches** near the top. On each branch, several **leaves** grow. Leaves can come in a variety of

colors and shapes. Most leaves are green through out the year. Many will change shades of red, orange, and yellow in autumn before falling off the tree in preparation for the winter.

All trees also contain fruits and flowers. The **flowers** of trees develop off the branches and are made up of colorful petals. A tree's flowers usually bloom in the spring or summer. By the fall, a **fruit** develops which contains the tree's **seeds**.

### GETTING READY

#### Activity 2:

1. Print 1 copy of leaf shape cards & cut.

#### Activity 3:

1. Print a copy of the "Guess the tree game board" for each student
2. Print one set of the tree game cards and cut.
3. Gather small items students can use as "game markers." (6 per student)  
i.e. post-it notes, rocks, or tokens

**\*TIP: Laminate all printed items for extended use**

## PROCEDURE

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### ACTIVITY 1: REVIEWING PARTS OF THE TREE

1. Remind students of their trip to Brooklyn Bridge Park. Ask if they remember one part of the tree they learned about.  
Continue until students have identified all the major tree parts (roots, trunk, bark, branches, leaves, flowers, fruit, and seeds) Consider drawing a tree on the board as students name each tree part!
2. For further reinforcement, play the Simon Says tree game students played while at Brooklyn Bridge Park.

### ACTIVITY 2: IDENTIFYING SHAPES AND COLORS OF TREES

1. During the tree hunt at Brooklyn Bridge Park, your students identified several trees with leaves and fruits of varying shapes and colors. Using the leaf cards provided, teach/remind students of some words we can use to describe how leaves look.
2. To make more challenging, fold cards in half so that students cannot see the shape or description and encourage them to think of ways to describe each leaf. (For example: pointy, green, star shaped)

### ACTIVITY 3: GUESS THE TREE

1. Tell students we will play a game similar to “Guess Who” but instead of guessing people, students will be guessing the tree.
2. Hand out a printed game board (provided) to each student. Give students a few minutes to read and look over the pictures.
3. Ask students to think of words that describe the shape and color of each tree’s leaves and fruits.
4. Give each student a set of 6 post-it notes or bingo-like spot markers. Students will use these to mark off trees on their game board.
5. The teacher, or one student, should pick 1 tree game card at random.
6. The class should begin to ask the card holder yes or no questions such as, “Does your tree have oval leaves?” or “Does your tree have acorns?”
7. Based on the player’s response, students should mark off trees on their game cards that don’t match. For example, if a student asks “Does your tree have red leaves” and the answer is NO, students should use game markers to cover any tree squares that have red leaves.

## PROCEDURE CON'T

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8. Continue playing until a student is ready to guess the tree. Game can be replayed until all tree cards have been chosen.
9. Alternative game method: The guessing game can also be played reversely where the teacher or student gives the class clues about their tree card until someone is ready to make a final guess.

## RECOMMENDED BOOKS

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- *From Seed to Plant* by Gail Gibbons
- *The Tiny Seed* by Eric Carle
- *A Tree is a Plant* by Clyde Robert Bulla
- *A Fruit is a Suitcase for Seeds* by Jean Richards
- *How a Seed Grows* by Helene J. Jordan
- *How Plants Grow (Time for Kids)* by Dona Herweck

## RECOMMENDED WEBSITES

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DK Find Out! Plants  
[www.dkfindout.com/us/animals-and-nature/plants](http://www.dkfindout.com/us/animals-and-nature/plants)

Lesson Plan: Sprouting Seeds  
[www.prekinders.com/sprouting-seed-bag-topper-printable](http://www.prekinders.com/sprouting-seed-bag-topper-printable)

Explore Plants (experiments)  
[www.peepandthebigwideworld.com/en/educators/curriculum/center-based-educators/18/plants/](http://www.peepandthebigwideworld.com/en/educators/curriculum/center-based-educators/18/plants/)

Central Park Tree Guide  
[www.centralparknyc.org/tree-guide](http://www.centralparknyc.org/tree-guide)

## TEACHER NOTES:

## VOCABULARY

**Bark:** Protective layer for the tree trunk, keeping it safe from insects and animals.

**Branches:** Holds the leaves and attached to the trunk.

**Bud:** A small growth at the tip or on the side of a stem that later develops into a flower, leaf, or branch.

**Compound leaf:** A leaf containing several smaller leaves called leaflets attached to a single stem.

**Crown:** The leaves and branches at the top of a tree.

**Flower:** The part of a plant that is often brightly colored and from which the seed or fruit develops.

**Fruit:** A fleshy structure which contains the seeds. Sometimes the fruit is called the seed pod. All trees grow fruits, however not all fruits are edible to humans.

**Leaf:** The green flattened part of a plant attached to a stem. Leaves are the food factories of a tree—through a process called photosynthesis energy (sunlight) is converted into sugar (food).

**Leaflets:** Part of a compound leaf not originating from a leaf vein.

**Life cycle:** Changes in the growth and development of an organism

**Lobe:** A curved or rounded part of a leaf.

**Petal:** One of the often brightly colored leaf-like outer parts of a flower.

**Plant:** A living thing with basic needs of nutrients, sunlight, water, air, and space

**Roots:** The lower portion of the plant, found underground. Their functions are to absorb nutrients and moisture, anchor the plant in the soil, and support the stem.

**Seed:** A small object produced by a plant from which a new plant can grow.

**Serrated:** Having a toothed or jagged edge.

**Simple leaf:** A leaf that does not divide into parts.

**Seedling:** A baby plant.

**Sprout:** The initial or rapid growth usually coming from a seed.

**Stem:** The upper part of the plant which bears leaves, flowers and fruits. The stem transports water from the roots to the leaves and petals. The main stem of trees is called the trunk.

**Tree:** A woody plant that has a single usually tall main stem called the trunk with few or many branches and leaves.

**Trunk:** The main stem of tree. Covered in bark and provides the structure, stability, and height of a tree.

## STANDARDS

### COMMON CORE ELA

- Reading Informational Text
- Speaking and Listening
- Literacy in Technical Subjects
- Literacy in Science

### COMMON CORE MATH

- Counting and Cardinality
- Measurement and Data
- Geometry

### NYC K-8 SCIENCE & SOCIAL STUDIES SCOPE & SEQUENCE

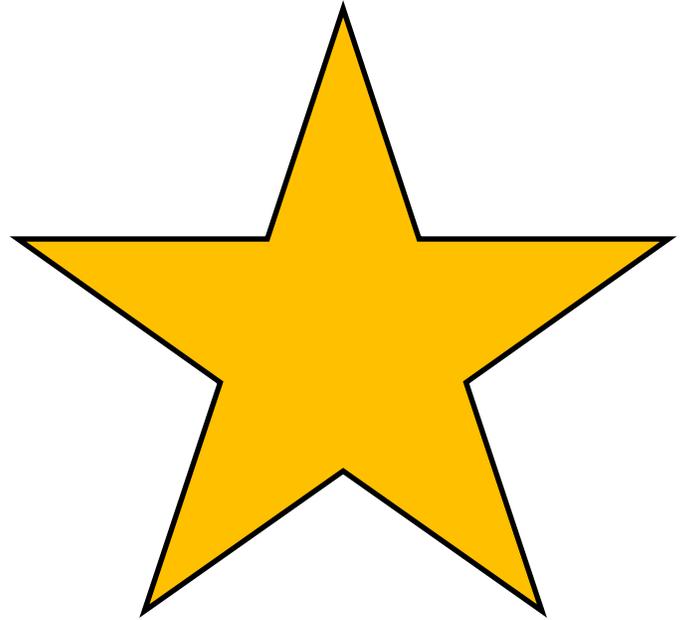
- Animals, Plants in their Env.
- Interactions of Air, Water, and Land
- Trees Through the Seasons

### NEXT GENERATION SCIENCE STANDARDS

- K. Interdependent Relationships in Ecosystems: Animals, Plants, Their Environment
- K. Structure, Function, and Information Processing



**AMERICAN  
SWEETGUM TREE**

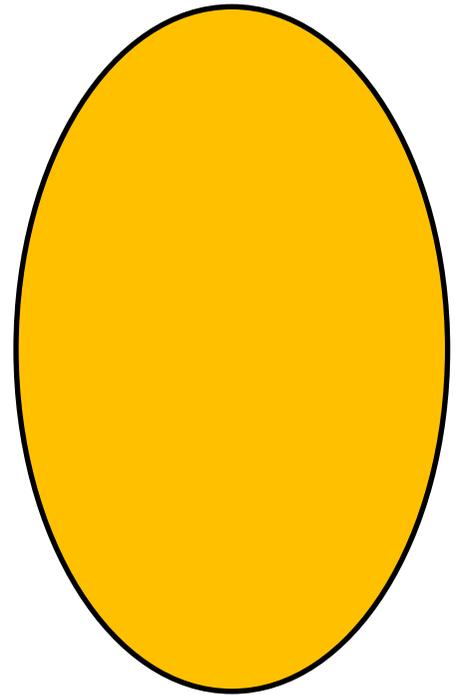


**STAR SHAPED**

CUT



**SOUTHERN  
MAGNOLIA TREE**



**OVAL SHAPED**



**NORTHERN  
CATALPA TREE**

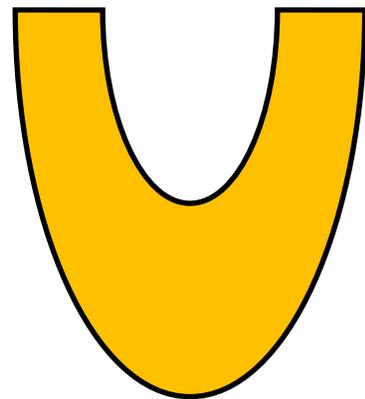


**HEART SHAPED**

CUT



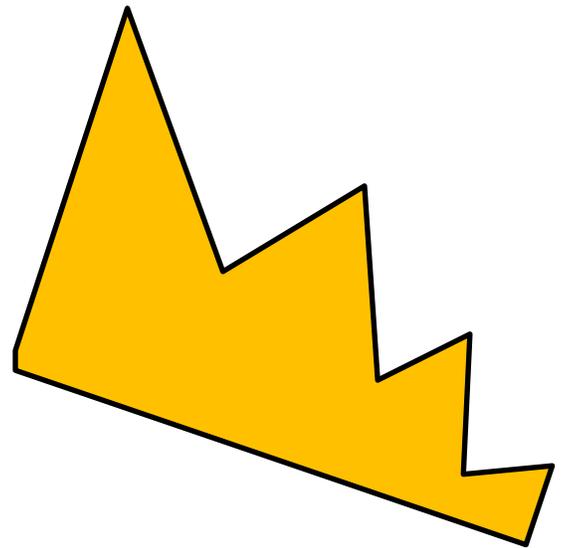
**SCARLET  
OAK TREE**



**LOBED EDGE**  
(outside of leaf forms U-shapes)

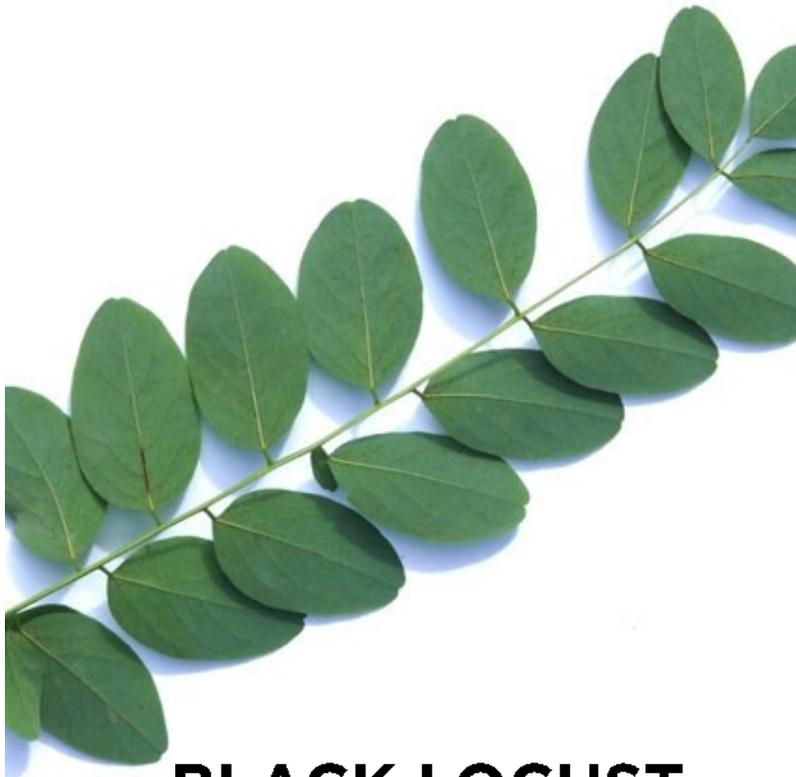


**LONDON PLANE  
TREE**

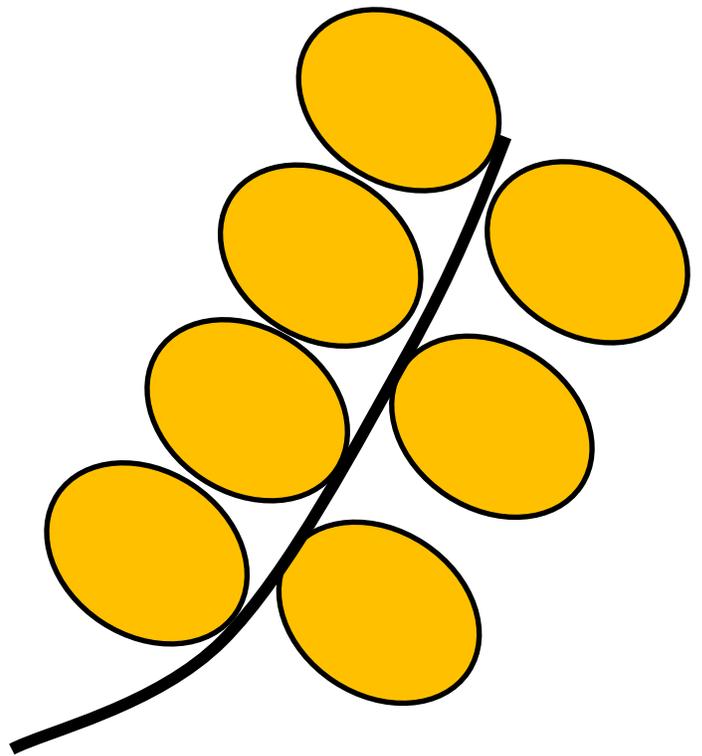


**TOOTHED EDGE**  
(very pointy around  
outside of leaf)

CUT



**BLACK LOCUST  
TREE**



**COMPOUND LEAF**  
(many small oval leaflets on  
one stem)

# GUESS THE TREE GAME BOARD

AMERICAN  
SWEETGUM



LEAF



FRUIT

LONDON  
PLANE



LEAF



FRUIT

SOUTHERN  
MAGNOLIA



LEAF



FRUIT

BLACK  
LOCUST



LEAF



FRUIT

SCARLET  
OAK



LEAF



FRUIT

NORTHERN  
CATALPA



LEAF



FRUIT

# GAME CARDS

**AMERICAN  
SWEETGUM**



**LEAF**



**FRUIT**

CUT

**LONDON  
PLANE**



**LEAF**



**FRUIT**

CUT

**SOUTHERN  
MAGNOLIA**



**LEAF**



**FRUIT**

**BLACK  
LOCUST**



**LEAF**



**FRUIT**

CUT

**SCARLET  
OAK**



**LEAF**



**FRUIT**

**NORTHERN  
CATALPA**



**LEAF**



**FRUIT**