

Tree Identification Challenge - Outdoor School At Home!

Calvin Crest Outdoor School

Guess Who?

Have you ever played the game “Guess Who”? In the game, you’re looking at cards that have people on them with different names and faces. The person you’re playing against has a specific person in mind, and you ask “yes” or “no” questions to help narrow down who you think you’re guessing. Eventually, you can narrow down the choices until you’re only left with one person. Identifying trees can work the same way.

Go Outside!

Right now, it’s a good idea to stay with your family and maintain at least 6 feet of social distance from other people, but it’s healthy to stay active and spend time outside. If you can, take a few minutes to walk around in your yard and/or your neighborhood. If you’re not able to go outside right now, take a look out of the windows where you live.

What do you notice about the different trees that you see? Look closely. Do they have leaves or needles? Are there any flower buds or blooms on them right now? Are there any that look similar to one another that might be the same kind?

Tree Identification Challenge!

At Calvin Crest Outdoor School, there are a limited number of types of trees. We have a dichotomous key that was made specifically for our elevation (5000 feet above sea level) in the western side of the Sierra Nevada. Though you can’t visit Calvin Crest right now, you can look at our dichotomous key and the attached photos to determine what kind of tree you’re looking at. Start with the first question, answer it, and depending on what your answer is, the key will direct you to a type of tree or a new question to answer.

Try It At Home!

You can try to identify the trees you have in your yard! Some trees are native, meaning that they grow naturally in your area. Others may be non-native, meaning that seeds or small trees were brought by people from another area and planted at some point. It is possible for a tree to grow from a seed that falls from a tree that was brought to your area and planted quite some time ago - if humans were involved in getting the seeds there at any point, it is still considered non-native.

Take a look at the trees around you. Make observations about the bark, leaves/needles, seeds, fruit, and blossoms. If you have one, you could use a field guide - a book designed to help you identify plants and animals in a specific area. If you do not have a field guide but do have access to the internet, you can search characteristics of trees you find, look at a list of trees in your area, or use a resource like this from the Arbor Day Foundation:

<https://www.arborday.org/trees/whattree/>.

THE TREES AND TALL SHRUBS OF CALVIN CREST

1. Has needles or scale like leaves.

GO TO #2

Has ordinary leaves.

(Turn paper over)

GO TO #6

2. Has needles.

GO TO #3

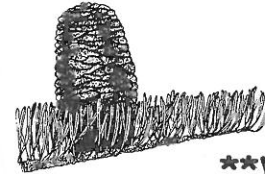
Has scale like leaves.

GO TO #5

3. Has needles in bundles.

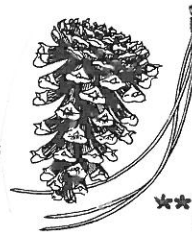
GO TO #4

Has short needles (1"-2") that are not bundled.
Cones (2"-5") sit upright on upper branches.



****WHITE FIR****

4. Has long needles (5"-10") in bundles of 3 and
prickly pine cones (3"-6" long).



****PONDEROSA PINE****

Has needles 3"-4" long in bundles of 5 and
long pine cones (over 1 foot long).



****SUGAR PINE****

5. Has jointed scales that look like they have
been ironed flat. 3-pronged seed pods.



****INCENSE CEDAR****

Has long, thin, round, awl shaped, scaled leaves
and egg shaped cones (2"-3").



****GIANT SEQUOIA****

CALVIN CREST TREES, SHRUBS WITH ORDINARY LEAVES

6. Has a single main trunk

GO TO #7

Has multiple trunks from ground level

GO TO #9

7. Has lobed leaves 4"-7" long, 2"-5" wide, acorns

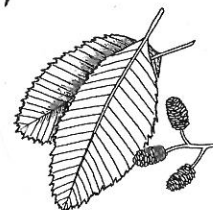


****BLACK OAK****

Leaves are not lobed

GO TO #8

8. Leaves arranged alternately on the stem. Tiny cones



****ALDER****

Leaves are in clumps on the stem. Fruit

****APPLE****

9. Leaves are oval, some smooth edges, some serrated edges.

Go to #10

Leaves have smooth edges.

Go to #11



10. Multiple trunks with leaves that are either smooth or serrated along edges; acorns

****CANYON LIVE OAK****

Multiple trunks with smooth reddish brown bark and small, round, pale whitish green leaves. Fruit like little apples. ****MANZANITA****

11. Multiple very flexible branches, trunks.

Leaves are narrow and long (to 5")



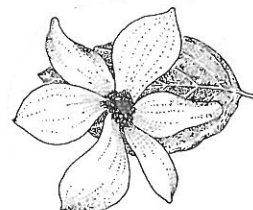
****WILLOW****

Leaves are oval, 1"-3" long, green branches, white flower clusters in spring



****DEERBRUSH****

Leaves are oval, 3"-5" long, large white blossoms in spring, reddish orange berries clustered in fall



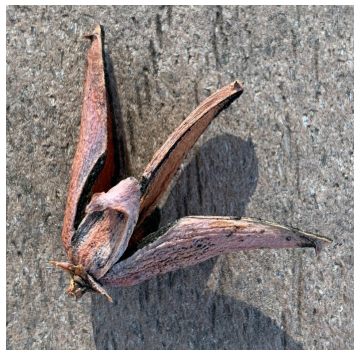
****DOGWOOD****



Tree #1



Tree #2



Tree #3



Tree #4



Tree #5



Tree #6



Tree Identification Challenge - Outdoor School At Home! Answer Key

Calvin Crest Outdoor School

Tree #1 is... a giant sequoia! (*Sequoiadendron giganteum*)

- A. The giant sequoia bark is cinnamon-colored and soft and spongy to the touch. Squirrels use it to line their nests.
- B. Sequoia cones are egg-shaped, about the size of a chicken egg. Mature cones average 2.5 inches long and 1.75 inches in diameter, and can remain on the tree for several years (the stems have countable rings much like the trunk of a tree). Each cone contains 200-300 seeds!
- C. Young trees have a narrow, triangle spire-like shape. As they grow older, trees lose their lower limbs and the massive trunks of the mature trees support large gnarled limbs and a canopy of foliage.
- D. Before sequoias were protected, the wood was used for posts, rails, grape stakes, etc.
- E. The General Sherman Tree, found in Sequoia National Park, is the largest living thing on earth. It is 274.9 feet tall, has a circumference (4.5 ft. above the base) of 83.2 feet, a base circumference of 102.6 feet, and a volume of nearly 58,000 cubic feet.

Tree #2 is... an incense cedar! (*Calocedrus decurrens*)

- A. The incense cedar's bright green scale-like needles lie in iron-flat sprays.
- B. It has hard, orange-brown, deeply furrowed bark that comes off in large sheets when the tree dies.
- C. The incense cedar has a three-prong seed pod that looks like a duck bill.
- D. The incense cedar is named for its fragrant needles and heartwood.
- E. Incense cedars and giant sequoias are often confused. Other than their differences in needles, bark, and cones, the shape of a young cedar is more triangular, as opposed to the spire-like silhouette of the sequoia.

Tree #3 is... a black oak! (*Quercus kelloggii*)

- A. The California black oak is the largest mountain oak in the west. The name comes from the blackish-grey bark that cover its sturdy, forked trunk and massive limbs.
- B. The bright yellow-green leaves are distinctly lobed with each lobe having bristly tips. In the fall, they will range in color from tawny yellow to a rich golden brown yellow before falling to the ground. In the spring, tiny new leaves emerging from their buds are red and velvety.
- C. In the winter, you may more easily notice large clumps of parasitic mistletoe growing on the branches of the black oak trees.
- D. Many wildlife species eat its acorns, leaves, and young sprouts. Some species live in the branches or hollows in black oak trunks.
- E. The Miwok collected black oak acorns as one of their main food sources. Today, the primary use for black oak is firewood. It is not suitable for lumber as it warps easily.

Tree #4 is... a ponderosa pine! (*Pinus ponderosa*)

- A. Ponderosa needles are long (5"-9") and grow in bundles of three.
- B. The bark of the mature ponderosa grows in large orange-brown plates that fit together like a jigsaw puzzle.
- C. Ponderosa pine cones are approximately 4"-6" in length and are prickly to the touch.
- D. One way to remember how to identify ponderosa pines is the "three P's" (to go with the P in ponderosa) - prickly pine cones, puzzle bark, and "perfect three" needles.
- E. High grade ponderosa wood is used for doors, shakes, frames, and paneling. Low grade wood is used for boxes, rafters, joists, and railroad ties.
- F. Ponderosa pines were named by botanist David Douglas for their "ponderous size."

Tree #6 is... a sugar pine! (*Pinus lambertiana*)

- A. Sugar pines can be identified by their short green needles in bunches of five. Needles are about 3 inches long. One helpful way to remember this is that the word "sugar" contains five letters.
- B. Sugar pine cones are the largest cone in this area, and are typically 10-18 inches long.
- C. Sugar pine bark has long, rectangular plates that fit together.
- D. Early loggers in the Sierra Nevada called the sugar pine the "King of the Pines." The tallest known living sugar pine is in Yosemite National Park and is over 270 feet tall. Early settlers prized the even grained, soft white wood that doesn't warp or twist and resists rot for house timbers and shingles. Loggers still prefer sugar pine wood for projects like cabinets, doors, and window frames.

Tree #6 is... a white fir! (*Abies concolor*)

- A. The white fir is named for its light grey bark that grows in small, light plates.
- B. White firs have short, single needles and cones that grow upright on top of the branches, high in the tree. This is different from pine cones, which hang below the branches.
- C. Early loggers considered white firs to be "weed trees" and did not cut them. Today they are used to make window frames, doors, shakes, shingles, and boxes.