

HOST YOUR OWN EVENT DURING CELEBRATION WEEK AND CALIFORNIA REDWOODS MONTH

CONTENTS

CELEBRATE WITH US!	3
EVERYTHING YOU NEED TO CELEBRATE REDWOODS	
Everyone Loves Redwoods!	4
What You Can Do	5
What and When is California Redwoods Month?	7
When is Celebration Week?	7
READY-TO-USE ACTIVITIES AND PROGRAM RESOURCES	8
CUSTOMIZABLE PROMOTIONAL MATERIALS	10
CONNECT WITH US	10

CELEBRATE WITH US!

In 2018, Save the Redwoods League is celebrating its 100th anniversary of protecting and restoring California's coast redwood and giant sequoia forests. These forests are among the world's most beloved treasures—on par with the Amazon rainforest, the glacial valleys of Patagonia and the Great Barrier Reef. Redwoods are a source of national pride, international recognition and personal awe and inspiration. Each year, millions of redwoods visitors from across the globe embrace the opportunity to connect with a landscape unlike any other.

One hundred years ago, the redwoods were almost completely lost due to the high demand for timber. Many were troubled by the destruction of groves and forests made up of the tallest and some of the largest, oldest living things on Earth. In 1918, a group of visionaries banded together to save them and, in doing so, helped to ignite the land conservation movement we know today. Since then, Save the Redwoods League has protected more than 200,000 acres of redwood forests and helped create 66 redwood parks and reserves. The League has pioneered innovative, science-based restoration work. And most importantly, we have touched the lives of countless individuals by connecting them to these towering natural wonders. This centennial is a powerful reminder of how far we've come and a jubilant invitation for people across the nation to get outside and celebrate the redwoods.

MARKING 100 YEARS OF SAVING REDWOODS IN 2018!

Save the Redwoods League is spearheading a major centennial celebration to capture the world's imagination and raise awareness and understanding for the next 100 years. The celebration will include:

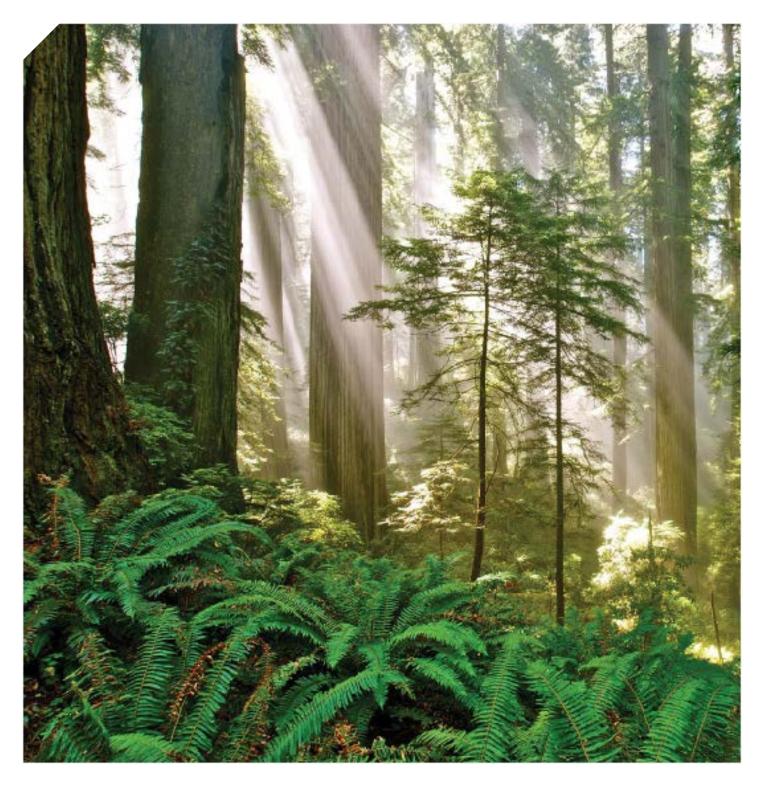
- · Free Second Saturdays every month in 2018 at over 40 redwood state parks. Learn more at FreeRedwoodsDays.org.
- Educational programs, exhibitions and cultural partnerships to connect people with the wonders of the redwoods.
- The release of Explore Redwoods, a web-based trip planning tool with redwoods-centric information on where to go and what to do. Visit <u>ExploreRedwoods.org</u> to plan your trip.
- · A redwood grove summer concert series.
- A new Giant Sequoia Parks Online Resources for Teachers and Students (PORTs) program. Learn more at SaveTheRedwoods.org/Celebrate.
- · Engagement campaign (social/ads/PR) to inspire people to "Stand for the Redwoods."
- · And much more...

The campaign runs through 2018 with activities and promotion throughout the entire year, and will **culminate with Celebration Week from October 7-14, 2018,** featuring the crescendo of our social/earned/paid media campaign, an immersive BART station experience, a documentary film premiere, a celebration gala event, and two Stand for the Redwoods Festivals. This toolkit has the background information, suggested activities, and free materials to support your organization in celebrating and standing for the redwoods.

Join Save the Redwoods League – as well as the San Francisco Giants, the California Academy of Sciences and 96 other organizations like yours – in hosting events throughout the week.

EVERYONE LOVES REDWOODS!

Bring the amazement and beauty of redwoods to your current stakeholders and use your event to invite new people into your community. Protecting the redwoods is one of the most important conservation and environmental issues in California, and surveys consistently find that Californians rank such environmental protections among their top concerns. And of course, the redwoods capture the hearts and minds of many!



WHAT YOU CAN DO

While Stand for the Redwoods, Stand for the Future is a year-long campaign to celebrate the iconic redwoods, we invite you to host your own event during Celebration Week—October 7-14, 2018—that connects your mission to the redwoods. The possibilities are endless! See exhibits on pages 11-24 for suggested activities and access high resolution files at SaveTheRedwoods.org/100kit.

YOUTH AND EDUCATION ORGANIZATIONS, PARENTS

Transport the wonder of the redwoods into your campus, classroom or home with a whole host of redwoods-themed games, adventures and educational activities. Participating in our redwoods curriculum is fun for students and families and will teach youths about redwood forests and all the creatures that inhabit them. Activities could include:

- Participating in the Giant Sequoia PORTS distance-learning program. Learn more at <u>SaveTheRedwoods.org/</u>
 Celebrate.
- Exploring the redwoods by downloading a pass to enjoy one of our Free Second Saturdays in over 40 redwood state parks. Learn more at FreeRedwoodsDays.org.
- · Educational activities like the Build-a-Tree anatomy lesson and the "How tall IS a redwood?" worksheet.
- · Learn about the flora and fauna in the redwood forest with the Redwood Kingdom game.
- Get creative with redwoods poetry and art exhibits. You can submit these pieces to Save the Redwoods League for a chance to be highlighted on our website.
- · Host redwoods-themed class parties or dress-up days.
- Ask children and adults to fill in **#Stand4Redwoods cards** with why they stand for redwoods, snap a selfie with it and share it on social media channels. (Don't forget to tag them with #Stand4Redwoods.) Post them on classroom walls and school hallways, too!

PARKS AND CONSERVATION ASSOCIATIONS

Few locations inspire awe like the towering columns and peaceful hush of a redwood forest. Help your supporters or visitors to connect with the forest and take a stand for the next 100 years with our customizable set of redwoods content. Whether you host an immersive redwoods event or provide people with redwoods-themed materials, you can help enable others to preserve the redwoods for decades to come. Engage conservationists and park visitors with activities and events like:

- Promoting our link to download a pass to enjoy a Free Second Saturdays in over 40 redwood state parks.
 Learn more at FreeRedwoodsDays.org.
- · Getting creative with Sunny the Slug, Marbled Murrelet and Coho Salmon coloring pages.
- · Sharing redwood park transect how-to kits with visitors.
- · Using "Imagine Redwoods" activities with a focus on 100 years in the past, 100 years in the future.
- Distributing #Stand4Redwoods cards so everyone can share how and why they stand for redwoods.

Don't forget to post them in your visitor centers!

LIBRARIES

Libraries can celebrate the redwood forest both indoors and out. Whether you celebrate with book signings, reading lists or our redwoods-themed activities, every event will help stand for the redwoods. Participating is even as simple as taking our #Stand4Redwoods social media pledge. Activities could include:

- Exploring the redwoods by downloading a pass to enjoy one of our Free Second Saturdays in over 40 redwood state parks. Learn more at FreeRedwoodsDays.org.
- · Sharing Redwoods Reading lists for all to enjoy.
- · Hosting a redwoods-themed reading or book signing.
- · Getting creative with redwoods poetry and art activities and exhibits.
- · Learning with a redwood forest plant ID lesson or contest.
- · Playing the Redwood Kingdom card game.
- · Passing out #Stand4Redwoods cards so that everyone can share how and why they stand for redwoods!

Then post them throughout the library.

COMMUNITY-BASED ORGANIZATIONS

Every organization can get involved and support the next 100 years of redwoods conservation. Whether you put on a redwoods-themed costume contest or pledge to #Stand4Redwoods on social media, you can help the redwoods year-round. Activities could include:

- Exploring the redwoods by downloading a pass to enjoy one of our Free Second Saturdays in over 40 redwood state parks. Learn more at FreeRedwoodsDays.org.
- · Sharing our fall-themed, redwoods-focused coloring books.
- · Hosting a Halloween costume contest and dressing up like a redwood or a redwood forest animal.
- Distributing redwoods parks brochures/maps to encourage visitation. You can add seasonal inserts for treasure hunts to find "spooky trees" like Scabby Tree, the Twisted Snag and the Monster Tree, or how to make a visit to the forest at night.
- Passing out #Stand4Redwoods cards so that everyone can share why they stand! Then post them around your office or community space and share on social media.

TRAVEL AND TOURISM GROUPS

Whether they come from next door or the other side of the globe, visitors continue to seek out the redwood forest. Support this natural treasure by promoting adult- and child-focused engagement materials or sharing #Stand4Redwoods social media pledges. Ways to engage include:

- Exploring the redwoods by downloading a pass to enjoy one of our Free Second Saturdays in over 40 redwood state parks. Learn more at FreeRedwoodsDays.org.
- Sharing redwood park brochures, maps and Centennial information at visitor bureaus, offices and key locations.
- Sharing Sunny the Slug storybooks and cut-outs to document the redwoods people have visited (think "Flat Stanley" for the redwoods lovers).
- Distributing "Life in the Coast Redwoods" and "Our Giant Sequoia Forests" workbook giveaways/downloads (available in English and Spanish).
- · Providing #Stand4Redwoods cards so visitors from far and wide can share why they stand for redwoods.

WHAT AND WHEN IS CALIFORNIA REDWOODS MONTH? WHEN IS CELEBRATION WEEK?

We encourage you to host an event and share #Stand4Redwoods promotions in October 2018, which is <u>California Redwoods Month</u>, and especially during <u>Celebration Week</u>, Sunday, October 7 – Sunday, October 14, 2018. This will correspond with a week full of activities in the redwoods and surrounding communities, featuring the crescendo of our social/earned/paid media campaign, a celebration gala event, and Stand for the Redwoods Festivals in San Francisco and Humboldt County. The League is celebrating throughout 2018, and if your organization is not able to participate during Celebration Week or California Redwoods Month, we'd still love your engagement any other time of the year.



ACTIVITIES IN AND AROUND THE REDWOODS

FREE PASSES TO REDWOOD PARKS

What to do: Experiencing the redwoods is now easier than ever! Every second Saturday of each month throughout 2018, parks across California are offering free passes to the redwood forest. As a partner, you can invite your community, patrons, staff and volunteers to download a free pass and enjoy the redwoods at over 40 redwood state parks. Download promotional content with links to the passes to post on your social media and to share on your website. Learn more at FreeRedwoodsDays.org.



VISIT SITE

Audience: Anyone and everyone!

EXPLOREREDWOODS.ORG TRIP PLANNER

What to do: The online Explore Redwoods trip-planning tool offers unprecedented guidance and tips for learning where to go and what to do in the redwoods. Users can choose their timeframe, region and activities of interest, and discover features like trails, campgrounds and access to ancient trees while building a custom itinerary. Share the link ExploreRedwoods.org on your online and social media channels, or use the tool to create a customized redwood forest experience for your patrons, staff or volunteers.



TRIP PLANNER

Audience: Anyone with an interest in travel or outdoor fun and exploration.

REDWOODS TRANSECT HOW-TO KITS

What to do: Distribute transect how-to kits to any visitor to the redwoods and encourage them to assess the health of the redwoods all on their own. To transect a redwood forest, hikers should stop every 10 feet and tally up all the wildlife they spot along the way. Visitors can also share stories and photos from their transect on social media to help celebrate and raise awareness about Celebration Week.

Audience: To be used by seasoned hikers, first-time visitors and everyone in-between. Great for all ages.

PRINCIPLE OF THE PRINCI

DOWNLOAD

IMAGINE REDWOODS

"IMAGINE REDWOODS" ACTIVITIES WITH A FOCUS ON 100 YEARS IN THE PAST, 100 YEARS IN THE FUTURE

What to do: Print off these sheets for visitors and kids to use as they travel through the redwood park. With these, children and imaginative adults can relax, experience the forest, and create art with the redwoods as their inspiration. Share completed drawings on social media or post them in your organization to spread the word about Celebration Week. These sheets should be made available at the entry to your park or in the visitor center.

And the second s

Audience: Children 5-12 years old, or adults who are young at heart; to be used by teachers, librarians, parents and more.

REDWOOD FOREST PLANT ID LESSON

What to do: Although the redwoods are the "big" stars, their forests are full of diverse and fascinating plants to identify. Print these off and distribute them to school groups and visitors to the redwoods and help them learn about all the other flora growing in redwood forests. Consider hosting a contest to see who can locate all the plant species on the list. Remember: take nothing but memories and leave nothing but footprints.

Audience: Fun for all ages!



READY-TO-USE ACTIVITIES AND PROGRAM RESOURCES

REDWOODS TREASURE HUNT

What to do: Print out copies and distribute them to anyone setting out to visit the redwoods. When families, groups, kids on school field trips or anyone else visit the redwoods, they can use these treasure hunt sheets to track all the plants and animals they encounter on their trip. Groups can even host competitions to see who spots the most items as they explore the redwood forest.

Audience: Fun for all ages.

REDWOODS TREASURE HUNT

DOWNLOAD

TEACHER'S GUIDES AND RESOURCES

What to do: Plan a redwoods field trip with our list of places to take your students, and see their eyes light up with wonder. Get junior high students involved in real science with the redwood phenology project. Or, bring the redwoods into your classroom with all our redwoods-themed games, adventures and educational activities. Kids of all ages will learn about the forest plants and animals and have fun in the process. Starting in October, you can participate in the Giant Sequoia PORTS distance-learning program. Learn more at SaveTheRedwoods.org/Celebrate.

In addition to our activity guides, download or request print copies of the "Life in the Coast Redwoods" and "Our Giant Sequoia Forests" workbooks. These are also available in Spanish (Coast and Sequoia). We have also created teacher's guides to the coast redwoods and giant sequoia to aid in teaching kids about the redwood forests.

Audience: Students of all ages.



RESOURCES

REDWOOD KINGDOM GAME

What to do: Find out who trumps who in the redwood forest. Learn about all the animals who inhabit the redwoods with this educational card game. Download the game and cut out the cards to compete against friends and family to see who can rule the redwood kingdom. More cards coming soon. Game on!

Audience: Fun for all ages.



DOWNLOAD

REDWOOD POETRY AND ART EXHIBITS

What to do: For centuries, the redwoods have captured the imagination of painters, poets and artists. Encourage creative expression and share the story of these giants by hosting a poetry and art workshop. You can also include a discussion about the importance of protecting these trees for future generations. No matter how you express yourself, the redwood forest makes a fantastic muse. Make sure to display paintings and poems during Celebration Week, October 7-14, 2018.

Audience: Children 5-12 years old; to be used by teachers, librarians, parents.



CELEBRATE REDWOODS IN LITERATURE

What to do: Whether you're sitting under an ancient tree, at your local library or in the comfort of your home, bring redwoods to life in your imagination through books! Host a reading or booksigning event, or make redwoods the topic for your book club in 2018. Check out our reading lists with over 50 fiction and nonfiction book recommendations for all reading levels.

Audience: There are books for all ages!



READING LIST

CUSTOMIZABLE PROMOTIONAL MATERIALS

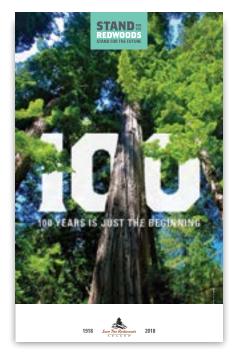
As a Celebration Week partner, you will enjoy:

Promotion of your event on the event calendar at <u>StandForTheRedwoods.org</u>, event promotion on social media, and listing of your organization name and link on <u>StandForTheRedwoods.org</u>. For social media, we may feature your social posts on our site and will list your organization name and link online.

In addition, we've made it easy to promote your event with these adaptable materials. Customize them for your event or activities and help get the word out!



#Stand4Redwoods cardsdownload to share why you stand for the redwoods!



Promotional poster (11"x17")



Stand for the Redwoods flyer



STAND FOR THE REDWOODS STAND FOR THE FUTURE

100 YEARS IS JUST THE BEGINNING

Stand for the Redwoods
Stand for the Future logo

CONNECT WITH US

Have questions? Need more information? We're here to help!

Jennifer Benito

Chief Communications Officer jbenito@savetheredwoods.org (415) 820-5814

EXPLORING PLACES

A Transect for Kids by Save the Redwoods League

What Is a Transect?

A **transect** is a real or imaginary line that people use to learn about a place by noting plants, animals and other things they find along it. Mike Fay, a **National Geographic Explorer-in-Residence**, walked along an 1,800-mile Redwood Transect following the Pacific coast from central California to southern Oregon.

YOU don't have to walk that far, though! Use this transect to explore a redwood park today.

Why Do a Transect?

Transects are a way to "sample" a place, without going to every spot there. They help people explore large areas in detail and to find patterns and connections. By hiking his Redwood Transect, Mike Fay was able to discover links between people, animals and plants in redwood forests.

You can discover the wonders of the redwood forest, too, just by doing this transect.

Transect Tools:

- Redwood Transect (page 2)
- notebook
- pencil or pen
- · colored pencils
- camera
- tape measure (optional)

How to Do Your Redwood Transect:

- 1. Bring your **Transect Tools** to a nearby park.
- 2. Check with a park ranger about any safety concerns.
- 3. Choose a trail or path.
- 4. Take 10 steps (or measure 20 feet) along the trail and stop.
- 5. Try to find one of the items on the **Redwood Transect.**
- 6. In your notebook, describe or draw the item you see at this stop. Label it with the stop number (Stop 1, Stop 2, and so on).
- 7. Repeat steps 4 through 6 until you find all the items. If you reach the end of the trail before you find them all, try another trail!
- 8. **Remember:** Take nothing but memories, leave nothing but footprints. Plants, animals, rocks and other natural things should be left alone.

How many did you find? What did you learn?

Where to Do Your Redwood Transect:

Plan a trip to one of California's redwood parks (ExploreRedwoods.org) and do your transect there. But you don't need redwoods to do this transect – use it to explore any park near you.





REDWOOD TRANSECT



DOWNLOAD HERE

IMAGINE REDWOODS

Visit a redwood park and sit in a quiet spot. Look around and listen - what do you see and hear? Imagine you are sitting in this exact spot, but 1, 10, or 100 years from now (or 1, 10, or 100 years ago). Or, imagine this place at night, during a storm, or on a sunny day. In the space below, draw a picture or write a story describing what you see, hear, smell, feel, and wonder about.

Find more fun redwoods-themed activities at Education.SaveTheRedwoods.org.



111 Sutter Street 11th Floor (415) 362-2352 San Francisco CA 94104

f (415) 362-7017



REDWOOD FOREST PLANT ID GUIDE



Small shiny leaves between 2-3cm long with finely serrated edges. Makes a black fruit. Huckleberry



Thin, dark green needles between 1.5-2.5cm long.



-eaves have 5 lobes, are up to 20cm in length and are soft and fuzzy. Make a red fruit like a raspberry. **Thimbleberry**



with poky edges with a thick, Leaves are 7-15 cm long leatherly texture. **Fanoak**



California Blackberry



Stems have three leaflets with serrated edges about 6-12 cm long. Small prickels on the stem, and make a dark purple fruit.

Leaves fold downward in direct sunlight. Found very close to the ground, with 3 heart-shaped leaflets on a stem.

Leaves are 2-5 cm long Coast Live Oak

with poky edges.

Redwood Sorrel



Leaves are 7-12 cm long. Smooth edges with a **Bay Laurel** distict smell.



REDWOOD FOREST PLANT ID GUIDE



Dogwood

distinctively as they come to the edge. Leaves are 8-12cm long and come to a point at the end. The veins curve



Madrone

lighter, greyish green underneath. Leaves are thick, waxy, and oval is a glossy, dark green with a usually 7-15cm long. The top



Sword Fern

The base of the leaflet is an upward are pinnate and can be 1-15cm long. 50-180cm long. Individual leaflets A single frond can vary between pointing lobe.



Alder

have serrated edges and come Leaves are 7-15cm long. They to a point at the end.



5 deeply palmate lobes.



o (415) 362-2352 f (415) 362-7017

111 Sutter Street 11th Floor San Francisco CA 94104

Save The Redwoods

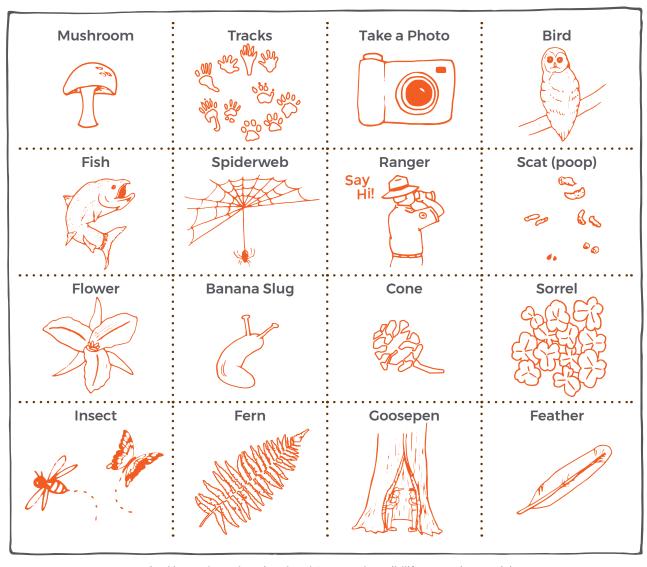
StandForTheRedwoods.org SaveTheRedwoods.org



REDWOODS TREASURE HUNT

You'll discover amazing things when you explore a redwood park! Look for these plants and animals as you walk through the redwood forest. Cross off each square below when you find one.

Find 4 in a row - you win! Find them all - become an honorary Redwoods Ranger!



Inspired by Redwood National and State Parks' Wildlife Detectives activity

Remember: Always leave things where you find them.

(except for trash – it's helpful and cool to pick it up and throw it away!)

Find redwood parks: Visit ExploreRedwoods.org

Save The Redwoods

111 Sutter Street 11th Floor San Francisco CA 94104 p (415) 362-2352 f (415) 362-7017

StandForTheRedwoods.org SaveTheRedwoods.org

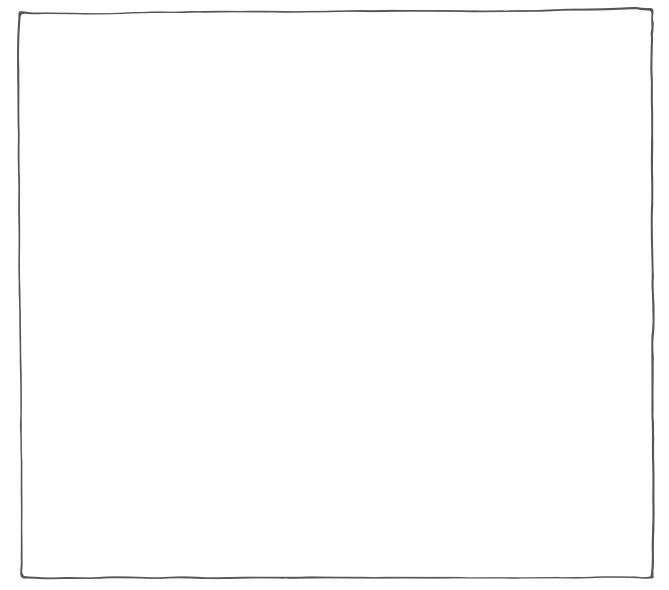


DOWNLOAD HERE

REDWOODS ART

Do you like to draw? A redwood forest can give you lots of great ideas! Walk through the forest. Look around - what do you see? Listen - what do you hear?

In the box below, draw a picture about what you see and hear. Or gather some leaves from the forest floor (don't take anything alive!) and make leaf rubbings.



Send the League your art, and we might post it on our website! Email it to Education@SavetheRedwoods.org, or mail it to the Education Program Manager at the address below. See other redwood art at SaveTheRedwoods.org/art.



111 Sutter Street 11th Floor (415) 362-2352 San Francisco CA 94104

f (415) 362-7017



DOWNLOAD HERE

REDWOODS POETRY

Redwood forests have inspired visitors from all over the world! Sit in a quiet spot. Look around you - what do you see? Listen carefully - what do you hear?

Send the League your oem, and we might post it on our website! Email it to Education@SavetheRedwoods.org, or mail it to the Education Program Manager at the address below. See other redwood poems at SaveTheRedwoods.org/art.



111 Sutter Street 11th Floor (415) 362-2352 San Francisco CA 94104

f (415) 362-7017



REDWOODS COLORS



very, very fast. It lives in the ocean but builds its nest high in old treetops of the coast redwood forest in California.

Illustration from Grandma Ba's Redwood Colouring Book.

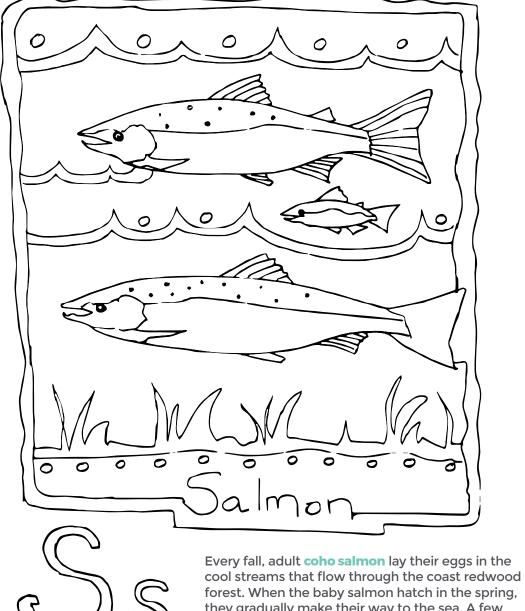


111 Sutter Street 11th Floor San Francisco CA 94104

p (415) 362-2352 f (415) 362-7017



REDWOODS COLORS



they gradually make their way to the sea. A few years later, they return to the same stream to lay their eggs, just like their parents did!

Illustration from Grandma Ba's Redwood Colouring Book.



111 Sutter Street 11th Floor San Francisco CA 94104

p (415) 362-2352 f (415) 362-7017



HOW TALL IS A REDWOOD?

Many coast redwood trees are more than 320 feet tall!

Have you ever wondered how big that REALLY is? It can be difficult for us to imagine.

Get an idea by measuring your height and then calculating how many of you it would take to be as tall as a redwood tree.

Step 1: Ask a friend to use a measuring tape to measure your height. Next measure your friend's height.

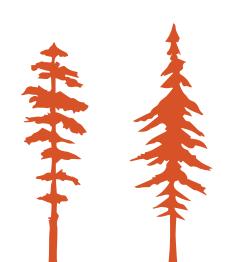
Step 2: Record your height here: _____ feet ____ inches

Record your friend's height here: _____ feet ____ inches

My Height	# of Me to Make a Redwood Tree	My Height	# of Me to Make a Redwood Tree
3 ft. 6 in.	91	5 ft. 0 in.	64
3 ft. 7 in.	89	5 ft. 1 in.	63
3 ft. 8 in.	87	5 ft. 2 in.	62
3 ft. 9 in.	85	5 ft. 3 in.	61
3 ft. 10 in.	83	5 ft. 4 in.	60
3 ft. 11 in.	82	5 ft. 5 in.	59
4 ft. 0 in.	80	5 ft. 6 in.	58
4 ft. 1 in.	78	5 ft. 7 in.	57
4 ft. 2 in.	77	5 ft. 8 in.	56
4 ft. 3 in.	75	5 ft. 9 in.	56
4 ft. 4 in.	74	5 ft. 10 in.	55
4 ft. 5 in.	72	5 ft. 11 in.	54
4 ft. 6 in.	71	6 ft. 0 in.	53
4 ft. 7 in.	70	6 ft. 1 in.	53
4 ft. 8 in.	69	6 ft. 2 in.	52
4 ft. 9 in.	67	6 ft. 3 in.	51
4 ft. 10 in.	66	6 ft. 4 in.	51
4 ft. 11 in.	65	6 ft. 5 in.	50

Step 3: Use this table to find out how many of YOU it would take to be as tall as a 320 ft. redwood.

Step 4: Write your answer here:



10-Story Building

Giant Sequoia

Coast Redwood

Find more fun redwoods-themed activities at Education.SaveTheRedwoods.org.

Save The Redwoods

L E A G U E*

You

111 Sutter Street 11th Floor San Francisco CA 94104

Apple Tree

(415) 362-2352(415) 362-7017

StandForTheRedwoods.org

STAND FOR THE REDWOODS STAND FOR THE FUTURE

DOWNLOAD HERE



Objectives

Students Will:

- 1. Develop a greater understanding of the natural systems of trees.
- 2. Learn about the physiology of trees and how they are able to survive.
- 3. Gain greater empathy for nature.

Method

Students learn about the structure of trees in a bodily kinesthetic and interactive activity.

Background

Trees have so many important jobs that are necessary to animals, people and the environment. Some animals spend their entire lives in trees or rely on them for food. Birds, squirrels, opossums, raccoons, and insects find shelter from the weather and predators in trees. Even dead or dying trees provide shelter and food for insects. Trees provide the air we rely on for life. Tree roots keep soil from washing away which makes streams and lakes cleaner. Trees protect us from the elements as well. The purpose of this activity is for students to learn about tree parts and their functions and to increase their empathy towards trees in nature.

Materials

Cards with the tree parts and definitions; Open space

Procedure

Toneset: Ask students what they know about trees. What kinds of connections have they had with trees? Do they know any of the components of trees?

- **Heartwood** provides strength to hold the trunk and branches upright.
- Taproot enables the tree to get water from deep in the earth and stabilize it during storms.
- **Lateral Roots** grow outward around the tree and help hold the tree upright, these root hairs take up water. Trees have thousands of miles of root hairs that grow towards water.
- **Sapwood** —xylem in the sapwood draws water up from the roots and transports it to the tree's highest branches.
- Cambium produces cells growing inward to form sapwood and out to form phloem.
- Phloem transports food that is made by the leaves and distributes it to the rest of the tree.
- Bark supports and protects a tree.



- 1. The teacher naturalist asks students to stand in a circle and passes out the tree part cards.
- 2. Each student who has a card reads the definition to the rest of the group.
- 3. Let students know that they are going to build a tree based on the tree parts on the cards.
- 4. Choose 2 students to stand back to back and act as the **heartwood**.
- 5. Select 3 people to be lateral roots and lay on the ground with their feet against the trunk.
- 6. Ask a small group to hold hands around the **heartwood** and act as **sapwood**.
- 7. Choose a small group to be the cambium and hold hands around the sapwood.
- 8. The rest of the group can surround the tree as **phloem** and finally **bark**.

Cabin Leader Role

As always cabin leaders play in integral part in this activity. Their participation, positive attitude, excitement, and interactions help keep the students engaged and interested.

Variations

- For 7th and 8th graders this lesson may lead to further discussion of trees and the adaptations various trees must make in order to compete in the forest.
- Ask students to spend some time sketching a tree in the journals and have them list the
 components that they just learned. Encourage them to use something from nature (bark, a rock,
 dirt) to sketch the tree.

Extensions

Pre-Activity: *Scope-a-Tree, *Meet a Tree

Post Activity: *Race to the Sun

Assessment

Group Discussion:

Students questions and comments during the debrief and discussion will reflect their understanding of the topic.

- 1. Were they surprised by anything they learned about the anatomy of a tree?
- 2. Did they learn anything that might cause them to look at nature differently?
- 3. How are humans are similar to trees? How are we different?
- 4. How is this activity related to self, others, nature and God?

Journal Questions:

- 1. What is our heartwood as human beings?
- 2. What is our bark?



Age: Grades 5-8

Subjects: Science (Biology), Physical Education

Skills: Invention, Observation, Discussion, Application

Duration: 20 minutes

Group size: 10-12 Students

Setting: Open field, Tree part cards

Catholic Social Teaching Principle: Stewardship of God's Creation

Archdiocese Religious Standards: California State Science Standards:

5th grade (2.f, 2.g) -Life Sciences

6" grade (5.a) -Life Sciences

7th grade (5.a) -Structure and Function in Living Systems

8th grade (6.a, 6.b) -Life Sciences

Key Vocabulary: Heartwood, Taproot, Lateral Roots, Sapwood,

Xylem, Cambium Layer, Phloem

Credit:

Caritas Creek Environmental Education Program

www.caritascreek.org

Caritas Creek's mission is to help young people discover the connection between all living things; to build bridges between diverse socio-economic and ethnic groups; and to foster in youth a deeper connection to the natural environment, to self; to the spirit of love, and to community.

Find more fun redwoods-themed activities at Education.SaveTheRedwoods.org.





