



Cadette Trees Badge

Online and Outdoor Activities
Optional Videoconference Meetings
Summer, 2020



Complete five requirements and Take Action, online and outdoors.

Badge workshops are optional, with two one-hour videoconference “meetings,” at the time chosen during registration, in addition to the activities listed here. They will be listed in Happenings: Cadettes, with a fee of \$10. Link to videoconferences will be sent to registrants.

First meeting: Introduce the activities, show examples, and answer questions. Learn about trees, tree benefits, and climate action.

Between the two meetings: Complete steps 1 through 6.

Second meeting: Be ready to tell your “tree dish” story. Share facts about trees that surprised you. Report on your Take Action experiences and how Kate Sessions inspires you.

GSUSA BADGE REQUIREMENTS

1. Try some tree fun
2. Dig into the amazing science of trees
3. Make a creative project starring trees
4. Explore the connections between people and trees
5. Help trees thrive
6. Take Action to share how amazing trees are

STEP 1 – Try some tree fun

Foods from trees. Start by listening to all the products that are made from trees. The last minute has an alphabetical list of foods!

Make a dish that features products made from trees. How about making a lemon meringue or a fruit pie, using several kinds of olives on pasta, making chocolate brownies with walnuts, or creating your own guacamole recipe? Share this dish with your family and point out which ingredients came from trees!

STEP 2 - Dig into the amazing science of trees

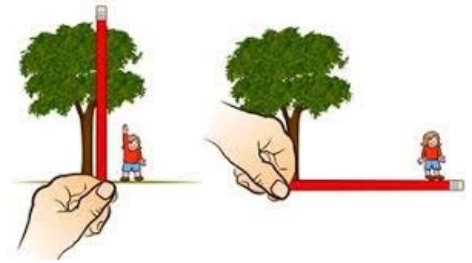
Be a naturalist in your neighborhood. Take a walk through your neighborhood and look at the trees. Then make a “tree map” to show where trees are located, along your street or on your block. Measure the circumference, height and tree canopy width.

Start by watching these videos:

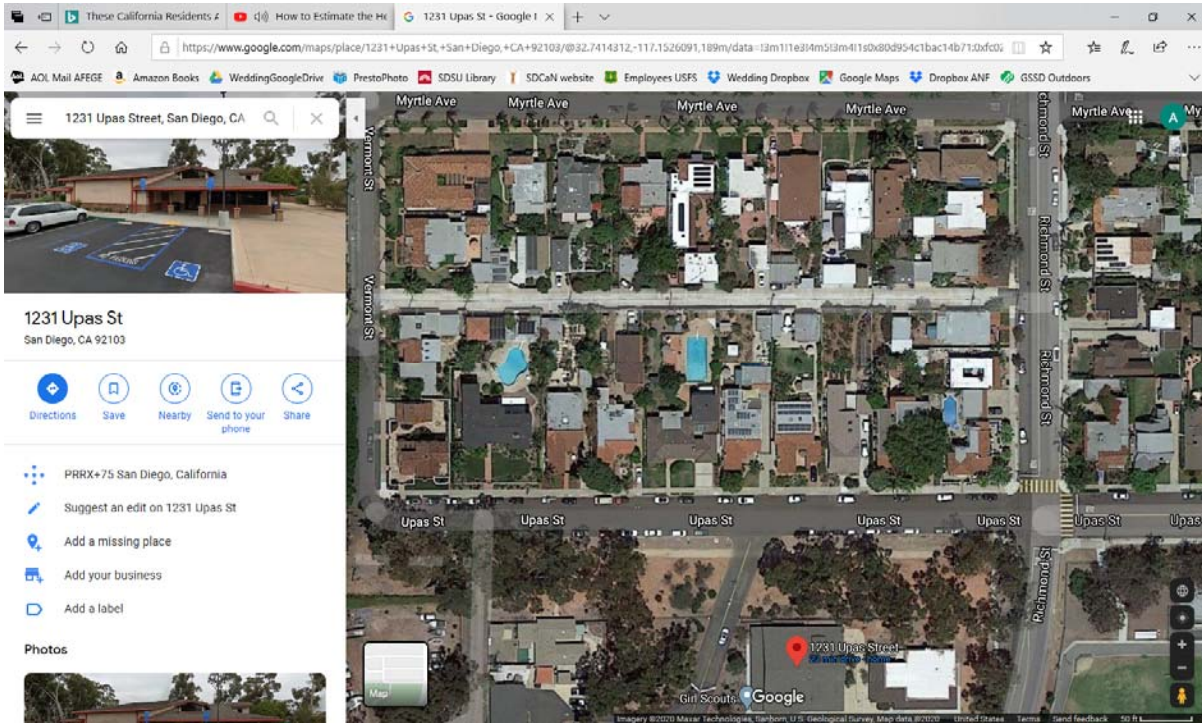
Measuring tree DBH, <https://www.youtube.com/watch?v=R9eQ9qFrSVs> (mark the height with chalk or pencil, not with a push pin)

Estimating tree height,
<https://www.youtube.com/watch?v=F6ftSqlmFM&t=16s>,
 actually a pencil works better than your hand

Estimating crown spread (tree width),
<https://www.youtube.com/watch?v=ezZSAfMKnK0>



Find your neighborhood on GoogleMaps by starting with your address. Zoom out to a few blocks around your house or apartment, and print a map. Walk around the neighborhood with an adult (and a mask) to find and measure five of the largest trees.



Mark the locations of these five trees on the map. Take a photo of each tree (optional).

Measure dbh (diameter at breast height), in inches. Follow instructions in the video. Divide circumference by 3.14 to get diameter, and record in table.

Tree height. Use a pencil instead of the “thumb” in the video. Record height in table.

Crown diameter, also known as tree canopy or the umbrella of leaves. Measure both CW1 and CW2 (from video) and record the average.

(If you can't locate a tape measure, estimate the distance on the ground by counting the number of shoe lengths. Multiply by shoe length in inches, and convert inches to feet.)

Tree #	DBH (inches)	Height (feet)	Canopy (feet)
1			
2			
3			
4			
5			

STEP 3 - Make a creative project starring trees

Capture a tree on your canvas or page. Paint, draw, sketch, photograph, or sculpt a leaf, tree, tree flower, forest, or tree landscape. If you're more of a poet or singer, find three poems or learn three songs about trees, then write your own poem or song.

Choose a tree and sit quietly next to it, with blank paper or card stock, and pencil. Sit for at least ten minutes, and look up, down, and around. Sketch or write a short story.

Sketch your tree. All the way from the top to the ground. Notice the leaves or bark and add detail to the sketch.

OR tell the tree's story. Why am I here? What do I do? What do I need to live? Who comes to visit me?

Also listen to **The Tree Lady**, a book about Kate Sessions, who owned a nursery, was a leader in establishing Balboa Park, and planted many trees in San Diego. Book is written by H. Joseph Hopkins, illustrated by Jill McElmurry, read by Ms. St. Germain, 6 minutes, <https://www.youtube.com/watch?v=EKCQfE4lb4g> .



STEP 4 – Explore the connections between people and trees

Food, inspiration and oxygen aren't the only ways trees benefit people. Fuel, medicine and shelter are also crucial to the tree-people connection – crucial, and anything but simple. Naturalists know all the moving parts surrounding their subject, so here's where you get the whole context of the tree relationship.

Explore the connections between trees and climate change. Watch these four videos:

What is global warming? 2 minutes,
<https://www.youtube.com/watch?v=NjvnAq6k20I>

Trees in Cities, 3 minutes,
<https://www.youtube.com/watch?v=0leNgMxh0c>

Zayda's story, 1 minute,
<https://www.youtube.com/watch?v=hgOBVU3Tpas>

Climate action and trees (Greta's advice), 4 minutes,
<https://www.youtube.com/watch?v=m2h6ZRtyKN0>

Then place ice cubes in 10 different places—the shade and sun, on concrete and under trees. Where do they melt fastest?

Identify products made from trees, in your daily life.

The wood and chemicals from trees are used in making many, many products in our daily lives.

Get started with the list at <https://www.youtube.com/watch?v=JLPDZNgzgnk> or at <https://sciencing.com/uses-of-trees-13424418.html> .

Walk around and inside your home and find 20 products made from trees.



STEP 5 – Help trees thrive

Many trees planted in San Diego were introduced from other continents and climates that have more natural rainfall. Urban trees need to be watered in the dry (summer) season.

Why do trees need water? How do trees move water from the soil to their leaves? How do we water trees? Watch these three videos:

How a tree works, https://www.youtube.com/watch?v=Z31vDMq_esY

How do trees transport water? <https://www.youtube.com/watch?v=9-dicqNoODg>

How to water a tree, <https://www.youtube.com/watch?v=J29E82DWM2g>

The roots of trees grow out to the edge of the canopy (which is the umbrella of leaves). So the tree needs to be watered deeply, once a month under the entire canopy. If there is a tree in your yard, watch the third video with an adult and look for more local tree watering information at <http://sdrufc.com/treewatering/> or <https://saveourwater.com/save-our-water-and-our-trees/> .

STEP 6 – Take Action

Choose and complete **one** of these:

Watch **The Tree Lady** video again, this time with someone of another generation, <https://www.youtube.com/watch?v=EKCQfE4Ib4g>. A younger sibling, a parent or guardian, a grandparent. This will likely be someone in your household but could be watched separately (at the same time) with someone far away. Start a conversation about Kate—how does she inspire you? Where are your favorite trees in Balboa Park? Where's the biggest tree? (outside San Diego Natural History Museum) What species are most of the trees in the canyons? (Eucalyptus)

Photograph your favorite tree in your neighborhood. Post on Instagram with three sentences about what you love about the tree, the tree size, and its benefits to you. Maybe also post a different photo, choose and link to one of the videos, and write what you learned about trees in this badge.

More activities (optional)

Watch this 18-minute video about tree advocacy in San Diego, <https://agrowingpassion.com/urban-forests/>

Watch this 25-minute video about trees and tree care in southern California, <https://youtu.be/IDP0ArFqxtI>

Make a rainstorm, <https://www.treepeople.org/sites/default/files/images/learn-at-home/Make%20a%20Rainstorm.pdf> (be ready to lead this at a future troop meeting)

Find more ways to get outdoors! www.sdgirlscouts.org/outdoor-resources

Anne Fege is a Forester with a forty-plus-year career in urban forestry, wildfire preparedness and recovery, wilderness management, energy forestry, research, and environmental education. She was a Brownie at age seven and stayed through Seniors, led several Cadette troops, and now volunteers to offer more “nearby nature” experiences for troops and outdoor STEM for older girls. Anne has a Ph.D. in Plant Physiology, a Masters in Forest Resources, and an MBA. Contact at afege@aol.com