

RANCHO EL CHORRO OUTDOOR SCHOOL

PASS IT ON TRAVELING NATURALIST 1ST GRADE

Lesson Goal: To introduce students to how plants and animals pass on traits to their offspring.

Learning Objectives:

- Students will discuss physical characteristics in plants and animals.
- Students will discuss inherited physical traits in guinea pigs, chickens, and flowering plants with a focus on color variation.
- Students will be able to record observations as data on color variation.

ACTIVITIES:

1. Students will observe and discuss color variation in plants.
2. Students will observe color variation in guinea pigs and chickens with the opportunity to see and touch live animals.
3. Students will collect data using beans to study genetic inheritance.

VOCABULARY

breed
inherit
variation

dominant
recessive

generation
trait



RANCHO EL CHORRO OUTDOOR SCHOOL

PASS IT ON – 1st Grade

Next Generation Science Standards Connections:		
Standard: 1-LS3. Heredity: Inheritance and Variation of Traits Performance Expectations: 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.		
Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K-2 build on prior experiences and progresses to the use of evidence and ideas in construct evidence-based accounts of natural phenomena and designing solutions. <ul style="list-style-type: none"> • Make observations to construct an evidence-based account for natural phenomena. (1-LS3-1) 	LS3.A: Inheritance of Traits <ul style="list-style-type: none"> • Young animals are very much, but not exactly, like their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1) LS3: B: Variation of Traits <ul style="list-style-type: none"> • Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1) 	Patterns <ul style="list-style-type: none"> • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (1-LS3-1)
California Common Core State Standards Connections for 1st grade: Speaking and Listening Standards: SL.1.1. Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. SL.1.2. Ask and answer questions about key details in 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 gather information or clarify something that is not understood. Language Standards: L1.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. L1.5. With guidance and support from adults, 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 by listening attentively, following turn-taking rules, and asking and answering questions. B. Interpretive. Emerging. 5. Listening Actively. Demonstrate active listening to read-alouds and oral presentations by asking and answering yes-no and wh- questions with oral sentence frames and substantial prompting and support. 6. Reading/viewing closely. Describe ideas, phenomena (e.g. plant life cycle), and text elements based on understanding of a select set of grade-level texts and viewing of multimedia with substantial support.		
California’s Education & the Environment Initiative (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 C: Students need to know that human practices can alter the cycles and processes that operate within natural systems. Alike but Different, 2nd grade. This unit introduces students to the ideas of inherited traits and variation within a population of animals. Learning Objective connections: Lessons 1 and 4: Students identify some of the characteristics that organisms inherit from their parents; students recognize that there is a variation among individuals within a population.		

VOCABULARY

breed raza	To produce (offspring); procreate; engender.
dominant dominante	The one of a pair of alternative alleles that masks the effect of the other when both are present in the same cell or organism; the trait or character determined by such an allele.
generation generación	A single step in natural descent, as of human beings, animals, or plants.
inherit hereda	To receive (a genetic character) by the transmission of hereditary factors.
recessive recesivo de	That one of a pair of alternative alleles whose effect is masked by the activity of the second when both are present in the same cell or organism; the trait or character determined by such an allele.
trait rasgo de	A distinguishing characteristic or quality, especially of one's personal nature.
variation variacion	The act, process, or accident of varying in condition, character, or degree.