
Aquatic Habitat Exploration



Fifth-Grade Teacher Resource Guide

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Aquatic Habitat Exploration: Lesson Summary and Vocabulary

Lesson Summary: YSI's *Aquatic Habitat Exploration* program allows students to examine aquatic animals and acquire a greater understanding of the water-based environments around them. Students will discuss the composition of our local lakes and creeks and the way living and nonliving features combine to form an interactive ecosystem. They will be offered a chance to touch different arthropods, amphibians, and reptiles that live in and around our aquatic habitats. After learning about the creatures that might be found nearby, students will take a short hike. At the creek or lake, they will have the chance to apply their knowledge hands-on by looking for aquatic organisms and attempting to identify them with instructor aid. Throughout the program, students will be challenged to use their critical thinking skills to work through a wide range of open-ended questions and activities about aquatic habitats and the life that inhabits them.

Vocabulary: These are words and concepts that relate to the YSI *Aquatic Habitat Exploration* program.

Amphibian: a cold-blooded animal that starts its life in water or a very wet environment but when mature can live on land

Aquatic: consisting of, relating to, or being in water

Arthropod: an animal with an exoskeleton and jointed legs

Consumer: an organism that receives energy to live by consuming other organisms

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

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

Habitat: the natural environment of a plant or animal

Lake: a stationary body of fresh water surrounded by land.

Metamorphosis: rapid changes in an animal's form after it is born or hatched

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

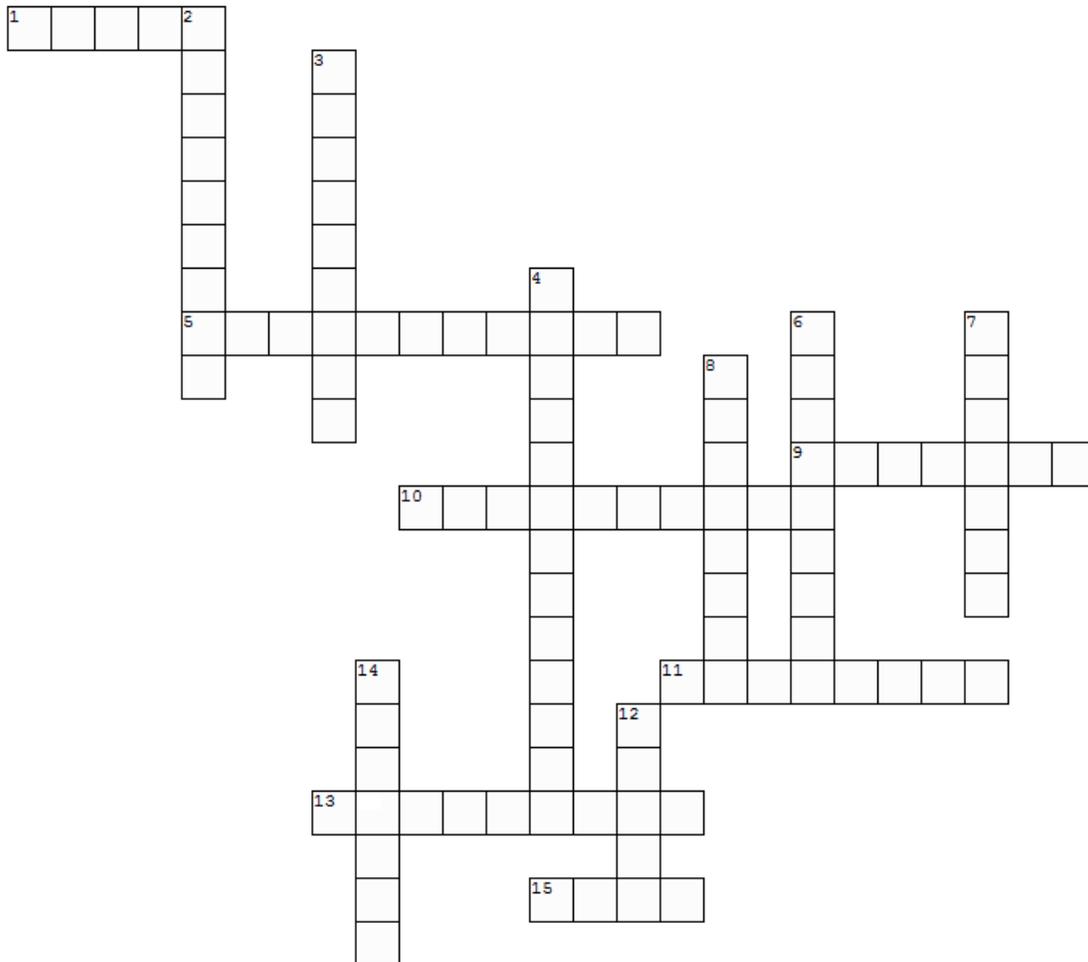
Producer: an organism that takes energy from light to produce living compounds

Reptile: a cold-blooded animal with dry scaly skin that typically lays soft-shelled eggs on land

Watershed: the area that all of the rain water in a region drains into

Definitions based on www.dictionary.reference.com

Aquatic Habitat Exploration Language Arts Crossword Puzzle



- | | | | | | | |
|-------------|---------------|-----------|-----------|-----------|------------|-------|
| ENVIRONMENT | CREEK | WATERSHED | ARTHROPOD | LAKE | DECOMPOSER | NICHE |
| ECOSYSTEM | METAMORPHOSIS | REPTILE | AQUATIC | AMPHIBIAN | PRODUCER | |
| | | CONSUMER | HABITAT | | | |

Across

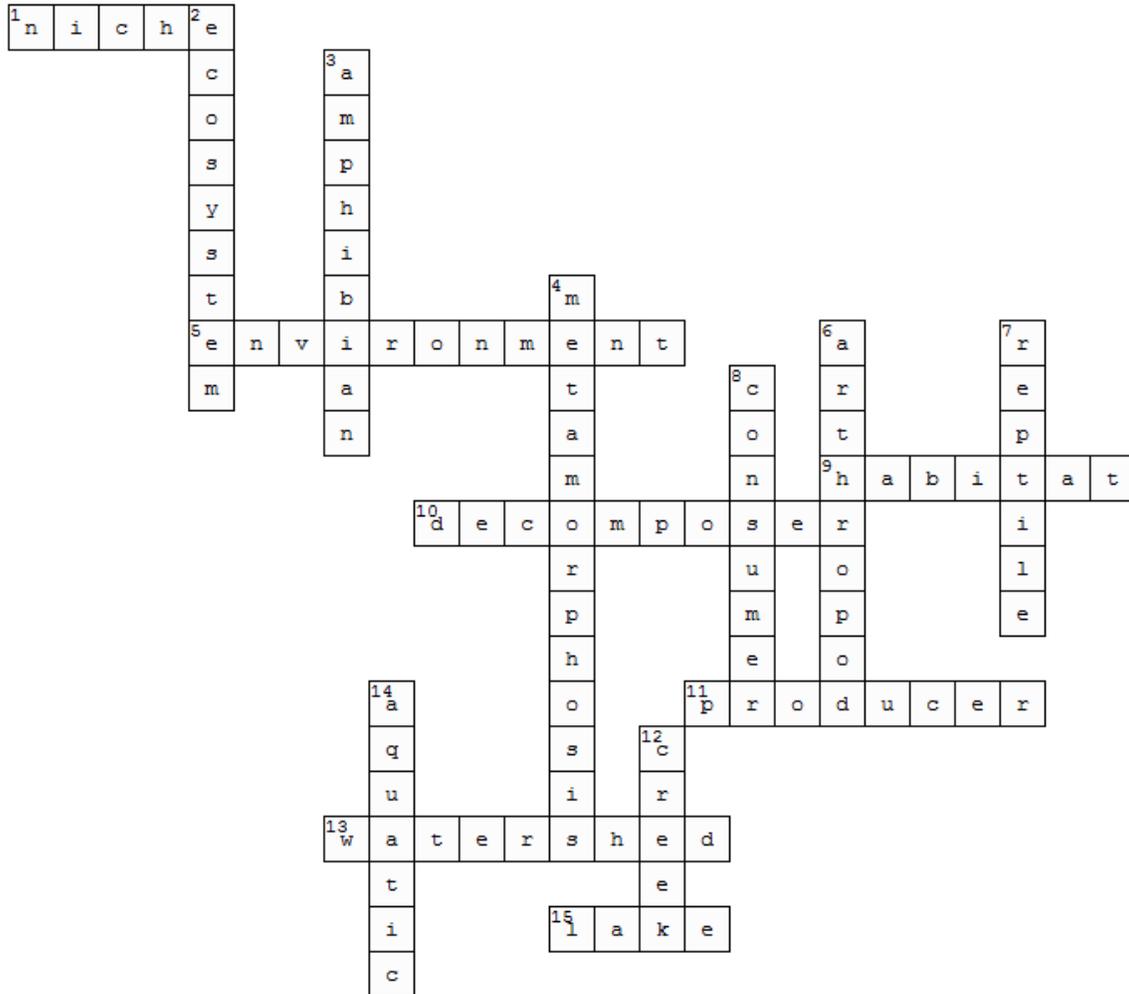
1. The part of ecosystem occupied by an organism or how it helps the system.
5. Everything that surrounds animals and humans in the natural world, including the air, the water, and the soil.
9. The natural environment of a plant or animal.
10. An animal that feeds on dead matter and breaks it down into parts of the soil.
11. An organism that uses sunlight, water, and air to make its own food.
13. The area that all of the rain water in a region drains into.
15. A large body of fresh water that stays in one place.

Down

2. A community of living things, together with their environment.
3. An animal that starts its life in the water but later can live on land.
4. Changes in an animal's form from birth to adult.
6. An animal with an exoskeleton and jointed legs.
7. A cold-blooded animal with scales.
8. An organism that receives energy to live by eating other organisms.
12. A flowing body of water smaller than a river, similar to a stream.
14. Made up of, relating to, or being in water.

Answer Key

Aquatic Habitat Exploration Language Arts Crossword Puzzle



Across

1. The part of ecosystem occupied by an organism or how it helps the system (**niche**).
5. Everything that surrounds animals and humans in the natural world, including the air, the water, and the soil (**environment**).
9. The natural environment of a plant or animal (**habitat**).
10. An animal that feeds on dead matter and breaks it down into parts of the soil (**decomposer**).
11. An organism that uses sunlight, water, and air to make its own food (**producer**).
13. The area that all of the rain water in a region drains into (**watershed**).
15. A large body of fresh water that stays in one place (**lake**).

Down

2. A community of living things, together with their environment (**ecosystem**).
3. An animal that starts its life in the water but later can live on land (**amphibian**).
4. Changes in an animal's form from birth to adult (**metamorphosis**).
6. An animal with an exoskeleton and jointed legs (**arthropod**).
7. A cold-blooded animal with scales (**reptile**).
8. An organism that receives energy to live by eating other organisms (**consumer**).
12. A flowing body of water smaller than a river similar to a stream (**creek**).
14. Made up of, relating to, or being in water (**aquatic**).

Aquatic Habitat Exploration Language Arts Word Search

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

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

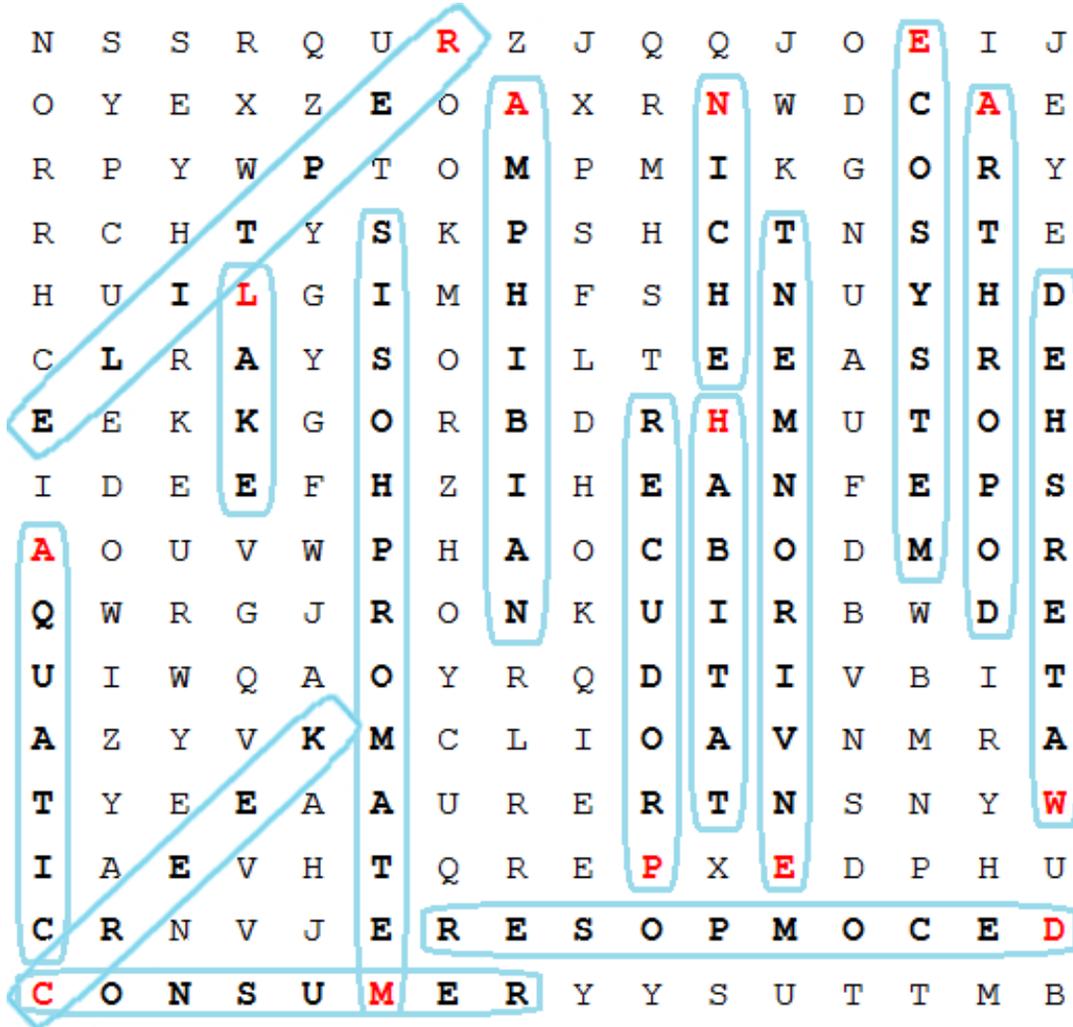
Word Bank

AMPHIBIAN
AQUATIC
ARTHROPOD
CONSUMER
CREEK

DECOMPOSER
ECOSYSTEM
ENVIRONMENT
HABITAT
LAKE

METAMORPHOSIS
NICHE
PRODUCER
REPTILE
WATERSHED

Answer Key
Aquatic Habitat Exploration
Language Arts Word Search



Word Bank

AMPHIBIAN
AQUATIC
ARTHROPOD
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DECOMPOSER
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Aquatic Habitat Exploration: 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 aquatic creatures and the habitats they belong to.

[RAFT Idea: Bug Pooter - Resource Area For Teaching - RAFT Bay Area](#)

Grades Covered: K through 10

Subjects Covered: Life Science

Curriculum topics: Arthropods, Observation, Classification, Insects

Description: A safe, humane way to collect and observe small creatures...

<http://www.raftbayarea.org/ideas/Bug%20Pooter.pdf>

[RAFT Idea: Mini Ice Mountains – Resource Area For Teaching – RAFT Bay Area](#)

Grades Covered: K through 10

Subjects Covered: Physical Science, Earth/Space Science

Curriculum topics: Landforms, Erosion, Patterns in Nature, Phases of Matter

Description: Use “mini mountains” of ice to observe how lakes, rivers, streams, and ice caves are formed...

<http://www.raftbayarea.org/ideas/Mini%20Ice%20Mountains.pdf>

[RAFT Idea: Ocean in a Box – Resource Area For Teaching – RAFT Bay Area](#)

Grades Covered: K through 6

Subjects Covered: Life Science, Earth/Space Science, Art

Curriculum topics: Oceanography, Environments, Ecology

Description: Our oceans have an entire world of aquatic life ...

<http://www.raftbayarea.org/ideas/Ocean%20in%20a%20Box.pdf>

[RAFT Idea: Water Cycle in 3D – Resource Area For Teaching – RAFT Bay Area](#)

Grades Covered: Pre-K through 12

Subjects Covered: Physical Science, Earth/Space Science

Curriculum topics: Water Cycle, Weather, Atmosphere

Description: Students use a circular format to create a realistic model of all phases of the water cycle ...

<http://www.raftbayarea.org/ideas/Land%20or%20Water.pdf>

Aquatic Habitat Exploration: Education Standards

The following page cites California Science Content Standards and Common Core Standards which students will be exposed to during the program.

California Science Content Standards Fifth Grade:

Earth Sciences: 3. Water on Earth moves between the oceans and land through the processes of evaporation and condensation. As a basis for understanding this concept:

- a. *Students know* that the amount of fresh water located in lakes, rivers, underground sources, and glaciers is limited, and that its availability can be extended by recycling and decreasing the use of water.
- b. *Students know* the origin of the water used by their local communities.

Investigation and Experimentation: 6. 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/>