Build a Watershed - GRADE THREE

[CA Science Framework](#) (p.228-252)

GRADE THREE INSTRUCTIONAL SEGMENT 3: SURVIVING IN DIFFERENT ENVIRONMENTS

Guiding Questions
• How does the environment affect living organisms?
• How do organisms' traits help them survive in different environments?
• What happens to organisms when the environment changes?

Performance Expectations
Students who demonstrate understanding can do the following:

3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted, and a pet dog that is given too much food and little exercise may become overweight] (eg. here)

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other] (label the living and nonliving features found in a watershed)

3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organism and the environments in which they lived long ago (Chert, which is the shells of marine plankton, shows some land in Marin Headlands used to be under water)

3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change * [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.] (Dams shorten the length of a river and decrease salmon spawning habitat – what can we do to then help the salmon?) (Certain animals can hibernate longer if conditions stay cold but they need access to this habitat.)

GRADE THREE INSTRUCTIONAL SEGMENT 4: WEATHER IMPACTS

Guiding Questions
• What is typical weather in my local region?
• How does it compare to other areas of California and the world?
• What weather patterns are common for different seasons?
• What weather-related hazards are in my region?
• How can we reduce weather-related hazards?

Performance Expectations

Students who demonstrate understanding can do the following:

3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season [Clarification Statement: Examples of data at this grade level could include average temperature, precipitation, and wind direction] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.] (Show graph of yearly rainfall over past 100 years)
http://www.marinwater.org/DocumentCenter/View/313/Rainfall-History-at-Lake-Lagunitas?bidId=

3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard * [Clarification Statement: Examples of design solutions to weather related hazards could include barriers to prevent flooding, wind-resistant roofs, and lighting rods] (what do to mitigate flooding, what to do to prepare for drought, what to do to avoid landslides…)

3-ESS2-2. Obtain and combine information to describe climates in different regions of the world

3–5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost (see 3-ESS3-1 above)

3–5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem (see 3-ESS3-1 above)