

How the world works

An exploration of the physical and material world; of natural and man-made phenomena; of the world of science and technology.

K	1st	2nd	3rd	4th	5th
<p>Central idea: Wood has many uses and is a finite product.</p>	<p>Central idea: Weather patterns inform, prepare, and affect the daily lives of people around the world.</p>	<p>Central idea: All living things undergo change within their lifecycle.</p>	<p>Central idea: Energy takes many forms and is stored and used in many ways.</p>	<p>Central idea: Natural and unnatural processes shape and reshape the earth's land and surface, affecting the way people live.</p>	<p>Central idea: Technology helps us explore our world, as well as other worlds.</p>
<p>Transdisciplinary Skills: Science, ELA</p>	<p>Transdisciplinary Skills: Science, ELA, Math</p>	<p>Transdisciplinary Skills: Science, ELA</p>	<p>Transdisciplinary Skills: Science, Math, ELA</p>	<p>Transdisciplinary Skills: Social studies, ELA, Science, Art</p>	<p>Transdisciplinary Skills: IN DEVELOPMENT</p>
<p>Lines of inquiry:</p> <ul style="list-style-type: none"> The properties of different materials and their uses. We use various materials, understanding the process of how paper is made How recycling paper extends the use of trees and other resources 	<p>Lines of inquiry:</p> <ul style="list-style-type: none"> Using scientific tools to collect data about weather How weather changes Why there are weather patterns and how they are different around the world 	<p>Lines of inquiry:</p> <ul style="list-style-type: none"> Describe the major phases of life cycles of different animals including butterflies and humans Compare and contrast different life cycles to themselves and others 	<p>Lines of inquiry:</p> <ul style="list-style-type: none"> An Inquiry into how energy effects our lives. 	<p>Lines of inquiry:</p> <ul style="list-style-type: none"> What are Earth's different types of land and surfaces? What impact do natural and unnatural processes have on Earth's landforms? How do landforms affect the way people live? 	<p>Lines of inquiry:</p> <ul style="list-style-type: none"> IN DEVELOPMENT
<p>Teacher questions: How are different types of wood are the same/different? What makes up wood? What different can wood be used? How do people throughout the world use wood? How could you use wood differently?</p>	<p>Teacher questions: How does weather affect life and other things? How does weather work? How can we measure weather? How do we know weather is important? What are different kinds of weather? Why does weather change or not change? How can we prepare for weather? How does weather cause a natural disaster?</p>	<p>Teacher questions: What are the phases of a butterfly's life cycle? How does an animal change throughout its life? Why is it necessary for animals to go through a life cycle? What do living things need in order to survive?</p>	<p>Teacher questions: What is energy? What are some sources of stored energy that people use? What is the source of most of the energy used by people? How does energy travel?</p>	<p>Teacher questions: What is a landform and what are some examples? How do waves, wind, water, and ice shape and reshape the Earth's land surface? How do the processes of chemical and physical weathering affect the breakdown and formation of landforms? How do rapid natural processes such as: landslides, volcanic eruptions, and earthquakes destroy and create landforms, and how do people respond to these changes? How do the three types of rocks in the rock cycle form from one another ? What are the physical features of the four natural regions of California, and how do landforms affect ways of life in each region?</p>	<p>Teacher questions: IN DEVELOPMENT</p>
<p>Key concepts: Form, Function, Responsibility</p>	<p>Key concepts: Form, Function, Causation, Change</p>	<p>Key concepts: Form, Change, Causation</p>	<p>Key concepts: Form, Function</p>	<p>Key concepts: Causation, change</p>	<p>Key concepts: IN DEVELOPMENT</p>
<p>Developing transdisciplinary and learner profile skills:</p> <ul style="list-style-type: none"> Use curiosity to conduct inquiry when exploring wood and paper in Foss Kit Apply learning of properties of wood to make paper Show responsibility and respect for community by recycling paper. Students will become <u>knowledgeable</u> the importance of wood world-wide and its many uses. 	<p>Developing transdisciplinary and learner profile skills: Communication Skills- During experimentation, students will discuss what is happening as well as write, and illustrate in their science journals *Thinking Skills- Putting air in context, comparing weather's affects in various regions Inquirers: Students developed their curiosity by exploring scientific concepts using hands-on experimentation and concrete materials and through questioning the reasons for different types of weather and storms. Communicators: Students</p>	<p>Developing transdisciplinary and learner profile skills:</p> <ul style="list-style-type: none"> Research skills – observing, collecting, and recording data. Organizing and interpreting data. Communication skills – listening, speaking, reading, and writing Thinking skills – comprehension, acquisition of knowledge, and analysis 	<p>Developing transdisciplinary and learner profile skills:</p> <ul style="list-style-type: none"> Inquirers thinkers risk-taker reflective communicators 	<p>Developing transdisciplinary and learner profile skills: Research Skills Observing- during hands-on activities students will use all the senses to collect information Communication skills Writing: will record information and observations through the note-taking process. They will keep records of investigations and readings in a science journal Self-Management skills- Students will plan and carry out investigations using their time</p>	<p>Developing transdisciplinary and learner profile skills:</p> <ul style="list-style-type: none"> IN DEVELOPMENT

	<p>communicated their findings through journal entries and partner talk. It also took communication while completing small group and partner investigations.</p> <p>Listening and speaking skills:</p> <p>Students demonstrated listening and speaking when presenting portions of the tree map and different types of weather to the class. Students worked collaboratively to find facts about one type of weather.</p> <p>Self-Management Skills:</p> <p>Students were required to file and keep their own material and portfolio work. They were also required to help with the set-up and clean-up of work stations.</p>			<p>effectively. They will understand and apply appropriate procedures for cooperative science groups.</p> <p>Learner Profile</p> <p>Communicators: demonstrate understanding of various landforms through research and visual arts.</p> <p>Thinkers: thinking creatively and critically about the causes and effects of continual change of the Earth.</p> <p>Inquirers: asking questions and researching information</p>	
<p>Summative assessment:</p> <ul style="list-style-type: none"> • Learning how to create paper from wood • Science journal entries • Observations • Thinking maps and student-generated charts • Partner sharing (work and communicating their thinking) 	<p>Summative assessment:</p> <p>Students will name for different kinds of weather, cut and paste outfits that are appropriate for four specific types of weather scenes, and color in an approximate temperature for that type of weather.</p>	<p>Summative assessment:</p> <ul style="list-style-type: none"> • Science notebook/ folder • PreAssessment: draw a picture of what you think a caterpillar looks like and draw pictures to show how a caterpillar changes during its life • Lesson 15 – draw picture of life cycle of another animal and compare to the life cycle of a butterfly • Lesson 9 – Life cycle cards activity sheet #8 • Activity sheet #10 – My butterfly and me • Why is it necessary for animals to go through a life cycle? - journal 	<p>Summative assessment:</p> <ul style="list-style-type: none"> • IN DEVELOPMENT 	<p>Summative assessment:</p> <p>At the end of the unit, the students, using their study of various types of maps and their features, will create a relief map depicting the four natural regions of California. After being instructed on summary writing, they will use notes they gathered to write a paragraph summarizing the physical features (including landforms) of each region.</p> <p>Also, students will choose one of the four regions and create a second paragraph summarizing how its physical features help create a certain way of life in that particular region.</p>	<p>Summative assessment:</p> <ul style="list-style-type: none"> • IN DEVELOPMENT