



Getting Micro with Climate



<u>Performance Expectations</u>	Connections Between <u>EP&Cs</u> , <u>CCCs</u> , and <u>SEPS</u>	<u>Clarifications for DCIs</u>	Relevant EEI Units
<p>K-PS3-1 Make observations to determine the effect of sunlight on Earth’s surface.</p> <p>1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.</p> <p>2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p> <p>3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>MS-LS2-3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.</p> <p>MS-ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.</p>	<p style="text-align: center;">Targeted Environmental Principles & Concept(s)</p> <p>Principle I - People Depend on Natural Systems The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.</p> <p>Concept A. The goods produced by natural systems are essential to human life and to the functioning of our economies and cultures.</p> <p>Concept B. The ecosystem services provided by natural systems are essential to human life and to the functioning of our economies and cultures.</p> <p>Concept C. That the quality, quantity, and reliability of the goods and ecosystem services provided by natural systems are directly affected by the health of those systems.</p>	<p style="text-align: center;">Targeted Disciplinary Core Idea(s)</p> <p>K-ESS3-3 Human Impacts on Earth Systems; Developing Possible Solutions Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.; Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</p> <p>K-PS3-1 Conservation of Energy and Energy Transfer Sunlight warms Earth’s surface.</p> <p>1-ESS1-2 Earth & The Solar System Seasonal patterns of sunrise and sunset can be observed, described, and predicted.</p> <p>1-LS1-1 Structure & Function All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.</p> <p>2-ESS1-1 The History of Planet Earth Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.</p>	<p>K: A Day in My Life; The World Around Me</p> <p>1: Surviving and Thriving; People & Places</p> <p>2: The Earth Rocks; California’s Lands Then and Now</p> <p>6: Energy It’s Not All The Same to You!; Energy & Material Resources Renewable or Not?</p> <p>7: Responding to Environmental Change; Extinction Past & Present</p> <p>8: Agricultural and Industrial Development in the United States (1877–1914)</p>

One Cool Earth (OCE) supports the integration of Next Generation Science Standards (NGSS) three dimensional learning and the Environmental Principles & Concepts (EP&Cs) in their lesson planning. In recognition of A Blueprint for Environmental Literacy and the California State Board of Education, OCE uses the *CA Science Framework*.

<p>MS-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.</p>	<p>Targeted Crosscutting Concept(s)</p> <p>Patterns Scale</p> <p>Targeted Science and Engineering Practice(s)</p> <p>Asking Questions Defining Problems Planning and Carrying out Investigations Obtaining, Evaluating, and Communicating Information</p>	<p>3-ESS2-1 Weather & Climate Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.</p> <p>5-LS2-1 Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment.</p> <p>MS-LS2-3 Cycle of Matter and Energy Transfer in Ecosystems Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem. Transfers of matter into and out of the physical environment occur at every level. Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments. The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem.</p> <p>MS-ESS2-1 Earth's Materials & Systems All Earth processes are the result of energy flowing and matter cycling within and among the planet's systems. This energy is derived from the sun and Earth's hot interior. The energy that flows and matter that cycles produce</p>	
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		<p>chemical and physical changes in Earth's materials and living organisms.</p> <p>MS-ESS2-6 Weather and Climate Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns.; The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents.</p>	
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