

Science Grade K Curriculum Guide

West Contra Costa Unified School District



- Pacing is based on current (2016) version of Draft California Science Framework
 - <http://www.cde.ca.gov/ci/sc/cf/scifw2nd60daypubreview.asp>
- Textbook: California Science (pink, Butterfly)

Instructional Segments

1. Plant and Animal Needs

Students observe plants and animals directly and through books and media to discover patterns in what they need to survive. They distinguish between plants and animals based on these needs. They describe how an organism's surroundings help it meet its needs.

2. Plants and Animals Change Their Environment

Students gather evidence about how organisms can directly change their environment. They focus especially on human impacts by gathering information about ways to reduce those impacts. They communicate their solutions.

3. Weather Patterns

Students observe the weather to spot patterns in the rhythm of the seasons and of the day. They investigate the effects of the Sun on the Earth and design a shade shelter.

4. Pushes and Pulls

Students explore how pushes and pulls speed objects up, slow them down, or change their direction. They design solutions to schoolyard challenges such as moving heavy boxes and protecting a block structure from an oncoming ball.

3. Weather Patterns

Students observe the weather to spot patterns in the rhythm of the seasons and of the day. They investigate the effects of the Sun on the Earth and design a shade shelter.

Instructional Segment	Guiding Questions	Phenomena	Performance Expectation	Suggested Lessons/Activities	Resources
3. Weather Patterns	<i>What is the weather like today and how it is different from yesterday?</i> <i>Can I predict tomorrow's weather?</i> <i>How does the sun heat up materials in my classroom?</i> <i>How can I protect myself from the sunlight?</i> <i>How do we prepare for severe weather?</i>	Watch video of weather forecaster Watch videos about each season Watch videos about the different weather phenomena (tornado, earthquake, floods, hurricane...etc.) Listen to radio weather forecast. Observe weather as it happens through the year. Observe dew on the playground.	<u>K-ESS2-1</u> Use and share observations of local weather conditions to describe patterns over time.	- Vocabulary: weather, measure, spring, summer, fall, winter, change, seasons, snow, rain, fog, cloudy, windy, sunny, cold, hot, wet, damp, seasons, - How does weather change? - What is spring? - What is summer? - What is fall? - What is winter? - Kinds of weather - How does the weather change during the year?	Kinder Science Textbook: Chapter 6 p. 156A-185 & Treasures Unit 7 (Weather Unit) Kinder science book p. 160 - 175 Treasures Unit 7 TE Week 1 pg 1561- 1644 (also consumable that goes with week 1) Treasures Unit 7 TE Week 2 pg 1645 – 1728 (also consumable that goes with week 2)

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3. Weather Patterns	<i>What is the weather like today and how it is different from yesterday?</i> <i>Can I predict tomorrow's weather?</i> <i>How does the sun heat up materials in my classroom?</i> <i>How can I protect myself from the sunlight?</i> <i>How do we prepare for severe weather?</i>	Watch time lapse videos of the ground drying out. Possibly also bodies of water drying up and vanishing. Watch time lapse videos of plants following the sun as it passes over head during a day. Show video of shadows changing positions as the day progresses.	<u>K-PS3-1</u> Make observations to determine the effect of sunlight on Earth's surface	• Photo sensitive beads. Experiment in sunlight as well as comparing to shade. • Use a thin layer of mud to see how the sun changes it in a few different varied sunny/shady locations over time. • Mark off the position of a shadow during the day using a stick and some chalk.	

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3. Weather Patterns	<i>What is the weather like today and how it is different from yesterday?</i>		<u>K-2-ETS1-1</u> Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. •		
	<i>Can I predict tomorrow's weather? How does the sun heat up materials in my classroom?</i>		<u>K-2-ETS1-2</u> Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. •		
	<i>How can I protect myself from the sunlight? How do we prepare for severe weather?</i>		<u>K-2-ETS1-3</u> Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. •		