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Five Senses Nature Walk:
Lesson Summary and Vocabulary

Lesson Summary: YSI’s Five Senses Nature Walk takes students outdoors for a chance to physically explore nature in the Bay Area. Students will discuss their five senses and go over trail rules with their YSI instructor before heading off to see, hear, touch, smell, and taste their way through a short hike. Just under an hour will be spent on the trail. Natural features vary strongly by program site, but an emphasis is placed on native plants and animals, wilderness safety, and experiencing nature in ways that are often overlooked. Students will learn to avoid poison oak, identify common uses of their local flora, and understand the way a landscape changes over time. All hikes will focus on observation and critical thinking skills and use group discussion to share and build on student discoveries.

Vocabulary: Below are words and concepts that relate to the YSI Five Senses Nature Walk program.

**Adaptation:** In biology, a change in an organism over time that better enables it to survive and multiply. An adaptation can be structural, physiologic, or behavioral.

**Camouflage:** blending in with an environment

**Creek:** a flowing body of water smaller than a river; stream

**Deciduous:** a type of tree that loses its leaves at a certain time of year

**Decomposer:** an animal that feeds on dead matter and breaks it down into simpler compounds

**Ecosystem:** a community of living things (organisms) interacting with each other as well as with their environment

**Environment:** the sum of everything that surrounds animals and humans in the natural world, including the air, the water, and the soil

**Evergreen:** a type of plant that keeps its leaves or needles all year round

**Habitat:** the natural environment of a plant or animal

**Niche:** the part of an ecological system occupied by a particular organism, or the functions of that organism in the system

**Oak Tree:** a tree belonging to the beech family that has acorns as its fruit

**Poison Oak:** a common West Coast plant that causes itching and has leaves in groups of three

**Redwood:** an extremely tall species of tree with red bark; any tree in the Sequoia genus

**Senses:** the parts and functions of our body that make us keenly aware of our environment; seeing, hearing, smelling, touching, and tasting

**Trait:** a distinguishing feature or characteristic, as of one's appearance, personality, or nature

Definitions based on [www.dictionary.reference.com](http://www.dictionary.reference.com)
Five Senses Nature Walk
Language Arts Crossword Puzzle

Definitions based on www.dictionary.reference.com
Down
1. A tree belonging to the beech family that has acorns as its fruit (oak tree).
2. A common West Coast plant that causes itching and has leaves in groups of three (poison oak).
4. An extremely tall species of tree with red bark; any tree belonging to the Sequoia genus (redwood).
5. The part of an ecosystem occupied by an organism or how it helps the system (niche).
6. Blending in with the surrounding environment (camouflage).
9. In biology, a change in an organism over time that better enables that type of organism to survive and multiply (adaptation).
10. An animal that feeds on dead matter and breaks it down into parts of the soil (decomposer).
12. A plant that has leaves or needles all year round (evergreen).

Across
3. Something about an organism’s appearance or behavior that makes it different than others (trait).
7. A community of living things together with their environment (ecosystem).
8. The natural environment of a plant or animal (habitat).
10. A tree that loses its leaves once a year, usually in the fall (deciduous).
11. Everything that surrounds animals and humans in the natural world, including the air, the water, and the soil (environment).
14. A flowing body of water smaller than a river, similar to a stream (creek).

Definitions based on www.dictionary.reference.com
Five Senses Nature Walk
Language Arts Word Search

Circle the vocabulary in the word search below. Can you find all the animal-related words?

Word Bank

<table>
<thead>
<tr>
<th>ADAPTATION</th>
<th>ECOSYSTEM</th>
<th>OAK TREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMOUFLAGE</td>
<td>ENVIRONMENT</td>
<td>POISON OAK</td>
</tr>
<tr>
<td>CREEK</td>
<td>EVERGREEN</td>
<td>REDWOOD</td>
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<td>DECIDUOUS</td>
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<td>NICHE</td>
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Word Bank

ADAPTATION  ECOSYSTEM  OAK TREE
CAMOUFLAGE  ENVIRONMENT  POISON OAK
CREEK  EVERGREEN  REDWOOD
DECIDUOUS  HABITAT  SENSES
DECOMPOSER  NICHE  TRAIT
The extension activities listed below are from RAFT (Resource Area For Teaching). RAFT educational content is available online (www.raftbayarea.org) at no cost and is aligned to California Science Standards and Next Generation Science Standards. Below is a selection of post-visit activities from RAFT to extend student learning about the five senses and their local ecosystems.

**RAFT Idea: Nature Book - Resource Area For Teaching - RAFT Bay Area**
**Grades Covered:** K through 12  
**Subjects Covered:** Life Science, Earth/Space Science, Language Arts, Art  
**Curriculum topics:** Journaling, Bookmaking, Observing  
Create this artistic and outdoorsy book from easily found materials.  

**RAFT Idea: The Germinator - Resource Area For Teaching - RAFT Bay Area**
**Grades Covered:** K through 8  
**Subjects Covered:** Life Science  
**Curriculum topics:** Botany, Plant Growth, Scientific Method  
Create a reusable germinator that gives students an unobstructed view of sprouting seeds.  
http://www.raftbayarea.org/ideas/The%20Germinator.pdf

**RAFT Idea: Be Prepared - Resource Area For Teaching - RAFT Bay Area**
**Grades Covered:** 3 through 8  
**Subjects Covered:** Earth/Space Science, Social Studies  
**Curriculum topics:** Natural Hazards, Emergency Preparedness, Community Studies  
Evaluate potential natural hazards and develop plans to address the dangers.  

**RAFT Idea: Reason for the Seasons - Resource Area For Teaching - RAFT Bay Area**
**Grades Covered:** 3 through 8  
**Subjects Covered:** Physical Science, Earth/Space Science  
**Curriculum topics:** Seasons, Angle of the Earth’s Axis to the Sun, Concentration of Sunlight  
**Description:** Use a flashlight to simulate the angle of the sun…  

All information was used with the permission of RAFT.
Five Senses Nature Walk:
Education Standards

The following pages cite California Science Content Standards, Common Core Standards, and Next Generation Science Standards which students will be exposed to during the program.

California Science Content Standards Fourth Grade:
Life Sciences: 2. All organisms need energy and matter to live and grow. As a basis for understanding this concept:
   a. Students know plants are the primary source of matter and energy entering most food chains.
   c. Students know decomposers, including many fungi, insects, and microorganisms, recycle matter from dead plants and animals.

3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:
   a. Students know ecosystems can be characterized by their living and nonliving components.
   b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.
   c. Students know many plants depend on animals for pollination and seed dispersal, and animals depend on plants for food and shelter.

Excerpted from CA State Standards: [http://www.cde.ca.gov/](http://www.cde.ca.gov/)

Common Core Fourth Grade:
Speaking and Listening Standards: Students will…
1. Engage effectively in a range of collaborative discussions with diverse partners on grade four topics, building on each others’ ideas and expressing their own clearly.
   a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
   b. Follow agreed-upon rules for discussions and carry out assigned roles.
   c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
   d. Review key ideas expressed and explain their own ideas and understanding in light of the discussion.
2. Paraphrase portions of information presented orally.
3. Identify the reasons and evidence a speaker provides to support particular points.


Next Generation Science Standards Fourth Grade:
Five Senses Nature Walk: Education Standards

Structure, Function, and Information Processing
- 4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
  - **Science and Engineering Practices**
    - **Engaging in Argument from Evidence:** builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed worlds
    - Construct an argument with evidence, data, and/or a model. (4-LS1-1)
  - **Disciplinary Core Ideas**
    - **LS1.A: Structure and Function:** Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)
  - **Crosscutting Concepts**
    - **Systems and System Models:** A system can be described in terms of its components and their interactions. (4-LS1-1)