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**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, together 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

Down
1. A tree belonging to the beech family that has acorns as its fruit.
2. A common West Coast plant that causes itching and has leaves in groups of three.
4. An extremely tall species of tree with red bark; any tree belonging to the Sequoia genus.
5. The part of an ecosystem occupied by an organism or how it helps the system.
6. Blending in with an environment.
9. In biology, a change in an organism over time that better enables it to survive and multiply. This feature can be structural, physiologic, or behavioral.
10. An animal that feeds on dead matter and breaks it down into simpler compounds.
12. A plant that has leaves or needles all year round.

Across
3. A distinguishing feature or characteristic, as of one's appearance, personality, or behavior.
7. A community of living things, together with their environment.
8. The natural environment of a plant or animal.
10. A tree that loses its leaves at a certain time of year.
11. Everything that surrounds animals and humans in the natural world, including the air, the water, and the soil.
13. The parts and functions of our body that make us keenly aware of our environment; seeing, hearing, smelling, touching, and tasting.
14. A flowing body of water smaller than a river, similar to a stream.

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).
9. In biology, a change in an organism over time that better enables it to survive and multiply. This feature can be structural, physiologic, or behavioral (adaptation).
10. An animal that feeds on dead matter and breaks it down into simpler compounds (decomposer).
12. A plant that has leaves or needles all year round (evergreen).

Across
3. A distinguishing feature or characteristic, as of one’s appearance, personality, or behavior (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 at a certain time of year (deciduous).
11. Everything that surrounds animals and humans in the natural world, including the air, the water, and the soil (environment).
13. The parts and functions of our body that make us keenly aware of our environment; seeing, hearing, smelling, touching, and tasting (senses).
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

ADAPTATION
CAMOUFLAGE
CREEK
DECIDUOUS
DECOMPOSER
ECOSYSTEM
ENVIRONMENT
EVERGREEN
HABITAT
NICHE
OAK TREE
POISON OAK
REDWOOD
Senses
Trait
Answer Key
Five Senses Nature Walk
Language Arts Word Search

Word Bank

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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.  

**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 page cites 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 Fifth Grade: Investigation and Experimentation:
Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
   a. Classify objects (e.g. rocks, plants, leaves) in accordance with appropriate criteria.

Excerpted from CA State Standards: http://www.cde.ca.gov/

Common Core Fifth Grade: Speaking and Listening Standards: Students will…
   1. Engage effectively in a range of collaborative discussions with diverse partners on grade five 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 by making comments that contribute to the discussion and elaborate on the remarks of others.
      d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from discussions.

Excerpted from Common Core Standards: http://www.corestandards.org/

Next Generation Science Standards Fifth Grade: Matter and Energy in Organisms and Ecosystems
   • 5-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water.
      o Science and Engineering Practices
         ▪ Engaging in Argument from Evidence: Engaging in argument from evidence in 3–5 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 world(s).
         ▪ Support an argument with evidence, data, or a model. (5-LS1-1)
      o Disciplinary Core Ideas
         ▪ LS1.C: Organization for Matter and Energy Flow in Organisms: Plants acquire their material for growth chiefly from air and water. (5-LS1-1)
      o Crosscutting Concepts
         ▪ Energy and Matter: Matter is transported into, out of, and within systems. (5-LS1-1)

Excerpted from NGSS: http://www.nextgenscience.org/