

# Tree Sketch

SUGGESTED LOCATION: LOOKOUT LOFT: FOREST WALK

**AT A GLANCE:** STUDENTS WILL CHOOSE A TREE TO OBSERVE, SKETCH, AND REFLECT ON THROUGH WRITING WHILE VISITING THE “LOOKOUT LOFT.”

**GRADES:** 3-5

**MATERIALS FOR EACH STUDENT:** CLIPBOARD (HARD DRAWING SURFACE), PENCIL, ONE COPY OF STUDENT PAGE.

**GOAL(S):** TO USE ELEMENTS AND PRINCIPLES OF ART TO PRODUCE A WORK OF ART INSPIRED BY NATURE.

**OBJECTIVES:**

STUDENTS WILL BE ABLE TO SKETCH FROM NATURE.

STUDENTS WILL DETERMINE AND LABEL PARTS OF A TREE.

STUDENTS WILL COMMUNICATE OBSERVABLE FEATURES OF THE TREE USING DESCRIPTIVE LANGUAGE.

**PA ACADEMIC STANDARDS:**

ARTS AND HUMANITIES PRODUCTION/VISUAL ARTS: 9.1.5.A; 9.1.5. B; 9.1.5 C

TYPES OF WRITING: 1.4.3.B; 1.4.3.C

**NATIONAL STANDARDS FOR VISUAL ARTS:**

STANDARD 1: UNDERSTANDING AND APPLYING MEDIA, TECHNIQUES, AND PROCESSES

STANDARD 2: MAKING CONNECTIONS BETWEEN VISUAL ARTS AND OTHER DISCIPLINES



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# Tree Sketch

SUGGESTED LOCATION: LOOKOUT LOFT: FOREST WALK

**DIRECTIONS:** There are trees all around us, and you might not know that there are many different kinds – each species has different leaf shapes, growth patterns, likes and dislikes. Take this opportunity to study one tree. Choose a tree to observe, draw, and write about. Look at it. Get to know it. Touch its bark and see how it feels. What else can you find out about your tree?

## **ACTIVITIES:**

Tell us about your tree in this box. Are there any birds in it? Do you see any insects? What is special about this tree compared to others around it?

Create a line drawing of a LEAF from the tree in this box.

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# Tree Sketch

SUGGESTED LOCATION: LOOKOUT LOFT: FOREST WALK

Draw a picture of the tree in this box. Try to show as many parts of the tree that you can. Try to label them. (trunk, bark, seeds, leaves, roots)

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# Build a Tree Poem

SUGGESTED LOCATION: PIERCE'S PARK

**AT A GLANCE:** STUDENTS WILL USE FIGURATIVE LANGUAGE AND LITERARY DEVICES TO CREATE TREE POEMS.

**GRADES:** 3-5

**MATERIALS FOR EACH STUDENT:** CLIPBOARD, PAPER, PENCIL, ONE COPY OF STUDENT PAGE

**GOAL(S):** USE VOCABULARY, CREATIVE WRITING, AND IMAGINATION TO CREATE A TREE POEM.

**OBJECTIVES:**

STUDENTS WILL TRANSLATE OBSERVATIONS INTO WORDS.  
STUDENTS WILL USE DESCRIPTIVE WORDS AND ACTION VERBS.  
STUDENTS WILL WRITE CLEARLY USING CONVENTIONS OF LANGUAGE.

**PA ACADEMIC STANDARDS:**

TYPES OF WRITING: 1.4.3A; 1.4.3.B; 1.5.3.F

**NATIONAL STANDARDS FOR WRITING:**

**STANDARD 1:** USES THE GENERAL SKILLS AND STRATEGIES OF THE WRITING PROCESS

**STANDARD 2:** USES THE STYLISTIC AND RHETORICAL ASPECTS OF WRITING

**STANDARD 3:** USES GRAMMATICAL AND MECHANICAL CONVENTIONS IN WRITTEN COMPOSITIONS

**BACKGROUND:**

NATURE HAS BEEN THE SUBJECT OR SETTING FOR CREATIVE WRITING FOR CENTURIES. DURING THIS ACTIVITY, STUDENTS ENGAGE IN PROCESS CENTERED WRITING ACTIVITIES TO WORK TOGETHER OR INDEPENDENTLY TO PRODUCE A POEM INSPIRED BY NATURE. AN OUTLINE IS PROVIDED, HOWEVER YOU MAY CHOOSE TO ADAPT THE FORMAT AS YOU SEE FIT.

**SUGGESTED READING BEFORE THE VISIT TO LONGWOOD GARDENS:**

THE GIVING TREE BY SHELL SILVERSTEIN

OLD ELM SPEAKS BY KRISTINE O'CONNELL GEORGE



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# Build a Tree Poem

SUGGESTED LOCATION: PIERCE'S PARK



Take a moment to think about life as a tree. Where would you like to live? How would you make friends? List some of your ideas here:

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Choose a tree in Pierce's Park that you want to get to know better. Take time to explore this tree. Answer the following questions:

1. What is your tree's name? (hint: trees have labels on the north side of the trunk)
2. List two words that describe what your tree looks like.
3. Write an action verb!
4. List 3 words that describe the place where your tree is living using alliteration.
5. Use a simile to compare your tree to something else.
6. Create a sentence from your tree's point of view.

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# Build a Tree Poem

SUGGESTED LOCATION: PIERCE'S PARK

Use the ideas you brainstormed and the answers to your tree questions to write a paragraph or poem about a tree. Share your draft with a friend.

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Reread your paragraph or poem. Are there changes that you want to make? Go back and make your changes.

Make sure to check your work. Dot the "I" and cross the "T."

At school, rewrite your poem on nice paper. You may want to include a drawing of the tree.

### Here is an example poem for inspiration:

Oak Tree  
large, mature  
swaying in the  
green, grassy, garden.  
My tree is tall like a skyscraper.  
"I love to feel the warm sun on my branches," said Oak.

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# Measure Me Tree

SUGGESTED LOCATION: OAK KNOLL

**AT A GLANCE:** INVESTIGATING THE OAK KNOLL, STUDENTS UNDERSTAND VERTICAL AND HORIZONTAL MEASUREMENT OF LARGE OBJECTS.

**GRADES:** 3-5

**MATERIALS FOR EACH STUDENT:** STRING, RULER, TAPE MEASURE, PAPER, PENCIL, DIRECTIONS SHEET, STUDENT PAGE

**GOAL(S):** WORKING IN PAIRS, STUDENTS USE MEASUREMENTS TO DETERMINE THE HEIGHT, AND BREADTH OF A LARGE TREE.

**OBJECTIVES:**

STUDENTS WILL DEMONSTRATE MEASUREMENT OF THE TRUNK, CROWN, AND HEIGHT USING VERTICAL AND HORIZONTAL MEASUREMENT.

STUDENTS WILL COMPARE RESULTS WITH OTHER GROUPS.

STUDENTS WILL CREATE A GRAPH OF THEIR FINDINGS.

DEFINE HORIZONTAL, VERTICAL, AND CIRCUMFERENCE.

**PA ACADEMIC STANDARDS:**

NUMBER SYSTEMS/RELATIONSHIPS: 2.1.3.J

MEASUREMENT: 2.3.5.A; 2.3.5.B; 2.3.5.C;

PROBABILITY/PREDICTIONS: 2.7.3.A; 2.7.3.D

**NATIONAL STANDARDS FOR MATHEMATICS:**

STANDARD 4: UNDERSTANDS AND APPLIES BASIC AND ADVANCED PROPERTIES OF THE CONCEPTS OF MEASUREMENT

STANDARD 5: UNDERSTANDS AND APPLIES BASIC AND ADVANCED PROPERTIES OF THE CONCEPTS OF GEOMETRY

STANDARD 6: UNDERSTANDS AND APPLIES BASIC AND ADVANCED CONCEPTS OF STATISTICS AND DATA ANALYSIS

STANDARD 7: UNDERSTANDS AND APPLIES BASIC AND ADVANCED CONCEPTS OF PROBABILITY

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CONTINUED...

# Measure Me Tree

SUGGESTED LOCATION: OAK KNOLL



## **BACKGROUND:**

LONGWOOD ARBORISTS TAKE EXCELLENT CARE OF THE TREES AT LONGWOOD GARDENS. UNDERSTANDING THE SIZE OF TREES IS VERY IMPORTANT TO THEIR JOB. HAVE STUDENTS WORK IN PAIRS OR SMALL GROUPS TO MEASURE A TREE'S TRUNK CIRCUMFERENCE, CANOPY BREADTH, AND OVERALL HEIGHT.

## **FOLLOW UP IN THE CLASSROOM:**

STUDENTS WHO FOCUSED ON THE SAME TREE CAN COMPARE MEASUREMENTS. HAVE STUDENTS MAKE BAR GRAPHS USING THE INFORMATION GATHERED AT LONGWOOD GARDENS. HAVE STUDENTS LOCATE THE BIGGEST TREE, SMALLEST TREE OF THE SAME SPECIES.

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# Measure Me Tree

SUGGESTED LOCATION: OAK KNOLL

## DIRECTIONS:

### Trunk:

- Measure from the ground to 4 ? feet high on the trunk.
- At that height, measure the trunk's circumference. (hint: use a string around the trunk and measure the length of the string.)
- Round to the nearest inch. Record the number and label as circumference.

### Crown:

- Find a tree's five longest branches.
- Have students determine the longest branch and place a marker on the ground beneath the tip of the longest branch.
- Find a branch that is opposite it and mark its tip on the ground.
- Measure along the ground from first marker to the second marker.
- Record the number and label as crown.

### Height:

- Have your partner stand at the base of the tree.
- Back away from the tree, holding your ruler in front of you in a vertical position. Keep your arm straight. Stop when the tree and the ruler appear to be the same size. (hint: close one eye to help you line it up)
- Turn your wrist so that the ruler looks level to the ground and is in a horizontal position. Keep your arm straight.
- Have your partner walk to the spot that you see as the top of the ruler. Be sure the base of the ruler is kept at the base of the tree.
- Measure how many feet he or she walked. That is the tree's height. Round to the nearest foot and record your answer as the height.

**Use the tree diagram on the next page to label and record your answers.**

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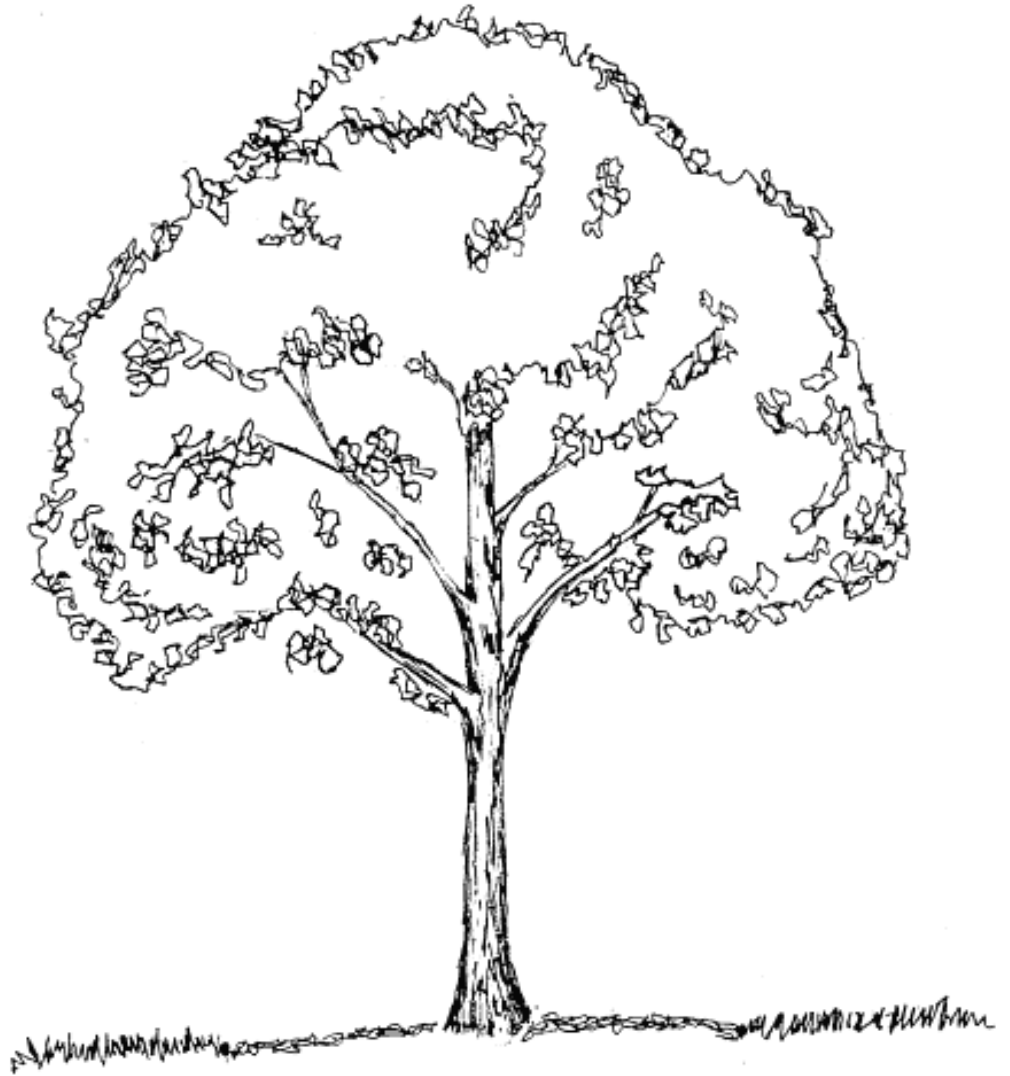


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# Measure Me Tree

SUGGESTED LOCATION: OAK KNOLL

**LABEL AS MANY TREE PARTS AS YOU CAN.**



**Record your measurements here:**

Circumference: \_\_\_\_\_

Canopy: \_\_\_\_\_

Height: \_\_\_\_\_

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# Tree Ecology

SUGGESTED LOCATION: BIRD HOUSE

**AT A GLANCE:** STUDENTS INVESTIGATE LIFE IN THE TREES FROM A BIRD'S-EYE-VIEW.

**GRADES:** 3-5

**MATERIALS FOR EACH STUDENT:** CLIPBOARD, PENCIL, COLORED PENCILS, MAGNIFYING GLASS, STUDENT PAGE

**GOAL(S):** STUDENTS WILL DISCOVER THE IMPORTANCE OF LIVING AND NONLIVING ELEMENTS IN AN ECOSYSTEM.

**OBJECTIVES:**

STUDENTS IDENTIFY LIVING AND NONLIVING ELEMENTS IN AN ECOSYSTEM.

STUDENTS DIFFERENTIATE BETWEEN LIVING AND NON-LIVING THINGS.

STUDENTS WILL EXPLAIN HOW ORGANISMS DEPEND ON DEAD WOOD FOR SURVIVAL.

**PA ACADEMIC STANDARDS:**

ECOSYSTEMS AND THEIR INTERACTIONS: 4.6.4.A

ENVIRONMENTAL HEALTH: 4.3.4.C

THREATENED, ENDANGERED AND EXTINCT SPECIES: 4.7.4.A

**NATIONAL STANDARDS OF LIFE SCIENCES:**

STANDARD 6: UNDERSTANDS RELATIONSHIPS AMONG ORGANISMS AND THEIR PHYSICAL ENVIRONMENT

**RESOURCE:**

PROJECT LEARNING TREE [HTTP://WWW.PLT.ORG/INDEX.CFM](http://www.plt.org/index.cfm)

**BACKGROUND:**

THROUGHOUT A TREE'S LIFE IT COLLECTS NUTRIENTS FROM THE ENVIRONMENT AND USES THEM TO GROW – BUILDING NEW BARK, WOOD, LEAVES ECT. WHEN A TREE DIES, DECOMPOSITION RETURNS THESE NUTRIENTS BACK TO THE ENVIRONMENT. LIVING ORGANISMS MOVE IN TO FACILITATE THE PROCESS OF DECOMPOSITION. HERE ARE SOME THINGS YOUR STUDENTS MAY FIND IN AND ON THE DECAYING STUMP.

PLANTS SUCH AS FUNGI, MOSS, AND LICHENS WILL GROW ON DEAD WOOD. AS TIME PASSES, SOME SEEDS MAY PLANT THEMSELVES INTO THE SOFT BARK AND MAY SPROUT.

INSECTS LIKE TERMITES, CARPENTER ANTS, BARK BEETLES WILL EAT THE WOOD AND TURN IT INTO A SYSTEM OF TUNNELS.

SOME ANIMALS, SUCH AS CENTIPEDES AND SPIDERS WILL PREY ON THE SMALLER INSECTS. THEY IN TURN BECOME MEALS FOR BIRDS, SKUNKS, AND OTHER ANIMALS.

FINALLY, MANY CREATURES DEPEND ON DEAD LOGS AS HIDEOUTS OR SHELTERS FROM LARGER ANIMALS. YOU MAY ALSO FIND THAT SOME BEETLES, WASPS, AND SLUGS LAY THEIR EGGS IN THE DECOMPOSING WOOD.

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# Tree Ecology

SUGGESTED LOCATION: BIRD HOUSE

**DIRECTIONS:** Visit “The Bird House” to explore the unique ecosystem surrounding this tree house from a bird’s eye view. Take time to look and listen to all that is happening in and around the trees. Observe the living and nonliving things in this ecosystem.

Record the living elements in the environment. (hint: living things breathe, move, grow, take in nutrients, and give off waste)

Record the nonliving elements in the environment. (hint: some of these elements can not be seen.)

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Why is it important to have BOTH living and nonliving elements in an ecosystem?

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# Tree Ecology

SUGGESTED LOCATION: BIRD HOUSE

Investigate the tree stump next to the “Bird House.” Although this stump is considered “dead wood,” it is important to leave it in the wooded area around the tree house. Take a closer look and see if you can identify **producers**, **consumers**, and **decomposers** interacting on the stump.

List your findings here:

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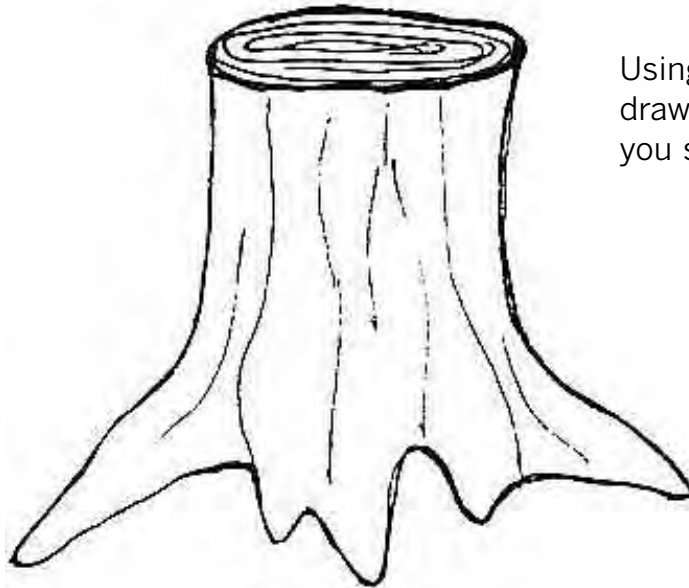
Over time, what do you think will happen to this tree stump?

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Using your colored pencils, draw some of the living things you see on the stump.