California Education and the Environment Initiative

The EEI Curriculum cohesively integrates science and engineering practices (SEPs), content (disciplinary core ideas/DCIs), and crosscutting concepts (CCs) within its lesson procedures. This preliminary analysis intentionally teases apart the individual SEPs, DCIs, and CCs as a means of correlating the EEI unit with specific performance expectations; however, the EEI lessons weave these components back together.

Next Generation Science Standards® Correlation with the California Education and the Environment Initiative (EEI) Curriculum

The EEI Curriculum is a great choice for transitioning to NGSS and contributes toward achievement of the performance expectations for the disciplinary core ideas reflected in the Summary Chart below: 3-LS4 Biological Evolution: Unity and Diversity and 4-LS1 From Molecules to Organisms: Structures and Processes. Each EEI unit highlights a small number of performance expectations, science and engineering practices, disciplinary core ideas, and crosscutting concepts. Therefore, the EEI units contribute to students’ overall achievement of the performance expectations by the end of a school year, where they will have had multiple opportunities to engage in all appropriate science and engineering practices, disciplinary core ideas, and crosscutting concepts. While EEI was designed to teach the 1998 California science standards to mastery, it reflects the real world interconnections in science and already incorporates many of the paradigm shifts reflected in the NGSS. To learn more about how EEI supports NGSS, visit http://californiaeei.org/NGSSGuides/.

Grades 3 and 4

3.3.a. – Structures for Survival in a Healthy Ecosystem

“Structures for Survival in a Healthy Ecosystem” helps students learn about the ways in which species use their physical structures to survive. It also highlights the roles of healthy ecosystems in the survival of species. Students explore different ecosystems in California, examining the interconnected relationships of species within these systems, the natural cycles by which they function, and the ways in which ecosystem health affects this functioning. As a culminating activity, they plan a garden habitat for hummingbirds and describe how humans can help hummingbirds meet their survival needs.

Correlation Chart Key

- SEP (Science and Engineering Practices)
- DCI (Disciplinary Core Ideas)
- CC (Crosscutting Concepts)

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## Disciplinary Core Ideas Supported by this EEI Unit

| 3-LS4 Biological Evolution: Unity and Diversity | 4-LS1 From Molecules to Organisms: Structures and Processes |

### Performance Expectations

| 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. |

### Suggestions for Using the EEI Unit to Support NGSS

| Use the unit to have students gather evidence that shows why certain plants and animals can survive well in forest, desert, or grassland habitat, and that humans can influence habitats and the survival of species in those habitats. |

| 4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and adaptation. |

### Suggestions for Using the EEI Unit to Support SEPs

| Science and Engineering Practices (SEPs) | Suggestions for Using EEI to Support SEPs |

### Engaging in argument from evidence (3-LS4-3, 4-LS1-1)

Use the unit to have students analyze specific animals and plants and gather evidence supporting how different structures help plants and animals survive in their habitats (Lessons 1 and 2). Have students consider that a healthy environment is necessary for species survival, regardless of any specialized structures (Lesson 2). Have students gather information showing that the interrelationship between plants, animals, and humans is essential in a healthy environment, and gain knowledge to argue that a disruption to one aspect of an environment can affect the others, and can ultimately affect human populations (Lesson 4).

Have students use the example of a hummingbird garden to help connect how human activity can have a positive effect on plant and animal growth, reproduction, and survival (Lesson 5).

### Suggestions for Using EEI to Support DCIs

| Disciplinary Core Ideas (DCIs) | Suggestions for Using EEI to Support DCIs |

### Crosscutting Concepts (CCs)

| LS4.C: Adaptation: For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3) |

Use the unit to engage students in the study of how organisms survive in specific environments based on their ability to use that environment’s available resources, such as water, sunlight, and food (Lessons 1-4).

### Suggestions for Using EEI to Support CCs

| Cause and effect (3-LS4-3) |

Use the unit to help students explore how a plant or animal’s specialized structures can influence (cause) an organism’s ability to survive, grow, and reproduce in an environment (effect). (Lessons 1, 2, and 4).