

RANCHO EL CHORRO OUTDOOR SCHOOL

AROUND WE GO

2ND GRADE

Lesson Goal: To understand cycles in nature and human influences on those cycles.

Learning Objectives:

- Students will recognize that within the plant and animal kingdoms there are cycles.
- Students will recognize that within the physical world there are cycles.
- Students will learn about human influences of those cycles.

ACTIVITIES:

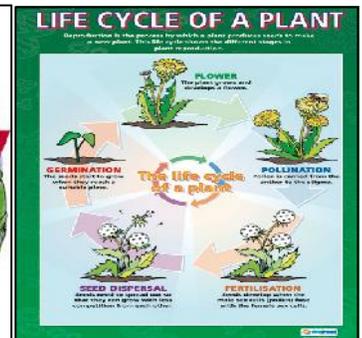
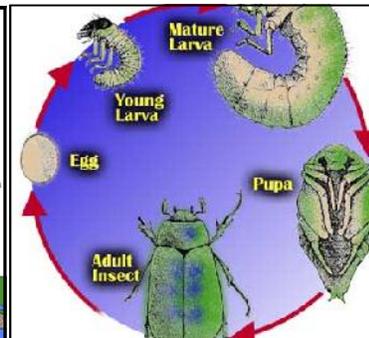
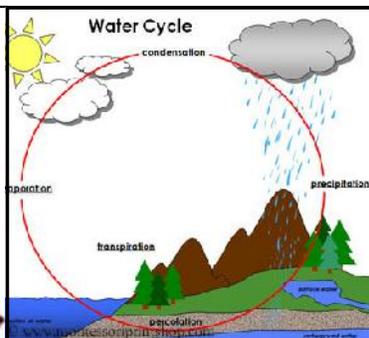
1. Students will visit the garden to learn about the nutrient cycle, composting, worms, and will investigate what lives in soil.
2. Students will hike along Pennington Creek to the pond to observe aquatic insects and learn about their life cycles.
3. Students will participate in a demonstration at the watershed model to learn about the water cycle and how human impact their watershed.
4. Students will participate in a skit to learn about the plant cycle and will make seed mud balls.

VOCABULARY

compost
fertilizer
plant cycle

cycle
life cycle
water cycle

decay
nutrients
watershed



Next Generation Science Standards Connections:

Standard: 2-LS2-1. Ecosystems: Interactions, Energy, and Dynamics

Performance Expectation:

2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-LS4-1)</p>	<p>LS2.A: Interdependent Relationships in Ecosystems Plants depend on water and light to grow. (2-LS2-1).</p>	<p>Cause and Effect Events have causes that generate observable patterns. (2-LS2-1)</p>

Common Core State Standards connections, 2nd grade:

Speaking and Listening Standards:

SL.1.1. Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

SL.1.2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

SL.1.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

Language Standards:

L1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L1.5. Demonstrate understanding of word relationships and nuances in word meanings.

English Language Development Standards connections:

A. Collaborative. Bridging

1. Exchanging information and ideas. Contribute to class, group, and partner discussions, including sustained dialogue, by listening attentively, following turn-taking rules, asking relevant questions, affirming others, adding pertinent information, building on responses, and providing useful feedback.

B. Interpretive. Expanding.

5. Listening Actively. Demonstrate active listening to read-alouds and oral presentations by asking and answering detailed questions with oral sentence frames and occasional prompting and support.

6. Reading/viewing closely. Describe ideas, phenomena (e.g. how earthworms eat), and text elements in greater detail based on understanding a variety of grade-level texts and viewing of multimedia with moderate support.

C. Productive. Expanding

9. Presenting. Plan and deliver brief oral presentations on a variety of topics and content areas (e.g. retelling a story, describing an animal, etc.).

California's Environmental Principles & Concepts and Education & the Environment (EEI) unit connections:

Principle III: Natural Systems proceed through cycles that humans depend upon, benefit from, and can alter.

Concept A: Students need to know that natural systems proceed through cycles and processes that are required for their functioning.

Concept B: Students need to know that human practices depend upon and benefit from the cycles and processes that operate within natural systems.

Concept C: Students need to know that human practices can alter the cycles and processes that operate within natural systems.

Cycle of Life, 2nd grade. In this unit, students come to know that reproduction is what ensures the survival of species through the study of animals.

Learning Objective connections:

Lesson 1, 2, 3: Recognize that reproduction is essential to the survival of a species, identify reproduction as a process that maintains plant and animal populations in natural systems, and identify reproductive cycles for different animals such as butterflies, frogs, and mice.

Lesson 5: Describe the reproduction of plants and animals as a process that provides human with food and other goods and ecosystem services. Explain why plant and animal reproduction is important in providing resources necessary for human survival.

Flowering Plants in Our Changing Environment, 2nd grade. This unit focuses on the role of flowers and fruits in plant reproduction and on how environmental stress influence plants' germination, growth, and development.

Lesson 2, 3: Identify plant reproduction as an important function for humans because it provides food sources, building materials, and other resource materials for use by humans and other animals; explain that, in order to reproduce, plants have different needs (e.g. soil, nutrients, and water) met by the natural systems in which they live; explain how the environment may affect a plant's ability to reproduce.

Lesson 4: Recognize that changes to conditions in the environment (e.g. light, water, environmental stress) may affect the germination, growth, and development of plants; predict what happens to a plant when a specific change in the environment occurs (e.g. there is suddenly no water).

VOCABULARY

compost abono	a mixture of various decaying organic substances, as dead leaves or manure, used for fertilizing soil.
cycle ciclo	a sequence of changing states that, upon completion, produces a final state identical to the original one
decay caries	to become decomposed; rot.
fertilizer fertilizante	any substance used to fertilize the soil, especially a commercial or chemical manure.
life cycle ciclo de vida	the continuous sequence of changes undergone by an organism from one primary form, as a gamete, to the development of the same form again.
nutrients nutrientes	nourishing; providing nourishment or nutriment.
plant cycle ciclo de la planta	the plant life cycle begins with a seed. The seed will sprout and produce a tiny, immature plant called a seedling. The seedling will grow to adulthood and form a mature plant. The mature plant will reproduce by forming new seeds which will begin the next life cycle.
water cycle ciclo del agua	the cycle of processes by which water circulates between the earth's oceans, atmosphere, and land, involving precipitation as rain and snow, drainage in streams and rivers, and return to the atmosphere by evaporation and transpiration.
watershed cuenca	the region or area drained by a river, stream, etc.; drainage area.