

4-5th Grade: Discover Redwoods *Teacher Guide*

<p>Next Steps for Teachers</p>	<ol style="list-style-type: none"> 1. Print Journals: Print out the Student Journal for students (optional). The journal may also be used electronically. 2. Review Student Guides: Review student guides (linked below) for each lesson. 3. Share Links with Students: Share the Student Guide link with your students on the day(s) you'd like your students to do the lesson.
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<p>NGSS Content Standards</p>	<p>Performance Expectations 3-LS1-1 4-LS1-1 5-LS1-1, 5-LS2-1</p> <p>SEP's Analyzing and Interpreting Data Constructing Explanations and Designing Solutions</p> <p>DCI's LS1.A: Structure and Function LS1.B: Growth and Development of Organisms LS2.A : Interdependent Relationships in Ecosystems LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p>CC's Patterns Cause and Effect Stability and Change Systems and Systems Models</p>
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<p>Themes Covered:</p>	<ul style="list-style-type: none"> • Layers of a tree and their functions • How do you determine the age of a tree? • What creatures live in different parts of a redwood forest? • You can tell the age of needles by counting sections of it.
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<p>Guiding Questions</p>	<ul style="list-style-type: none"> • What plants and animals live in a redwood forest?
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- What characteristics of redwoods help them grow and thrive?
- What can the rings of a redwood tree tell us about its life?

Social and Emotional Learning support

A [Redwood Tree Yoga Video](#) is part of this unit.

Lesson #1: Engage

- Pose the guiding questions so students start thinking about redwoods and their forests.
- Students answer questions in their journal.
- [“Redwoods” Storytime Video](#) including the following pause points:
 - 3:34- Push forward with your hands and say “Resist fire”
 - 4:15- Put your hands above your head and make a slurping noise
 - 7:05- How many different animals live in the redwood canopy? (Answer: 8 are listed on this page)
 - 8:20- wave your arms back and forth and intertwine them like the branches of a redwood tree
- Neighborhood Tree Search and journal activity

Lesson #2: Explore

- [Redwood Tree Yoga](#)
- Watch the [Redwood Scavenger Hunt Video](#) and complete the journal questions
- Tree Cookie Activity and journal questions
- [Build a Tree Video](#) and journal questions

Lesson #3: Explore

- Watch the [Banana Slug Video](#)
- Complete the [Redwood Animals](#) and their [Habitats Activity](#)
- [Neighborhood Animal Scavenger Hunt](#)

Lesson #4: Explain

- Study the [tree cookies](#) and tell us about the rings
- Watch the [Redwood Needles Video](#) and count the needle sections and tell us its age
- Revise and add to your answers on the Guiding Questions

Lesson #5: Elaborate

Choose one of the following activities to share with others what you learned about redwoods and redwood forests.

- Option 1: Take our [pledge](#) and commit to helping the redwoods.
- Option 2: Draw a picture of a redwood forest and the different animals that live in it and share it with your family.
- Option 3: Write a poem or haiku about redwoods and share it with [Save the Redwoods League](#).
- Option 4: Find a redwood park near you to visit with our [ExploreRedwoods.org](#) webpage.

Chat with a Naturalist

Additional Resources

- Explore the [Redwood Forest Facts](#) webpage
- Print and play the [Redwood Kingdom Game](#)
- [Coast Redwood Education Brochure and Activity Book](#) (downloadable in English and Spanish)
- Chat with a Naturalist - This is an option if students have more questions or are interested in continuing to engage and ask further questions of a Save the Redwoods League Naturalist. Educators should reach out to the [education department](#) at Save the Redwoods League and can schedule a 30 minute zoom session with a Naturalist. Questions should be provided to the Naturalist prior to the date of the check in so they have ample time to prepare and address students' questions thoroughly and thoughtfully.

Discover Redwoods

Student Journal



Name: _____

Date: _____

1 Answer the following Guiding Questions. It is OK if you do not know the answers to all of them.

What plants and animals live in a redwood forest?

Add to your answer after learning about redwoods

What do all trees/plants need to grow?

Add to your answer after learning about redwoods

What characteristics do redwood have that help them grow and thrive?

Add to your answer after learning about redwoods

What do the rings of a tree tell you about its life?

Add to your answer after learning about redwoods

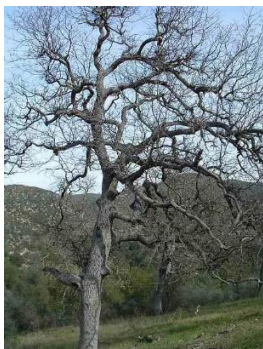
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Student Journal

2 Neighborhood Tree Search

Walk around your neighborhood with an adult. Look for different trees and make observations about them, what patterns do you notice, how are they similar, how are they different?

Put an X by the pictures you saw during your walk.



What are three observations you made about the trees in your neighborhood?

Draw one of the leaves you picked up. DO NOT TRACE IT.

Discover Redwoods

Student Journal

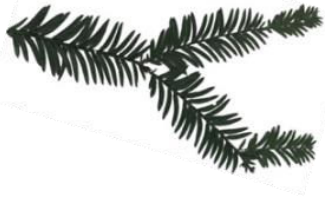
3

Redwood Scavenger Hunt - Click here to watch the [Redwood Scavenger Hunt video](#)

Write down one thing you learned about each of the objects below.



I learned...



I learned...



I learned...



I learned...

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Student Journal

4 **Tree Cookies** – Look at the different tree [cookie pictures](#), or real tree cookies.

A tree puts on a new layer of wood every year. You see this as a light and dark ring. The light ring is wood put on during the early growing season and the dark ring is wood put on during the late growing season – all in the same year.

1 year of growth



Complete the following statements.

What you notice	I notice...
Write what questions you have	I wonder...
Write down what these tree cookies remind you of.	This reminds me of...

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Student Journal

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Build a Tree

Click here to watch the [Build a Tree Video](#)

Draw a line from the tree part to what it does - its function.

Bark	Growth layer of the tree
Sapwood/Xylem	Makes food for the tree
Roots	Protects the tree from bugs and fire
Heartwood	Moves food
Cambium	Supports the tree on the inside
Phloem	Moves water
Leaves	Sucks up water and nutrients from the soil

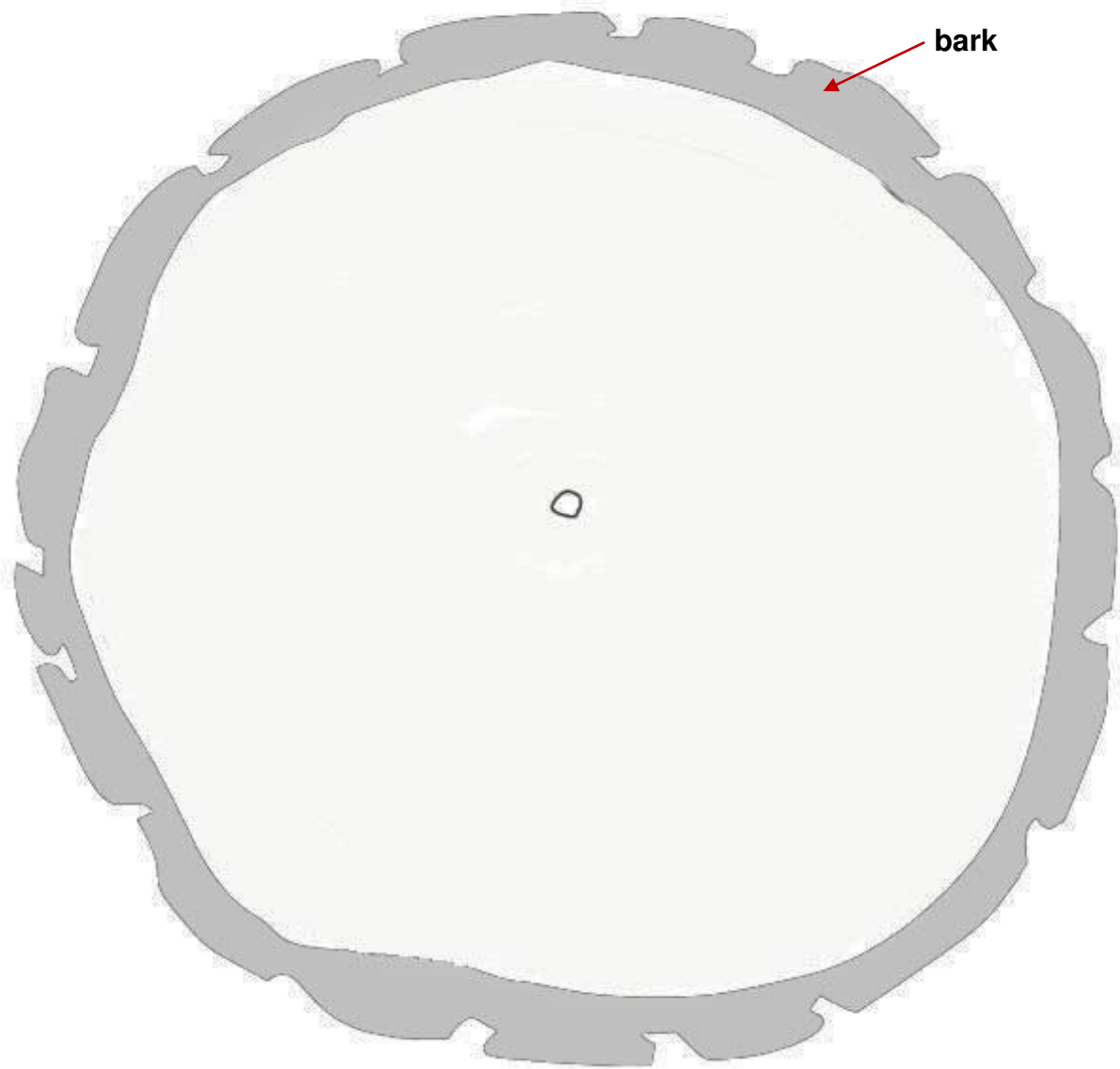
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Student Journal

6 **Tree Cookies** - Draw a ring for every year old you are. (If you are 8, draw 8 rings)

Color the inner most rings of your tree cookie (3-4 rings) **dark brown**. Color the rest of the rings, **light brown**. Draw one ring right under the bark that is **blue**. Draw another ring right inside the blue circle that is **green**. Label the different parts of the tree cookie using the following guide.

Light brown – sapwood **Dark brown** – heartwood **Green** – cambium **Blue** – phloem



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Student Journal

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Redwood Needles

Count the different sections of the redwood needle picture below. How old is it?



Draw a redwood branch that is the same age as you.

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Lesson #1 Engage

<p>Step 1:</p> <p>Guided Questions</p>	<p>If you did not receive a printed copy of the Journal, download the journal and save to your computer. From time to time, you will be asked to open up your Journal to do an activity.</p> <p>Go to #1 in your student journal to answer the Guiding Question.</p>
<p>Step 2:</p> <p>Watch Video</p>	<p>Click here to watch the “Redwoods” Storytime. Make sure to engage in the suggested movements and the various pause points below.</p> <ul style="list-style-type: none">○ 3:34- Push forward with your hands and say “Resist fire”○ 4:15- Put your hands above your head and make a slurping noise○ 7:05- How many different animals live in the redwood canopy? (Answer: 8 are listed on this page)○ 8:20- wave your arms back and forth and intertwine them like the branches of a redwood tree
<p>Step 3:</p> <p>Neighborhood Tree Search</p>	<p>Walk around your neighborhood with an adult. Look for different trees and make observations about them, what patterns do you notice, how are they similar, how are they different. Collect a couple leaves from the ground and bring them home.</p> <p>Go to #2 in your student journal and complete the Neighborhood Tree Search activity</p>

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Lesson #2 Explore

<p>Step 1: Mindfulness</p>	<p>Click here to watch Deborah doing a 4.00 minute Redwood Tree Yoga Video.</p>
<p>Step 2: Watch Video</p>	<ul style="list-style-type: none">Click here to watch the Redwood Scavenger Hunt Video <p>Go to #3 in your Journal: Redwood Scavenger Hunt Fill out the chart in your journal to share what you learned about different objects in the redwood forest.</p>
<p>Step 3: Tree Cookie Activity</p>	<p>Print, or look at online, the three different tree cookie pictures. (Or look at real tree cookies if you have them.)</p> <p>Go to #4 in your Journal: Tree Cookies Fill in the chart to write down what you notice, what you wonder about, and what the tree cookies remind you of.</p>
<p>Step 4: Watch Video</p>	<ul style="list-style-type: none">Click here to watch the Build a Tree Video. <p>Go to #5 in your Journal: Build a Tree Label the tree parts diagram and write down one thing that part of the tree does.</p>

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Lesson #3 Explore

<p>Step 1:</p> <p>Watch Video</p>	<p>Click here to watch a video about Banana Slugs</p>
<p>Step 2:</p> <p>Redwood Animals and their Habitats</p>	<p>Print out the Animal Coloring Sheet and the Redwood Forest Habitat Page.</p> <ul style="list-style-type: none">• Read about the different redwood animals on the Animal Coloring Sheet• Color in the animals and cut them out.• Glue them onto the Redwood Forest Habitat page where you think they go based on what you learned about them.• Write on the back of the worksheet why you placed the animals where you did. Use evidence to explain your answer. <p>You can use the following sentence structure:</p> <ol style="list-style-type: none">1. I placed the ___ animal in the ___ because... <p>More than one animal can live in the same place.</p>
<p>Step 3:</p> <p>Neighborhood Animal Scavenger Hunt</p>	<p>Using the Neighborhood Animal Scavenger Hunt Worksheet, walk around your neighborhood, with a trusted adult or family member. As you walk, search for examples of the six different pictures on your worksheet.</p>

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Lesson #4 Explain

<p>Step 1:</p> <p>Redwood Tree Cookies</p>	<p>Go to #6 in your Journal: Tree Cookies. Complete the questions about the rings of the tree.</p>
<p>Step 2:</p> <p>Watch Video</p>	<p>Click here to watch the Redwood Needles Video</p> <p>Go to #7 in your journal: Redwood Needles. Answer the question and draw what you learned about redwood needles from the video.</p>
<p>Step 3:</p> <p>Guiding Questions</p>	<p>Go back to #1 in your journal: Guiding Questions. Add to your answers after learning more about redwoods and redwood forests.</p>

Discover Redwoods

Lesson #5 Elaborate

<p>Step 1:</p> <p>Share What You Learned</p>	<p>Using the resources listed below – Choose one activity to complete to share with others what you learned about redwoods and redwood forests.</p> <ul style="list-style-type: none">• Option 1: Take our pledge and commit to helping the redwoods.• Option 2: Draw a picture of a redwood forest and the different animals that live in it and share it with your family.• Option 3: Write a poem or haiku about redwoods and share it with Save the Redwoods League.• Option 4: Find a redwood park near you to visit with our ExploreRedwoods.org webpage.
<p>Step 3:</p> <p>Chat with a Naturalist</p>	<p>To learn more, think of three questions you would ask a naturalist about redwoods near where you live.</p> <p>Your teacher will arrange a time for your class to chat with a naturalist from Save the Redwoods League.</p>
<p>Step 3:</p> <p>Learn More!</p>	<p>To Learn more about redwoods investigate the following resources.</p> <ul style="list-style-type: none">• Explore the Redwood Forest Facts webpage• Print and play the Redwood Kingdom Card Game• Read and complete the Coast Redwood Education Brochure and Activity Book (downloadable in English and Spanish)