



Southeast Alaska Discovery Center

Conservation Education Program - Water - an endless journey



Join the team at Southeast Alaska Discovery Center in exploring the importance and properties of water. Water on earth is reused over and over. The water cycle is the constant movement of water from the land to the ocean and back again. From trees and plants to animals and insects, all living things are dependent on this precious resource. Humans use water for many things, including drinking, growing food, making electricity, shipping products around the world and recreation. This SEADC program is intended to build student understanding of the water cycle, how water sources are used by living organisms, and the need to protect and use water wisely to safeguard our environment.

Each week students will learn about the featured water environment through a variety of activities including experience scientific inquiry, build knowledge through games and activities, create water themed art, participate in a group narrative writing project – Wylan Water’s Endless Journey.

Lesson Session List

Splash! The Journey Begins

- Session 1: Introducing the Water Cycle, Properties of Water,
- Session 2: Looking at Freshwater, Water Drops, Introducing Wylan Water’s Endless Journey

Gurgle, Gush! A Tale of Two Waters

- Session 3: Where Two Waters Meet, Estuaries as Nurseries,
- Session 4: In and Out - How Tides Work, Sand Creations, Wylan Water’s Endless Journey

Roar! On the Ocean’s Edge

- Session 5: Discover Ocean Forests, Oceans or Food
- Session 6: Exploring Ocean Currents, Salted Watercolor, Wylan Water’s Endless Journey

Scushh, Bubble! Exploring Underwater

- Session 7: Underwater Explorers, Discovering Underwater Mountains,
- Session 8: Buoyancy, Submarine Science
- Session 9: Underwater Diorama, Wylan Water’s Endless Journey

Whoosh! What Goes Up Must Come Down

- Session 10: Warming Up to Go - Evaporation, Making Dew - Condensation, Riding the Wind – Precipitation,
- Session 11: Let It Snow! Wylan Water’s Endless Journey
- Session 12: Celebrating Water, Snowball Catapults



Suggested Vocabulary List:

Aquifer, artifact, body of water, brackish water, brook, channel, cloud, condensation, depth, dew, drinkable, erosion, evaporation, flood, flow, fresh water, frost, gravity, H₂O, hail, headwaters, hydropower, ice, ice crystal, icicle, irrigation, lake, lava, moisture, non-potable, ocean, pond, pool, potable, precipitation, puddle, rain, reservoir, river, runoff, saltwater, sea, snow, stream, surf, tide, vapor, volcano, water, water cycle, water drop, waterfall, watershed, waves, wetlands

Suggested Resources List:

As with all subjects, there are numerous resources available at your local library, school libraries, and on the internet. The following is a limited list of possible resources developed to support the presented ideas in this SEADC Conservation Education program.

Children's Books

- The Snowflake: A Water Cycle Story by Neil Waldman - 1st grade - 5th grade
- A Drop of Water by Walter Wick - 2nd grade - 6th grade
- Did A Dinosaur Drink This Water? By Robert Wells - 2nd grade - 5th grade
- Magic School Bus: Wet All Over by Joanna Cole - Kindergarten - 3rd grade
- One Well: The Story of Water on Earth by Rochelle Strauss - 4th grade - 8th grade
- Water Dance by Thomas Locker - 2nd grade - 5th grade

Educator's Web Resources

- **Thirstin's Water Cycle Adventure**
 - <https://www3.epa.gov/safewater/kids/index.html>
- **USDA Forest Service Educators**
 - <https://www.fs.usda.gov/learn/educators>
- **The Water Cycle for Schools and Students**
 - <https://water.usgs.gov/edu/watercycle-kids-adv.html>



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Conservation Education Program - Earth Explorers: Caves & Karst

Join the team at the Southeast Alaska Discovery Center in an exploration of caves and karst. Caves are natural features in the earth with voids, cavities, and interconnected passages. We will explore the ecosystems of these special places that are home to animals who have adapted to living in extreme environments. Karst is a type of landscape that forms when rocks are dissolved forming large passages, channels, caves, sinkholes, and springs. Over millennia these systems collapse and create fascinating mountains, valleys, and river systems on the surface of the earth.

Lesson Session List

- Session 1 - Moving and Changing Rocks - how caves, caverns, and underground water systems create unique geological environments, Caves Diorama
- Session 2 - Hello Who's There? - Explore what makes cave environments different from surface habitats and the unique creatures who call this underground world home., Cave Food Web
- Session 3 – Fossils and Animal Bones Found in Caves - laboratory exploration of animal bones and fossils found in caves. Sculpt your own trace fossils or body fossils to put into your cave diorama. Cave Art Chalk Drawings

Recommended Vocabulary Words

Cave	Stalactite	Troglobite	Petroglyph
Sinkhole	Stalagmite	Adapted	Pictograph
Erosion	Column	Pigment	
Karst	Trogloxene	Microbe	
Speleologist	Troglophile	Fossils	

Suggested Resources:

As with all subjects, there are numerous resources available at your local library, school libraries, and on the internet. The following is a limited list of possible resources and books developed to support the ideas presented in this program.

Online and Video:

- Geologic Cave Tour Video, National Park Service: <https://www.nps.gov/media/video/view.htm?id=D687F045-C512-B8FB-1CA827CE51ABA394>
- Mammoth Cave, National Park Service: <https://www.nps.gov/macac/index.htm>
- National Cave and Karst Program https://www.fs.usda.gov/sites/default/files/fs_media/fs_document/15431-fs-pub-cave-and-karst_508.pdf

Books:

- *What are caves?* By Schuh, Mari
- *Caves* by Kramer, Stephen



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Conservation Education SEADC - Insects and Arachnids

Insects are often considered pests, and some are appreciated for their beauty or as important to food production. Insects are important to the health of the environment and are beneficial as pollinators, controlling pest insects, and as food sources for other animals. Insects are good indicators of environmental health, for assessing water quality and uncovering possible soil contamination. Join the Southeast Alaska Discovery Center team for conservation education activities, as we explore the world of insects and arachnids.

Lesson Session List

- Session 1: Insect Scavenger Hunt, Defining Insects and Arachnids, Insect Life Cycle - define the difference between insects and arachnids, explore the life cycle and food sources of insects.
- Session 2: Butterfly Life Cycle Lab, Insect Bingo and the Sense of Smell. - explore the importance of insects in the food web of the forest, participate in a mini lab exploring the life cycle of butterflies, play insect bingo and learn about how the sense of smell is important for plants and insects.
- Session 3: Insect Models – create your own insect or arachnid. Use recycled materials, paint, paper, and other materials to model your creation. Describe you insect, its place in the food web, and its benefits to the environment and humans.

Recommended Vocabulary

Egg, larva, pupa, adult, head, thorax, abdomen, wings, Ant, Butterfly, Ladybird, Bees, Moth, Fly, Grasshopper, Cricket, Spider, Caterpillar, antennae, beetles, pollinators, Adaptation, Flora, Metamorphosis, Nectar, migration, hive, colony,

Suggested Resources:

As with all subjects, there are numerous resources available at your local library, school libraries, and on the internet. The following is a limited list of possible resources and books developed to support the ideas presented in this program.

Books:

- *The secret life of bugs* by Butterfield, Moira
- *Magnificent book of insects and spiders* by Taylor, Barbara
- *Bugs* by Hickman, Pamela
- *Jumper: a day in the life of a backyard jumping spider* by Lanan, Jessica



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Conservation Education SEADC – Salmon in the Forest

Overall, salmon plays a vital role in the economy, culture, and ecology of Southeast Alaska, making them a cornerstone of the region's ecosystem. Salmon are a keystone species that supports the economy of Southeast Alaska and sends nutritious and healthy food around the world. This region's salmon is important to the culture of Alaska Native peoples, such as the Tlingit, who view them as revered and essential for their subsistence.

Lesson Session List

- Session 1 – Forests and Fish & Salmon in the Classroom, Salmon Tank Lab
- Session 1 – Forests and Fish & Salmon in the Classroom, Salmon Tank Lab
- Session 3 – Cultural ties to Salmon and Hunting Visitor/Formline Salmon

Suggested Vocabulary List:

Adult, Alevin, Chinook (King) salmon, Chum (Dog) salmon, Coho (Silver) salmon, Culture, Ecosystem, Forest, Fry, Migration, Observation, Parr, Pink salmon, Predator, Prey, Region, Salmon, Egg, Smolt

Suggested Resources:

As with all subjects, there are numerous resources available at your local library, school libraries, and on the internet. The following is a limited list of possible resources and books developed to support the ideas presented in this program.

Books:

- *Survival of the salmon* by Lumry, Amanda
- *Salmon forest* by Suzuki, David
- *Salmon creek* by LeBox, Annette

Online Videos:

- The Salmon Forest - <https://youtu.be/rm25cRi8TL8>