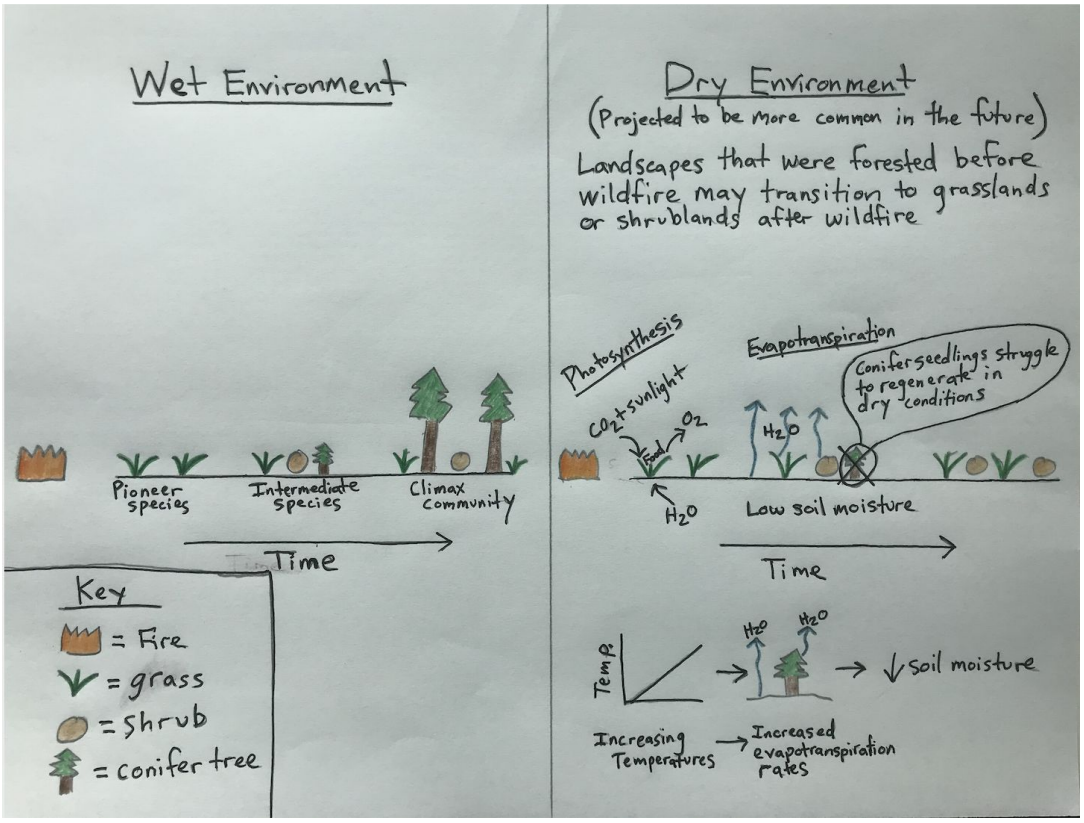
The Future of Forests

Final Model Construction - Teacher Guide

Setting the Stage

Scientists gather evidence and develop models to represent phenomena. As new evidence is acquired, models are revised, an iterative process that goes on indefinitely.



Lesson Overview

In this lesson, students draw on concepts and evidence acquired during the unit to construct final models for the unit driving question, “How do landscapes recover after a fire?”

- *Part 1 – (60 minutes) Final Model Construction*
  Students work in pairs to construct their final models for the unit driving question, “How do landscapes recover after a fire?”

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Instructional Overview	
Grade Level	Middle/High School
Instructional Time	60 *(may take longer depending on the class)*
Unit Driving Question	How do landscapes recover after a wildfire?
Lesson Driving Question	Why do scientists continue to gather evidence and revise models of phenomena?
Building Toward	Middle School: MS-LS2-4, MS-ESS3-3 High School: HS-LS2-7
Three Dimensions	**Science and Engineering Practices:** ● Constructing Explanations (for Science) and Designing Solutions (for Engineering) ● Engaging in Argument from Evidence **Disciplinary Core Ideas:** *Middle School:* ● LS2.C: Ecosystem Dynamics, Functioning, and Resilience ● ESS3.C: Human Impacts on Earth Systems *High School:* ● LS2.C Ecosystems Dynamics, Functioning, and Resilience **Crosscutting Concepts:** ● Stability and Change
What Students Will Do	● Develop a model to explain how how landscapes recover/change after a disruption (e.g., wildfire)
Materials	❏ Final Model Construction PPT ❏ Final Model Construction Worksheet (1 per student-pair) ❏ Colored pencils, markers, crayons ❏ Gotta-Have Checklist ❏ Summary Table
Material Preparation	❏ Cue and test web links ❏ Review speaker notes in the Final Model Construction PPT ❏ Display Summary table and Gotta-Have Checklist ❏ See Gotta-Have Checklist example ❏ See Final Summary Table example ❏ See Final Model example
Vocabulary	No new vocabulary

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Part 1 - Final Model Construction (60 minutes)

Refer to Part 1 slides included in the Final Model Construction PPT. See PPT presenter notes for additional information

1. Summarize the "Wildfire and Landscape Change" unit referring to the final summary table and Gotta-Have Checklist (see final summary table and Gotta-Have Checklist examples)

2. Refer to the Final Model Construction PPT to review the "signs and symbols to connect relevant parts" (slide #6) and provide any additional instructions for the final model construction phase.

3. Students work in pairs to construct their final models (see final model example).
    a. Teacher should be prepared to:
        i. Prompt each group to describe how and why they changed the model.
        ii. Ask probing questions
        iii. Compare and contrast ideas across groups

Optional: Model Sharing
Facilitate a gallery walk in which students have the opportunity to observe their peers' models.