
Five Senses Nature Walk



Sixth-Grade Teacher Resource Guide

Table of Contents

Lesson summary	1
Vocabulary	1
Language Arts Crossword Puzzle.....	2-3
Language Arts Word Search.....	4-5
Extension Activities	6
Education Standards	7-9

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, 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

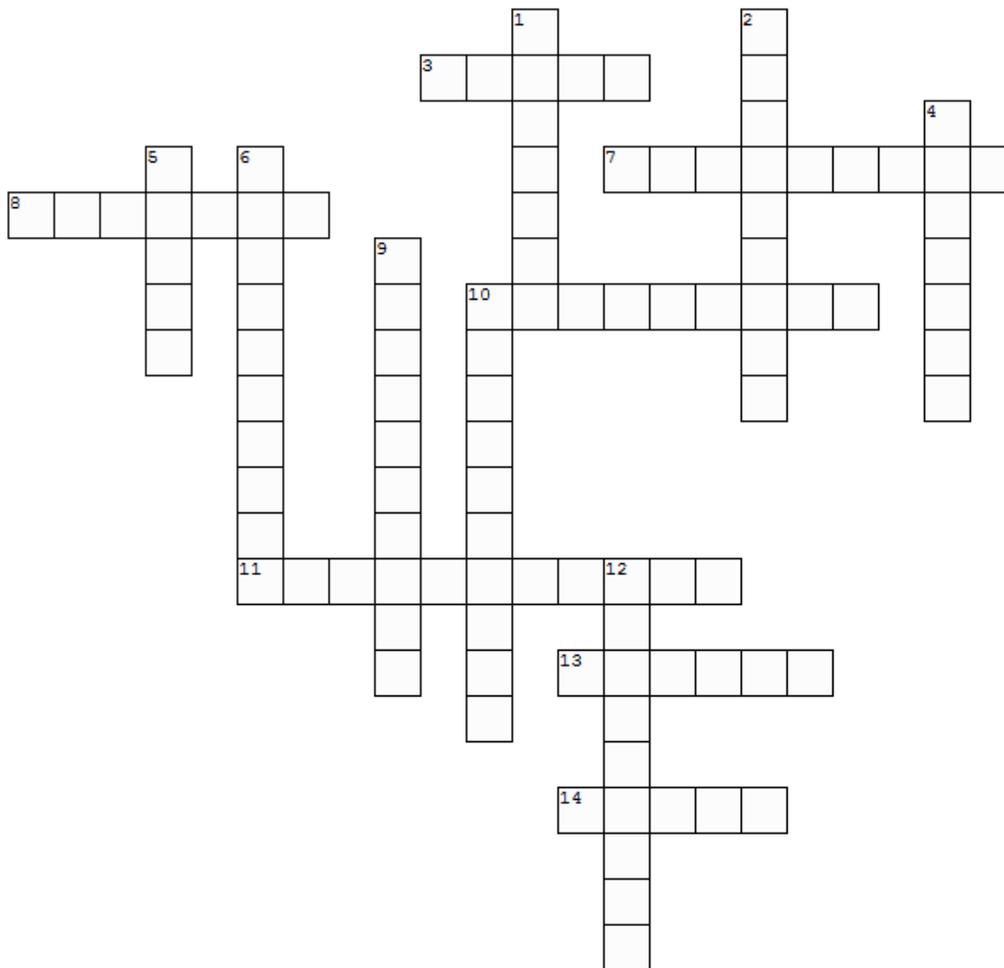
Redwood: an extremely tall species of tree with red bark; any tree in the *Sequoia* genus

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

Five Senses Nature Walk Language Arts Crossword Puzzle



CAMOUFLAGE	DECIDUOUS	EVERGREEN	POISON OAK	OAK TREE	ECOSYSTEM	
TRAIT	NICHE	REDWOOD	ENVIRONMENT	CREEK	SENSES	DECOMPOSER
		ADAPTATION	HABITAT			

Down

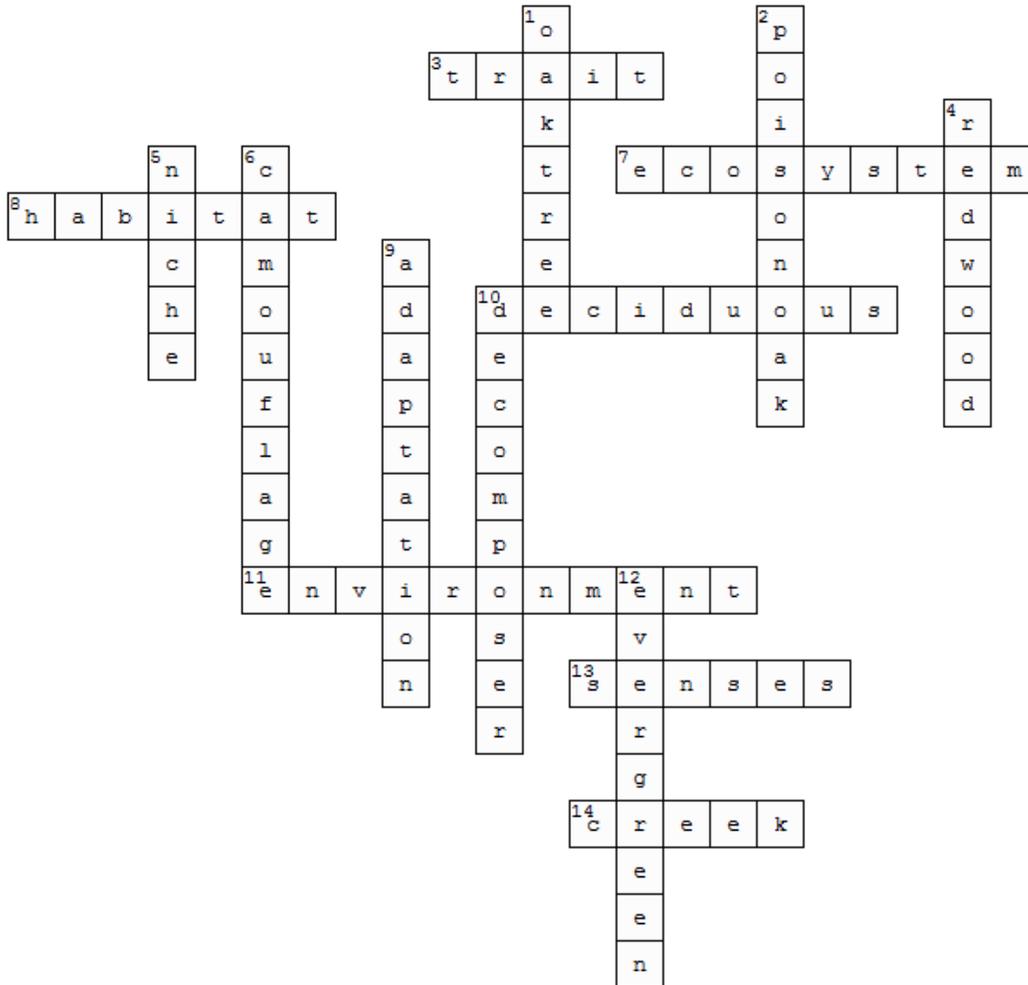
1. A tree belonging to the beech family that has acorns as its fruit.
2. A common West Coast plant that causes itching and has leaves in groups of three.
4. An extremely tall species of tree with red bark; any tree belonging to the *Sequoia* genus.
5. The part of an ecological system occupied by a particular organism, or the functions of that organism in 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. The sum of 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.

Answer Key

Five Senses Nature Walk Language Arts Crossword Puzzle



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 ecological system occupied by a particular organism, or the functions of that organism in the system. (**niche**)
6. Blending in with an environment. (**camouflage**)
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. The sum of 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**).

Five Senses Nature Walk Language Arts Word Search

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

Q	T	I	P	Y	P	U	F	B	L	D	J	T	Q	T	H
D	O	O	W	D	E	R	R	G	R	E	C	R	P	P	O
L	L	V	K	U	D	X	T	A	I	C	W	A	X	O	X
O	X	L	C	N	K	G	N	J	S	O	B	I	E	I	Y
E	T	Q	N	J	J	P	E	A	J	M	A	T	G	S	D
V	J	K	O	I	P	K	M	S	U	P	O	S	A	O	E
E	A	A	I	U	M	X	N	W	P	O	B	K	L	N	C
R	Z	M	T	Q	I	C	O	Q	L	S	L	G	F	O	O
G	E	K	A	E	W	M	R	Y	H	E	R	H	U	A	S
R	H	T	T	E	S	J	I	I	A	R	O	X	O	K	Y
E	C	A	P	R	E	M	V	B	Z	P	I	P	M	J	S
E	I	T	A	T	S	B	N	N	I	P	C	H	A	K	T
N	N	I	D	K	N	W	E	X	W	G	A	Y	C	R	E
H	H	B	A	A	E	D	E	C	I	D	U	O	U	S	M
E	G	A	D	O	S	Q	P	L	R	Q	B	Y	Y	N	F
C	P	H	V	L	C	R	E	E	K	V	M	G	I	K	A

Word Bank

ADAPTATION
CAMOUFLAGE
CREEK
DECIDUOUS
DECOMPOSER

ECOSYSTEM
ENVIRONMENT
EVERGREEN
HABITAT
NICHE

OAK TREE
POISON OAK
REDWOOD
SENSES
TRAIT

Five Senses Nature Walk: Extension Activities

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.

<http://www.raftbayarea.org/ideas/Nature%20Book.pdf>

[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.

<http://www.raftbayarea.org/ideas/Be%20Prepared.pdf>

[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...

<http://www.raftbayarea.org/ideas/Reason%20for%20the%20Seasons.pdf>

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 Sixth Grade:

Ecology (Life Sciences): 5. Organisms in ecosystems exchange energy and nutrients among themselves and with the environment. As a basis for understanding this concept:

- a. *Students know* populations of organisms can be characterized by the functions they serve in an ecosystem.
- b. *Students know* different kinds of organisms may play similar ecological roles in similar biomes.

Resources: 6. Sources of energy and materials differ in amounts, distribution, usefulness, and the time required for their formation. As a basis for understanding this concept:

- c. *Students know* the natural origin of materials used to make common objects.

Investigation and Experimentation: 7. 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:

- g. Interpret events by sequence and time from natural phenomena (e.g., the relative age of rocks and intrusions).
- h. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hill slope).

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

Common Core Sixth Grade:

Speaking and Listening Standards: Students will...

1. Engage effectively in a range of collaborative discussions with diverse partners on *grade 6 topics, texts, and issues*, 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 by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
 - b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
 - c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
 - d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

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

Five Senses Nature Walk: Education Standards

Next Generation Science Standards Sixth Grade: Structure, Function, and Information Processing

- **MS-LS1-8:** Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.
 - **Science and Engineering Practices:**
 - **Obtaining, Evaluating, and Communicating Information:** Obtaining, evaluating, and communicating information in 6-8 builds on K-5 experiences and progresses to evaluating the merit and validity of ideas and methods.
 - Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. (MS-LS1-8)
 - **Disciplinary core ideas:**
 - **LS1.D: Information Processing:** Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The signals are then processed in the brain, resulting in immediate behaviors or memories. (MS-LS1-8)
 - **Crosscutting Concepts:**
 - **Cause and Effect:** Cause and effect relationships may be used to predict phenomena in natural systems. (MS-LS1-8)

Matter and Energy in Organisms and Ecosystems

- **MS-LS2-1:** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
 - **Science and Engineering Practices:**
 - **Analyzing and Interpreting Data:** Analyzing data in 6–8 builds on K–5 experiences and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.
 - Analyze and interpret data to provide evidence for phenomena. (MS-LS2-1)
 - **Disciplinary core ideas:**
 - **LS2.A: Interdependent Relationships in Ecosystems:**
 - Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. (MS-LS2-1)
 - In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction. (MS-LS2-1)
 - Growth of organisms and population increases are limited by access to resources. (MS-LS2-1)
 - **Crosscutting Concepts:**
 - **Cause and Effect:** Cause and effect relationships may be used to predict phenomena in natural or designed systems. (MS-LS2-1)
- **MS-LS2-4:** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
 - **Science and Engineering Practices:**
 - **Engaging in Argument from Evidence:** Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the

Five Senses Nature Walk: Education Standards

- natural and designed world(s).
- Construct an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem. (MS-LS2-4)
- **Disciplinary core ideas:**
 - **LS2.C: Ecosystem Dynamics, Functioning, and Resilience:** Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations. (MS-LS2-4)
- **Crosscutting Concepts:**
 - **Stability and Change:** Small changes in one part of a system might cause large changes in another part. (MS-LS2-4)

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