CALIFORNIA
Native American Studies
MODEL CURRICULUM

Connected California: Ohlone Unit
Grade Level: 3rd – 5th Grades
Subject Areas: Social Studies, Science
Materials Needed:

- Computer with internet access and projector
- Whiteboard and markers
- Chart paper and markers
- Printed copies of redwood tree diagrams
- Notebooks or journals
- Art supplies (colored pencils, crayons, construction paper)

Curriculum Themes: (Check that apply)

- ☑ History
- ☐ Cultural Strengths
- ☐ Law/Government
- ☑ Relationship to Place
- ☑ Cross Curricular Integration

Unit Authors and Researchers

This unit was researched, authored, and edited by the California Indian Museum and Cultural Center, California Indian Education for All, and the San Diego County Office of Education. Additionally the videos from this unit come from the California Academy of Sciences. The California Academy of Sciences is a renowned scientific and educational institution dedicated to regenerating the natural world through science, learning, and collaboration. Based in San Francisco's Golden Gate Park, it's the only place in the world to house an aquarium, planetarium, rainforest, and natural history museum—plus cutting-edge research programs—all under one living roof. The unit resources were designed and created from funding through the California Department of Education's Native American Studies Model Curriculum grant and contract.

Instructional Video Credits

Lesson 1: Restoring the Presidio | California Academy of Sciences Video
https://www.youtube.com/watch?v=Ne5hmjhql_g&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=7&t=8s&pp=iAQB
Melissa K. Nelson (Turtle Mountain Chippewa), Chair, Cultural Conservancy, Professor, Arizona State University
Videography: Robin Moore at Plus M, Presidio Trust
Presidio Images: Presidio Trust
Producer: Molly Michelson
Editor: Matt Blackwell
Additional Videography: Nick Perez, Gayle Laird
Stock Footage and Music: Pond5.com

Lesson 2: Resilient Redwoods | California Academy of Sciences Video
https://www.youtube.com/watch?v=BAMfEIIFxcg&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=14&t=54s&pp=iAQB
Vincent Medina and Louis Trevino, mak-'amham/Cafe Ohlone
Producer: Molly Michelson
Videographer: Nick Perez
Images: Hugo Alhberg/Heath Ceramics
Stock Footage and Music: Pond5.com

Lesson 3: California's Redwood Trees | California Academy of Sciences Video
https://www.youtube.com/watch?v=cYCajfj5AYk&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=22&pp=iAQB
Sarah Jacobs and Emily Magnaghi
Videographer/Editor: Nick Perez
Producer: Molly Michelson
Additional Footage: Frans Lanting
Stock Footage and Music: Pond5.com

California Native American Studies Model Curriculum

The California Native American Studies Model Curriculum (NASMC) will support the design and development of open-source lesson plans, primary source documents, planning resources, teaching strategies, and professional development activities to assist California K-12 educators in teaching about California Native American Studies. Per AB 167, the NASMC is defined as lesson plans, primary source documents, planning resources, teaching strategies, and professional development activities to assist educators in teaching about Native American Studies.

Unit Objectives:

- Students will understand the historical and ecological significance of the Presidio in San Francisco.
- Students will analyze the impact of restoration efforts on preserving history and supporting ecosystems.
- Students will research specific areas of the Presidio and collaborate to present their findings.
- Students will design an advocacy campaign to educate others about the importance of restoration.
- Students will present their research and campaigns, demonstrating their understanding of how restoration connects to cultural preservation and environmental health.
- Students will understand the unique characteristics that contribute to the resilience of redwood trees.
- Students will explore the environmental challenges redwoods face and how they adapt to survive.
- Students will analyze the importance of conservation efforts in protecting redwood forests.
- Students will examine the ecological and environmental importance of California's redwood trees.
- Students will explore the concepts of respect, reciprocity, and reverence within Indigenous knowledge systems.
- Students will reflect on the importance of maintaining balanced relationships with the land and nature.
- Students will apply these concepts by discussing ways they can show respect, reciprocity, and reverence for their local environment.
- Students will learn from California Native American perspectives

Background for Educators

Essential Understandings of California Indian History and Culture

- ☑ Essential Understanding 1: Great Diversity Among Tribes (EU1 Video) https://bit.ly/NASMC_EU1
- ☑ Essential Understanding 2: Diversity Among Identity (EU2 Video) https://bit.ly/NASMC_EU2
- ☑ Essential Understanding 3: Native Traditional Beliefs (EU3 Video) https://bit.ly/NASMC_EU3
- ☑ Essential Understanding 4: Policies that Affected Tribes (EU4 Video) https://bit.ly/NASMC_EU4
- ☐ Essential Understanding 5: Reservations (EU5 Video) https://bit.ly/NASMC_EU5
- ☑ Essential Understanding 6: History from a California Indian Perspective (EU6 Video) https://bit.ly/NASMC_EU6
- ☐ Essential Understanding 7: Tribes Have Sovereign Powers (EU7 Video) https://bit.ly/NASMC_EU7

Overview

The Connected California: Ohlone Unit is an interdisciplinary learning experience designed for students in grades 3–5 that centers Indigenous knowledge, history, and ecological science through the lens of the Ohlone people's connection to land. Developed in partnership with the California Indian Museum and Cultural Center, California Indian Education for All, and the San Diego County Office of Education, the unit explores environmental restoration and resilience by highlighting Native voices and traditional ecological knowledge. Students examine the cultural and ecological significance of the Presidio of San Francisco and California's redwood forests through hands-on inquiry, storytelling, and reflection.

Throughout the unit's three lessons: Restoring the Presidio, The Resilience of Redwood Trees, and Exploring California's Redwood Trees students investigate environmental challenges and restoration efforts, analyze plant adaptations, and create advocacy and conservation campaigns. Learning is guided by the 5E instructional model (Engage, Explore, Explain, Elaborate, Evaluate) and emphasizes the Indigenous values of respect, reciprocity, and reverence. By integrating social studies and science standards, and incorporating culturally responsive teaching, this unit supports students in understanding the intersections between Native history, environmental health, and civic responsibility. Through video storytelling, group collaboration, and artistic expression, students are empowered to become stewards of the land and to recognize the ongoing contributions of Native communities to California's

ecological and cultural landscapes. Each lesson incorporates storytelling from Native voices, student collaboration, and reflection activities that foster cultural respect, environmental awareness, and community engagement.

Core Themes:
- History and sovereignty
- Cultural strengths and Indigenous knowledge systems
- Environmental relationships and stewardship
- Science, civics, and ELA integration

Students will:
- Analyze environmental impact on Indigenous communities and ecosystems.
- Explore Indigenous cultural perspectives on redwoods and the environment.
- Investigate ecological roles of redwood trees.
- Evaluate solutions for balancing conservation and human needs.
- Express learning through art, reflection, and collaborative discussion.

Lesson Highlights:
Lesson 1: Restoring the Presidio – A Journey Through History and Ecology
- Students explore the cultural and ecological restoration of the Presidio in San Francisco.
- They learn about the site's transformation from a military post to a national park through the lens of Indigenous knowledge and sustainability.
- Working in groups, students research specific areas of the Presidio and create advocacy campaigns to educate others about the importance of restoration.
- Emphasizes cultural preservation, environmental stewardship, and civic action.

Lesson 2: The Resilience of Redwood Trees
- Students investigate the unique adaptations that help redwood trees survive environmental challenges such as fire and drought.
- Each group researches a specific redwood characteristic (e.g., bark, sprouting roots) and connects it to the tree's overall resilience.
- Students develop conservation plans and visual presentations to advocate for the protection of redwood forests.
- Integrates scientific inquiry with Indigenous perspectives on environmental balance and resilience.

Lesson 3: Exploring California's Redwood Trees
- Focuses on the ecological role of redwood forests in supporting biodiversity and combating climate change.
- Students study different redwood features (e.g., height, root systems) and analyze their importance to the broader ecosystem.
- Groups create actionable conservation strategies and educate others through posters or brochures.
- Encourages students to connect Indigenous ecological knowledge with modern conservation efforts.

Pedagogical Approach:
Each lesson follows a 5E learning model—Engage, Explore, Explain, Elaborate, Evaluate—and includes:
- Video-based storytelling from Native voices
- Hands-on activities and group projects
- Scaffolded strategies for differentiation
- Formative and summative assessments
- Emphasis on respect, reciprocity, and reverence in learning

Connected California: Ohlone Unit
Lesson 1: Restoring the Presidio: A Journey Through History and Ecology
Grade Level: 3rd – 5th Grades
Subject Areas: Social Studies, Science
Duration: 60 minutes

Learning Objectives

- Students will understand the historical and ecological significance of the Presidio in San Francisco.
- Students will analyze the impact of restoration efforts on preserving history and supporting ecosystems.
- Students will research specific areas of the Presidio and collaborate to present their findings.
- Students will design an advocacy campaign to educate others about the importance of restoration.
- Students will present their research and campaigns, demonstrating their understanding of how restoration connects to cultural preservation and environmental health.

Materials

- Internet access to play the video
- Chart paper or whiteboard
- Markers
- Student notebooks
- Printed copies of the Presidio map
- Art supplies (colored pencils, crayons, construction paper)

Video Link: Lesson 1: Restoring the Presidio
https://www.youtube.com/watch?v=Ne5hmjhgI_g&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=7&t=8s&pp=iAQB

Curriculum Themes: (Check that apply)

- ☑ History
- ☐ Cultural Strengths
- ☐ Law/Government
- ☑ Relationship to Place
- ☑ Cross Curricular Integration

Instructional Standards:
History–Social Science:
Standard 3.1: Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.
Standard 4.1: Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.
Standard 5.8: Students trace the colonization, immigration, and settlement patterns of the American people from 1789 to the mid-1800s, with emphasis on the role of economic incentives, effects of the physical and political geography, and transportation systems.

Next Generation Science Standards (NGSS):
3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.
4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.
5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Lesson Plan:

Engage (15 minutes)

- Activate prior knowledge and spark interest in the Presidio and its restoration.
- Teacher Directions:
    - Begin by asking students if they have ever visited a national park or historical site. Discuss their experiences and what they observed.
    - Introduce the Presidio of San Francisco, providing a brief overview of its history as a military fort and its transformation into a national park.
    - Show the video "Restoring the Presidio" to the class.
- Scaffolding Strategies:
    - Provide a brief background of the Presidio before showing the video to give context.
    - Pause the video at key points to explain complex terms or concepts.
    - Encourage students to take notes or jot down questions during the video.

Explore (30 minutes)

- Investigate the historical and ecological aspects of the Presidio.
- Teacher Directions:
    - Divide students into small groups and provide each group with a map of the Presidio.
    - Assign each group a specific area or landmark within the Presidio to research (e.g., Crissy Field, Fort Point, Main Post).
    - Instruct groups to use available resources (books, articles, reputable websites) to gather information about their assigned area, focusing on its historical significance and any restoration efforts.

- Scaffolding Strategies:
  Provide guiding questions to help focus their research, such as:
        - What was the original purpose of this area?
        - What changes have occurred over time?
        - What restoration efforts have been implemented?
    - Offer graphic organizers to help students organize their findings.
    - Circulate among groups to provide support and answer questions.

Explain (20 minutes)

- Synthesize and present findings to deepen understanding.
- Teacher Directions:
    - Have each group present their findings to the class, using their maps and any visual aids they created.
    - Encourage students to discuss the significance of their area and the impact of restoration efforts.
    - Facilitate a class discussion on the common themes observed across different areas of the Presidio.

- Scaffolding Strategies:
    - Provide sentence starters to help students present their information, such as:
        - "Our area was originally used for..."
        - "One significant change that occurred was..."
        - "The restoration efforts focused on..."
    - Use a Venn diagram

Elaborate

Watch the Video: Lesson 1: Restoring the Presidio
https://www.youtube.com/watch?v=Ne5hmjhqI_g&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=7&t=8s&pp=iAQB

Play the full video, pausing at key moments to ask reflective questions.

Group Discussion and Reflection Activity:

- Divide students into small groups. Ask them to share their notes and identify common themes from the video.
- Have the small group complete the Video Discussion and Reflection Group Activity.

Extension Discussion:

1. Lead a whole-class discussion, asking questions like:
   - "How can we honor Native American history and culture today?"
   - "What lessons can we learn about resilience and advocacy from their experiences?"
   - "How do modern Native communities continue to preserve their connection to the land?"

Evaluate

Exit Ticket:

1. Ask students to respond to one of the following prompts in 2-3 sentences on an index card or sheet of paper:
   - "What is one thing you learned about Native American culture and land today?"
   - "Why is it important to understand this part of history?"
   - "What can we do to support Native American communities today?"
2. Collect responses to assess understanding and guide future lessons.

Student Worksheet: Restoring the Presidio

Name: _____

Part 1: Engage - Exploring the Presidio

1. Have you ever visited a national park or historical site?

   Where did you go, and what did you notice about the environment or its history?

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2. While watching the video *Restoring the Presidio*, take notes:
   - What is the Presidio, and why is it significant?

   - What restoration efforts were highlighted in the video?

Part 2: Explore - Investigating the Presidio

Work in your group to research the area of the Presidio assigned to you. Answer the following questions:

1. **Name of the area or landmark your group is researching:**

   _____

2. **What was the original purpose of this area?**

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3. **How has this area changed over time?**

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4. **What restoration efforts have been implemented?**

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5. **Why is this area important to the Presidio's history and environment?**

Part 3: Explain - Sharing Your Findings

Prepare to share your findings with the class. Use the following questions to organize your presentation:

1. What did you learn about your area of the Presidio?

2. Why is restoration important for this area?

3. How does this area connect to the overall story of the Presidio?

Part 4: Elaborate - Advocacy Campaign

Create an advocacy campaign to educate others about the restoration efforts in the Presidio.

1. **Key Message:**
    - What is the main idea you want to communicate about restoring the Presidio?

2. **Call to Action:**
    - What do you want your audience to do to support restoration efforts?

3. Use one of the following formats for your campaign:
    - A flyer with drawings and key facts.
    - A social media post (write a caption and include hashtags).
    - A script for a short video or PSA.

Part 5: Reflect - Why Restoration Matters

1. Why is it important to restore places like the Presidio?

2. What did you learn about the relationship between history and the environment in this lesson?

Restoring the Presidio - California Academy of Sciences
Ohlone Group Discussion and Reflection

Video Link	**Summary of Video**
[Restoring the Presidio | California Academy of Sciences] 	"Restoring the Presidio" by the California Academy of Sciences showcases the integration of Indigenous science in revitalizing San Francisco's Presidio. It highlights efforts to reconnect urban environments with native plants and wildlife, emphasizing the importance of traditional ecological knowledge in urban restoration projects.

Reflection Questions

1. **Why is it important to restore places like the Presidio, and how does this help plants, animals, and people?**
(Think about how restoration brings back habitats and connects people to nature.)

2. **What challenges do people face when restoring areas like the Presidio, and how do they work to solve them?**
(Consider the hard work and planning needed to bring back native plants and animals.)

3. **How can restoring the Presidio inspire people to care for other natural spaces in their communities?**
(Think about how projects like this show the value of protecting and improving the environment.)

Video Link:
https://www.youtube.com/watch?v=Ne5hmjhql_g&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=7&t=8s&pp=iAQB

Connected California: Ohlone Unit
Lesson 2: The Resilience of Redwood Trees
Grade Level: 3rd – 5th Grades
Subject Areas: Social Studies, Science
Duration: 60 minutes

Learning Objectives

- Students will understand the unique characteristics that contribute to the resilience of redwood trees.
- Students will explore the environmental challenges redwoods face and how they adapt to survive.
- Students will analyze the importance of conservation efforts in protecting redwood forests.
- Students will identify and describe the unique characteristics that make redwood trees resilient.
- Students will explore the challenges redwoods face and their adaptations for survival.
- Students will work in groups to research redwood tree features and create a conservation plan for redwood forests.
- Students will synthesize information and create visual presentations to share their findings.
- Students will explain how redwoods adapt to environmental challenges and propose strategies to protect redwood forests.

Materials

- Computer with internet access and projector
- Whiteboard and markers
- Chart paper and markers
- Printed copies of redwood tree diagrams
- Notebooks or journals
- Art supplies (colored pencils, crayons, construction paper)

Video Link: Lesson 2: Resilient Redwoods
https://www.youtube.com/watch?v=BAMfEIIFxcg&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=14&t=54s&pp=iAQB

Curriculum Themes: (Check that apply)

- [x] History
- [ ] Cultural Strengths
- [ ] Law/Government
- [x] Relationship to Place
- [x] Cross Curricular Integration

Instructional Standards:
Next Generation Science Standards (NGSS):
3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Lesson Plan:

Engage (15 minutes)

- Activate prior knowledge and spark interest in redwood trees and their resilience.
- **Teacher Directions**:
    - Begin by asking students if they have ever seen or heard of redwood trees. Discuss their experiences and what they know about these trees.
    - Introduce the concept of resilience in nature, explaining that some organisms have special features that help them survive in challenging environments.
    - Show the video "Resilient Redwoods" to the class.

- **Scaffolding Strategies**:
    - Provide a brief background on redwood trees before showing the video to give context.
    - Pause the video at key points to explain complex terms or concepts.
    - Encourage students to take notes or jot down questions during the video.

2. Explore (30 minutes)

- Investigate the unique characteristics and adaptations of redwood trees.
- **Teacher Directions**:
    - Divide students into small groups and provide each group with a diagram of a redwood tree.
    - Assign each group a specific characteristic or adaptation to research (e.g., thick bark, ability to sprout from roots, height, leaf structure).
    - Instruct groups to use available resources (books, articles, reputable websites) to gather information about their assigned characteristic and how it contributes to the tree's resilience.

- **Scaffolding Strategies**:
    - Provide guiding questions to help focus their research, such as:
        - What is the characteristic?
        - How does it help the redwood tree survive?
        - Why is this characteristic important for the tree's resilience?
    - Offer graphic organizers to help students organize their findings.
    - Circulate among groups to provide support and answer questions.

3. Explain (20 minutes)

- Synthesize and present findings to deepen understanding.
- **Teacher Directions**:
    - Have each group present their findings to the class, using their diagrams and any visual aids they created.
    - Encourage students to discuss how their assigned characteristic contributes to the overall resilience of redwood trees.
    - Facilitate a class discussion on the common themes observed across different characteristics.

- **Scaffolding Strategies**:
    - Provide sentence starters to help students present their information, such as:
        - "Our characteristic is..."
        - "It helps the redwood tree survive by..."
        - "This is important because..."
    - Use a Venn diagram to compare and contrast different characteristics.

4. Elaborate (30 minutes)

- Apply knowledge by creating a conservation plan for redwood forests.
- **Teacher Directions**:
    - Explain that while redwood trees are resilient, they still face threats from environmental changes and human activities.
    - Assign each group the task of developing a conservation plan to protect redwood forests.
    - Plans should include:
        - Identification of major threats to redwood forests.
        - Strategies to mitigate these threats.
        - Ways to educate the public about the importance of redwood conservation.

- **Scaffolding Strategies**:
    - Provide examples of conservation efforts to guide students.
    - Offer a template for the conservation plan to help structure their ideas.

Watch the Video: Lesson 2: Resilient Redwoods
https://www.youtube.com/watch?v=BAMfEIIFxcg&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=14&t=54s&pp=iAQB

Play the full video, pausing at key moments to ask reflective questions.

Group Discussion and Reflection Activity:

- Divide students into small groups. Ask them to share their notes and identify common themes from the video.
- Have the small group complete the Video Discussion and Reflection Group Activity.

Extension Discussion:

2. Lead a whole-class discussion, asking questions like:
    - "How can we honor Native American history and culture today?"
    - "What lessons can we learn about resilience and advocacy from their experiences?"
    - "How do modern Native communities continue to preserve their connection to the land?"

Evaluate

Exit Ticket:

3. Ask students to respond to one of the following prompts in 2-3 sentences on an index card or sheet of paper:
    - "What is one thing you learned about Native American culture and land today?"
    - "Why is it important to understand this part of history?"
    - "What can we do to support Native American communities today?"
4. Collect responses to assess understanding and guide future lessons.

Student Worksheet: Resilient Redwoods
Name: _____

Part 1: Engage - Learning About Redwood Trees

1. Have you ever seen or heard about redwood trees?
    - If yes, where did you see them or hear about them?

2. While watching the video *Resilient Redwoods*, take notes:
    - What are some characteristics that make redwood trees resilient?
    - What challenges do redwood forests face?

Part 2: Explore - Investigating Redwood Tree Adaptations

In your group, research the characteristic or adaptation assigned to you. Answer the following questions:

1. **What is the name of your assigned characteristic or adaptation?**

   _____

2. **How does this characteristic help redwood trees survive in their environment?**

3. **Why is this characteristic important for the resilience of redwoods?**

4. **Draw and label a diagram of your characteristic. Include how it helps redwoods survive.**

Part 3: Explain - Sharing Your Findings

Prepare to share your findings with the class. Use the following prompts to organize your presentation:

1. What did you learn about your assigned characteristic?

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2. Why is it important for redwood resilience?

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3. How does this characteristic connect to the overall health of redwood forests?

Part 4: Elaborate - Designing a Conservation Plan

Work with your group to create a conservation plan for redwood forests. Answer these questions to guide your plan:

1. **What are the major threats to redwood forests?**

2. **What strategies can help protect redwoods from these threats?**

3. **How can you educate the public about the importance of conserving redwoods?**

4. **Design a poster, flyer, or brochure as part of your conservation plan. Include:**
    - A brief explanation of why redwoods are important.
    - Examples of threats to redwood forests.
    - Actions people can take to protect redwoods. *(Use the space below or a separate sheet of paper.)*

Part 5: Reflect - Why Redwood Conservation Matters

1. Why are redwoods considered resilient trees?

2. What did you learn about the relationship between redwoods and their environment in this lesson?

3. How does protecting redwood forests benefit both nature and people?

Resilient Redwoods - California Academy of Sciences
Ohlone Group Discussion and Reflection

Video Link	Summary of Video
[Resilient Redwoods | California Academy of Sciences] 	"Resilient Redwoods" by the California Academy of Sciences delves into the cultural significance of redwood trees for the East Bay Ohlone peoples. It highlights the deep connections between these Indigenous communities and the redwood ecosystems, emphasizing the importance of preserving both cultural heritage and natural habitats.

[2:33]

Reflection Questions

1. **What makes redwood trees resilient, and why are they able to survive for so many years?**
   (Think about the special features of redwoods that help them live through challenges like fire or drought.)

2. **Why are redwood forests important for both nature and people?**
   (Consider the role they play in the environment, such as providing habitats and helping with climate change.)

3. **How can people help protect redwood forests so they can continue to thrive?**
   (Think about what actions can be taken to keep these forests healthy for the future.)

4. **What does it mean to be resilient? How are the redwoods and Ohlone resilient?**

Video: https://www.youtube.com/watch?v=BAMfEIIFxcg&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=14&t=54s&pp=iAQB

Connected California: Ohlone Unit
Lesson 3: Exploring California's Redwood Trees
Grade Level: 3rd – 5th Grades
Subject Areas: Social Studies, Science
Duration: 60 minutes

Learning Objectives

- Students will examine the ecological and environmental importance of California's redwood trees.
- Students will explore the role of redwood forests in supporting biodiversity and mitigating climate change.
- Students will investigate specific redwood tree characteristics and analyze how they contribute to the forest ecosystem.
- Students will develop and present a conservation plan highlighting strategies to address threats to redwood forests.
- Students will articulate the significance of redwoods and propose actionable solutions for their conservation.

Materials

- Computer with internet access and projector
- Whiteboard and markers
- Chart paper and markers
- Printed copies of redwood tree diagrams
- Notebooks or journals
- Art supplies (colored pencils, crayons, construction paper)

Video Link: Lesson 3: California's Redwood Trees
https://www.youtube.com/watch?v=cYCajfj5AYk&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=22&pp=iAQB

Curriculum Themes: (Check that apply)

- ☑ History
- ☐ Cultural Strengths
- ☐ Law/Government
- ☑ Relationship to Place
- ☑ Cross Curricular Integration

Instructional Standards:
Next Generation Science Standards (NGSS):
3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Lesson Plan:

Engage (15 minutes)

- Activate prior knowledge and spark interest in redwood trees.
- **Teacher Directions**:
    - Begin by asking students if they have ever seen or heard of redwood trees. Discuss their experiences and what they know about these trees.
    - Introduce the topic by showing the video "The World's Tallest Trees! | Explore the Redwoods | SciShow Kids" to the class.

- **Scaffolding Strategies**:
    - Provide a brief background on redwood trees before showing the video to give context.
    - Pause the video at key points to explain complex terms or concepts.
    - Encourage students to take notes or jot down questions during the video.

Explore (30 minutes)

- Investigate the unique characteristics and ecological significance of redwood trees.

- **Teacher Directions**:
    - Divide students into small groups and provide each group with a diagram of a redwood tree.
    - Assign each group a specific aspect of redwood trees to research (e.g., height, age, bark, leaves, root system).
    - Instruct groups to use available resources (books, articles, reputable websites) to gather information about their assigned aspect and how it contributes to the tree's survival and the forest ecosystem.

- **Scaffolding Strategies**:
    - Provide guiding questions to help focus their research, such as:
        - What is the characteristic?
        - How does it help the redwood tree survive?
        - Why is this characteristic important for the ecosystem?
    - Offer graphic organizers to help students organize their findings.
    - Circulate among groups to provide support and answer questions.

Explain (20 minutes)

- Synthesize and present findings to deepen understanding.

- **Teacher Directions**:
    - Have each group present their findings to the class, using their diagrams and any visual aids they created.
    - Encourage students to discuss how their assigned aspect contributes to the overall survival of redwood trees and the health of the forest.
    - Facilitate a class discussion on the common themes observed across different aspects.

- **Scaffolding Strategies**:
    - Provide sentence starters to help students present their information, such as:
        - "Our aspect is..."
        - "It helps the redwood tree survive by..."
        - "This is important because..."
    - Use a Venn diagram to compare and contrast different aspects.

Elaborate (30 minutes)

- Apply knowledge by creating a conservation plan for redwood forests.

- **Teacher Directions**:
    - Explain that while redwood trees are resilient, they still face threats from environmental changes and human activities.
    - Assign each group the task of developing a conservation plan to protect redwood forests.
    - Plans should include:
        - Identification of major threats to redwood forests.
        - Strategies to mitigate these threats.
        - Ways to educate the public about the importance of redwood conservation.

- **Scaffolding Strategies**:
    - Provide examples of conservation efforts to guide students.
    - Offer a template for the conservation plan to help structure their ideas.
    - Encourage creativity in presenting their plans (e.g., posters, brochures, presentations).

Watch the Video: Lesson 3: California's Redwood Trees
https://www.youtube.com/watch?v=cYCajfj5AYk&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=22&pp=iAQB

Play the full video, pausing at key moments to ask reflective questions.

Group Discussion and Reflection Activity:

- Divide students into small groups. Ask them to share their notes and identify common themes from the video.
- Have the small group complete the Video Discussion and Reflection Group Activity.

Extension Discussion:
Lead a whole-class discussion, asking questions like:

- "How can we honor Native American history and culture today?"
- "What lessons can we learn about resilience and advocacy from their experiences?"
- "How do modern Native communities continue to preserve their connection to the land?"

Evaluate
Exit Ticket:
Ask students to respond to one of the following prompts in 2-3 sentences on an index card or sheet of paper:

- "What is one thing you learned about Native American culture and land today?"
- "Why is it important to understand this part of history?"
- "What can we do to support Native American communities today?"

Collect responses to assess understanding and guide future lessons.

Student Worksheet: Exploring California's Redwood Trees
Name: _____

Part 1: Engage - Learning About Redwood Trees

1. Have you ever seen or heard about redwood trees?
    - If yes, where did you see or hear about them?

2. While watching the video *California Redwood Trees*, take notes:
    - What are some unique characteristics of redwood trees?
    - Why are redwood trees important for the environment?

Part 2: Explore - Investigating Redwood Tree Features

In your group, research the characteristic or feature assigned to you. Answer the following questions:

1. **What is the name of your assigned feature?**

   _____

2. **How does this feature help redwood trees survive in their environment?**

3. **Why is this feature important for the redwood forest ecosystem?**

Draw and label a diagram of your feature. Include how it helps redwoods survive.

(Use the space below or attach a separate sheet if needed.)

Part 3: Explain - Sharing Your Findings

Prepare to share your findings with the class. Use these prompts to organize your presentation:

1. What did you learn about your assigned feature?

2. Why is it important for redwood resilience and survival?

3. How does this feature contribute to the health of the entire redwood forest?

Part 4: Elaborate - Designing a Conservation Plan

Work with your group to create a conservation plan for redwood forests. Use these questions to guide your plan:

1. **What are the major threats to redwood forests?**

2. **What strategies can help protect redwoods from these threats?**

3. **How can you educate others about the importance of conserving redwoods?**

4. **Create a visual (e.g., poster, brochure, or flyer) for your conservation plan. Include:**
    - A brief explanation of why redwoods are important.
    - Examples of threats to redwood forests.
    - Actions people can take to protect redwoods.

    (Attach your visual to this worksheet or present it to the class.)

Part 5: Reflect - Why Redwood Conservation Matters

1. Why are redwoods considered unique and important trees?

2. What did you learn about how redwoods survive in their environment?

3. How does protecting redwood forests benefit both people and the planet?

California Redwood Trees - California Academy of Sciences
Ohlone Group Discussion and Reflection

Video Link	**Summary of Video**
[California's Redwood Trees | California Academy of Sciences] 	"California's Redwood Trees" by the California Academy of Sciences explores the different species of redwood trees and the ecosystems they support. Academy scientists discuss the significance of these ancient giants, highlighting their ecological importance and the conservation efforts aimed at preserving them.

Reflection Questions

1. **What makes California redwood trees unique, and why are they some of the tallest trees in the world?**
   (Think about their special features and the environment they grow in.)

2. **How do redwood trees support the animals and plants that live in their forests?**
   (Consider the ways redwoods provide shelter, food, and other resources for wildlife.)

3. **Why is it important to protect California redwood forests, and what can people do to help?**
   (Think about how these trees benefit the environment and how we can take care of them.)

Video: https://www.youtube.com/watch?v=cYCajfj5AYk&list=PLS14biAqBAtE-RYxvhTbDnsqkq2Lu0R0j&index=22&pp=iAQB