

TEACHER OVERVIEW

Water Conservation and Wildlife Ecosystems

Kindergarten – 2nd Grade

Nature Vision Student Packet

The materials contained within this packet for students have been created by Nature Vision, an environmental education nonprofit organization that brings programming to schools and local greenspaces for over 70,000 preK-12th grade students each year in King and Snohomish Counties. This curriculum is designed to foster an understanding of the importance of water and its integral role in supporting life and shaping our planet. Packets can be completed by students either independently from home, or with the help of an adult caregiver. Materials for each day of the week build on the previous days' learning by offering a variety of activities that involve art, writing, safe field exploration, and kinesthetic activities.

These materials are provided to you by Cascade Water Alliance (Cascade). Cascade wants everyone to understand the importance of conserving and protecting our limited water resources. Cascade supports Nature Vision in the development and delivery of water education programs and we are happy to offer these materials to our friends in the community. Learn more about Cascade at cascadewater.org.

This unit supports NGSS Performance Expectations across various disciplines, as well as supporting K-12 Integrated Environmental and Sustainability Standards. These are listed at the bottom of this page. Teachers will be supplied with PDF formats of materials to be emailed to families, or teachers may print and send to students to complete at home.

In this packet, students begin with an introduction to habitats and what plants and animals need to survive. The next lessons focus on salmon, amphibians, and their unique relationship to our water resources. Students then explore soil and how healthy soil and plant life helps support water conservation. The unit is finished with a focus on stewardship and what we as members of the community can do to support our water supply and the amazing plants and animals they learned about during the course of two weeks.

If you have any further questions or concerns regarding this packet, please email our Office Coordinator at info@naturevision.org.

Grades K-2

Supports NGSS Performance Expectations: K-LS1-1, K-ESS2-2, K-ESS3-1, K-2-ETS1-1, 1-LS3-1, 2-LS4-1

Grades K-2
Day 1 / Day 2 - Habitats, Living and Non-Living
Day 3 / Day 4 - Salmon Life Cycles
Day 5 / Day 6 - Amphibians and Local Water Connection
Day 7 / Day 8 - Soil and Decomposers
Day 9 / Day 10 - Stewardship

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PARENT/CAREGIVER OVERVIEW

Water Conservation and Wildlife Ecosystems

Kindergarten – 2nd Grade

Welcome to Nature Vision’s student packet for home use. Nature Vision is an environmental education nonprofit organization that brings programming to schools and local greenspaces for over 70,000 preK-12th grade students each year in King and Snohomish Counties. We are excited to be offering this version of our programming directly to students at home!

This packet is designed to be completed over the course of two weeks, with each day focusing on a different aspect of environmental science and stewardship. The majority of these materials can be completed independently, but we thought it would be important to provide background information for any adults that may be helping to complete or answer questions. We’ve included the basic learning objectives for each day along with some vocabulary.

These materials are provided to you by Cascade Water Alliance (Cascade). Cascade wants everyone to understand the importance of conserving and protecting our limited water resources. Cascade supports Nature Vision in the development and delivery of water education programs and we are happy to offer these materials to our friends in the community. Learn more about Cascade at cascadewater.org.

Another great resource to learn about saving water and how to help our salmon and watershed is weneedwater.org. Check out the We Need Water webpage or on Instagram @WeNeedH2O to see how you can be part of this campaign! Challenge yourself to use #WeNeedWater to post all the things you are doing with your friends and family to conserve and protect water!

*Please contact info@naturevision.org with any questions or concerns
Stay connected with Nature Vision! Follow us for updates @naturevisionorg*



NOTE: Students may require support in reading directions and/or completing some tasks. While many activities in this packet are creatively-oriented and open-ended, you may consult the answer key located at the back of the packet for additional assistance or guidance.

Unless otherwise noted, images courtesy of freepik.com

PARENT/CAREGIVER OVERVIEW: DAY 1 / DAY 2

Habitats, Living and Non-Living

Background Information A habitat is where a plant or animal lives. From their habitat, these plants and animals get the food, water, shelter, and space that they need to survive. Humans also have a habitat, which we often call our home and/or community. Plants and animals affect our habitats, and we affect the habitats of plants and animals, too.

Learning Objectives: Students think about the different things that many plants and animals need to survive. Students will also explore how a habitat that is perfect for one animal is not a perfect habitat for others. Along the way, we will highlight the following points: Humans need the same things that other living things do to survive, are connected to the natural world, and have an impact on it.

Activity 1: Human Habitat Scavenger Hunt

- **Overview:** Students locate and draw the living and non-living things around them
- **Parent/Caregiver Tasks:** None

Activity 2: What's Your Perfect Habitat?

- **Overview:** Students design their perfect habitat and draw the living and non-living things that they need to be happy and healthy
- **Parent/Caregiver Tasks:** None

Optional Activity: We Need Water Challenge

- **Overview:** Students complete a daily task related to a water conservation habit and a challenge to spread awareness on the importance of saving water
- **Parent/Caregiver Tasks:** If possible, help the student post their #WeNeedWater challenge on social media

Optional Activity: Habitat Match-Up

- **Overview:** Students match an animal to its preferred habitat
- **Parent/Caregiver Tasks:** None

Optional Activity: Video

- **Overview:** Students watch a short video from PBS that illustrates the concepts of habitats and the jobs animals do in nature
- **Parent/Caregiver Tasks:** Provide technical support

PARENT/CAREGIVER OVERVIEW: DAY 3 / DAY 4

Salmon Life Cycles

Background Information: Salmon are amazing animals that are some of the most recognizable members of the natural communities in the Pacific Northwest. Many of us already know that salmon are a delicious and healthy food for people, but they also move through many different habitats on their incredible journey from streams to the ocean and back again.

Learning Objectives: Students will begin their Nature Vision lessons with an introduction to one of Washington's most important animals: salmon. They will learn ways to remember all 5 species of salmon along with details on their life cycle and the difficult journey they go through. Along the way, we will highlight the importance of having plenty of fresh, clean water available for these animals and so many more.

Activity 1: Salmon Life Cycle Spinner

- **Overview:** After learning about the life cycle of a salmon, students create a spinner wheel that shows all the stages of their development
- **Parent/Caregiver Tasks:** Assist with cutting out pieces and joining them together

Activity 2: Salmon Stream

- **Overview:** Students design a river scene that will be the perfect habitat for spawning salmon
- **Parent/Caregiver Tasks:** Guide students towards including trees, shade, and rocks, while removing obstacles and harmful items in the salmon's way

Optional Activity: We Need Water Challenge

- **Overview:** Students complete a daily task related to a water conservation habit and a challenge to spread awareness on the importance of saving water
- **Parent/Caregiver Tasks:** If possible, help the student post their #WeNeedWater challenge on social media

Optional Activity: Salmon Coloring Sheet

- **Overview:** Students color salmon and their environment, making sure to design salmon with matching patterns to indicate that they are the same species
- **Parent/Caregiver Tasks:** None

PARENT/CAREGIVER OVERVIEW: DAY 5 / DAY 6

Amphibians and Local Water Connection

Background Information: Amphibians are incredible animals that undergo an amazing change during their life cycle. Because they spend part of their lives in the water and part of their lives on land, they help to connect these two different habitats. Our water use and management is critically important for the survival of these animals because they are sensitive to changes in both the quality and quantity of water in an environment. Globally, we have seen drastic changes to amphibian populations, which has also harmed many other species that rely on them for survival. By helping to keep water clean and plentiful, we support these amazing animals.

Learning Objectives: Students will continue their investigation into local waterways and meet a new group of animals that live here in Washington: amphibians! They will learn about what makes these creatures unique before diving into their life cycle and learning all about the many adaptations that amphibians use to survive.

Activity 1: Find the Amphibian

- **Overview:** Students identify which creatures are amphibians based on their unique traits
- **Parent/Caregiver Tasks:** Help students remember what makes an amphibian, reminding them that some animals are similar but not quite the same

Activity 2: Build an Amphibian

- **Overview:** Students create a unique and customized amphibian by combining different adaptations on a single animal
- **Parent/Caregiver Tasks:** Encourage students to include each of the requested kinds of adaptation (i.e. for hunting, protection, movement)

Optional Activity: We Need Water Challenge

- **Overview:** Students complete a daily task related to a water conservation habit and a challenge to spread awareness on the importance of saving water
- **Parent/Caregiver Tasks:** If possible, help the student post their #WeNeedWater challenge on social media

Optional Activity: Hop and Leap Game

- **Overview:** Students test out their own legs to see how they compare to that of a frog
- **Parent/Caregiver Tasks:** Ensure that the student is in a safe environment and has the space to hop, leap, and move around — *if possible, try to measure the height or distance that your child is able to jump*

Optional Activity: Life Cycle Matching

- **Overview:** Students recall the life cycle of a frog and a salamander by arranging pieces in order
- **Parent/Caregiver Tasks:** Supervise the student in cutting out the pieces and helping them remember the life cycle

PARENT/CAREGIVER OVERVIEW: DAY 7 / DAY 8

Healthy Soil and Decomposers

Background Information: Healthy soil is an amazing habitat that helps to support insects, plants, and other life. Healthy soil helps to clean and absorb our water, making sure we have a suitable habitat for salmon, amphibians, and people.

Learning Objectives: Students will explore soil and meet some of the creatures that live in it. They will learn ways to maintain a healthy habitat for life in soil, resulting in an environment better for salmon and other animals.

Activity 1: Soil Observation

- **Overview:** Students carefully explore and observe an area of soil in a neighborhood greenspace, flower pot, bush, or tree
- **Parent/Caregiver Tasks:** Supervise the student's exploration outside

Activity 2: Meet a Decomposer

- **Overview:** Students observe pictures of decomposers (i.e. small animals that break down material in the soil) and circle any that they found while engaging in their soil observation (Activity 1)
- **Parent/Caregiver Tasks:** None

Optional Activity: We Need Water Challenge

- **Overview:** Students complete a daily task related to a water conservation habit and a challenge to spread awareness on the importance of saving water
- **Parent/Caregiver Tasks:** If possible, help the student post their #WeNeedWater challenge on social media

Optional Activity: Video

- **Overview:** Students watch a short video from "SciShow Kids" that shows the role soil plays in the environment
- **Parent/Caregiver Tasks:** Provide technical support

Optional Activity: Decomposer Storytelling

- **Overview:** Students tell or write a story from the perspective of a worm or another decomposer
- **Parent/Caregiver Tasks:** None

PARENT/CAREGIVER OVERVIEW: DAY 9 / DAY 10

Stewardship

Background Information: Stewardship is how we care for the natural world. Environmental stewardship includes conserving natural resources (e.g. water) that all living things need to survive, thinking and acting carefully about how we interact with the world around us, and doing our best to ensure that we positively impact the environment. Specifically, stewardship activities center around what students and families can do to save water and keep it clean for the rest of the environment.

Learning Objectives: Students will combine their knowledge gained throughout the week to consider ways they can support the environment. They should focus on water conservation by thinking carefully about natural resource use.

Activity 1: Stewardship Matching Memory Game

- **Overview:** Students cut out various cards from a “saving water” infographic and match actions that waste water with the solutions that save water
- **Parent/Caregiver Tasks:** Support in cutting the paper

Activity 2: Stewardship Ideas Poster

- **Overview:** Students create their own poster to remind themselves and family how to save water at home
- **Parent/Caregiver Tasks:** None

Optional Activity: We Need Water Challenge

- **Overview:** Students complete a daily task related to a water conservation habit and a challenge to spread awareness on the importance of saving water
- **Parent/Caregiver Tasks:** If possible, help the student post their #WeNeedWater challenge on social media

PARENT/CAREGIVER OVERVIEW: VOCABULARY

DAY 1 / DAY 2

Habitat: The home of an animal or plant

Living: Something that eats, breathes, and grows

Non-Living: Physical parts of the environment (e.g. air, water, light, minerals)

DAY 3 / DAY 4

Alevin: Freshly hatched salmon, still with their egg yolk attached as a food source

Fry: Baby salmon that are still living in their home stream

Life Cycle: The stages that a living thing goes through as it grows

Parr: Young salmon that have developed stripes as camouflage in the river

Smolt: Young salmon transitioning from fresh water to salt water

Spawning: When a salmon returns home to mate and lay eggs

Redd: A salmon's nest, dug into the bottom of a stream

Chum/Sockeye/Chinook/Coho/Pink: The 5 species of salmon found in Washington

DAY 5 / DAY 6

Adaptation: A change to an animal species that allows them to more easily survive

Amphibian: A cold-blooded vertebrate with a water-based, gill-breathing larval stage and a land-based, lung-breathing adult stage (e.g. frogs, toads, newts, salamanders, caecilians)

Metamorphosis: A physical change in body structure after birth (i.e. changing from a tadpole to a frog)

DAY 7 / DAY 8

Decomposers: Animals that live in the soil

Soil: The upper layer of earth in where plants grow

DAY 9 / DAY 10

Conservation: Protecting the natural world, especially by making smart choices about our natural resource use

Stewardship: Taking care of something; being a protector

DAY 1 / DAY 2

Habitats, Living and Non-Living

People, plants, and animals are connected. One way we are connected is that we all need food, water, and the space to live and grow. We call this a **habitat**. A habitat is an animal's home where it has everything it needs to live. We all need each other, including other plants and animals. If one kind of plant or animal is lost, our whole habitat can be hurt. People live in different habitats, but we all need the same things as plants and animals to live.

A habitat is made of things that are **living** and things that are **non-living**. How can we tell?

Living Things

Living things use energy:

Plants make energy from the sun, some animals eat plants, other animals eat animals. Some things even eat stuff that was alive but is dead and rotting.



All life grows:

Some life grows from a seed, some from an egg, some like you are born from a mother and grow up.



All life makes more life:

Plants can drop seeds or fruit to make more plants, salmon spawn in streams, even tiny germs split and make more of themselves. Life has to be able to make more life.



Non-Living Things

These can be rocks, water, air...



...or things in your home like your toys
or the cotton in your clothes!



Some things were once alive but now they
aren't, like the plants or animals in the food you
eat.



...or the wood that was used to build
your home!

Vocabulary

Habitat: The home of an animal or plant

Living: Something that eats, breathes, and grows

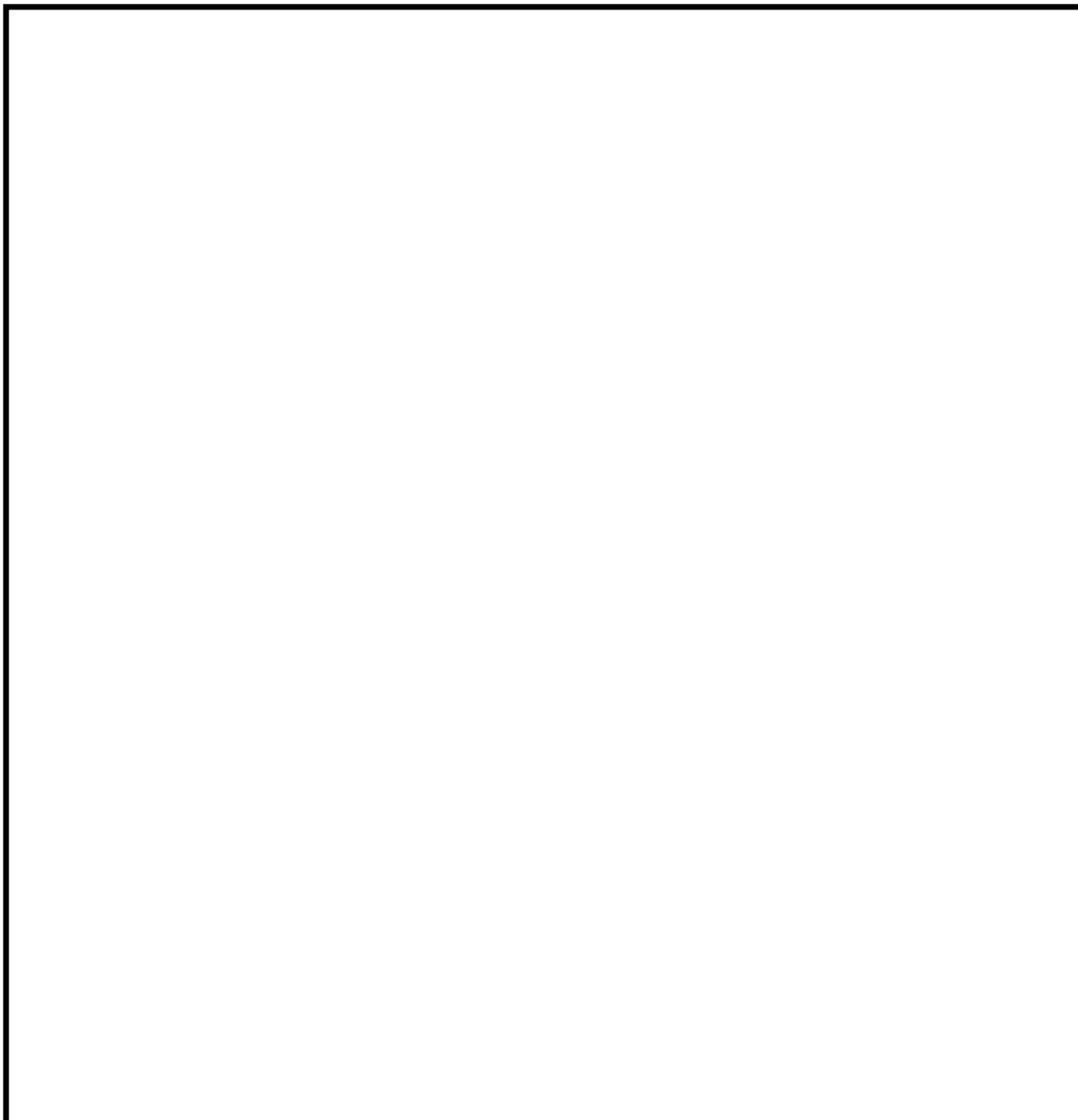
Non-Living: Physical parts of the environment (e.g. air, water, light, minerals)

Activity #1

Human Habitat Scavenger Hunt

Take a look around you. Find six different things in your habitat and draw them below. Circle the ones that are living or were once living but now are not. Put an X next to the ones that are non-living.

Materials: Pencil/crayons/markers/colored pencils

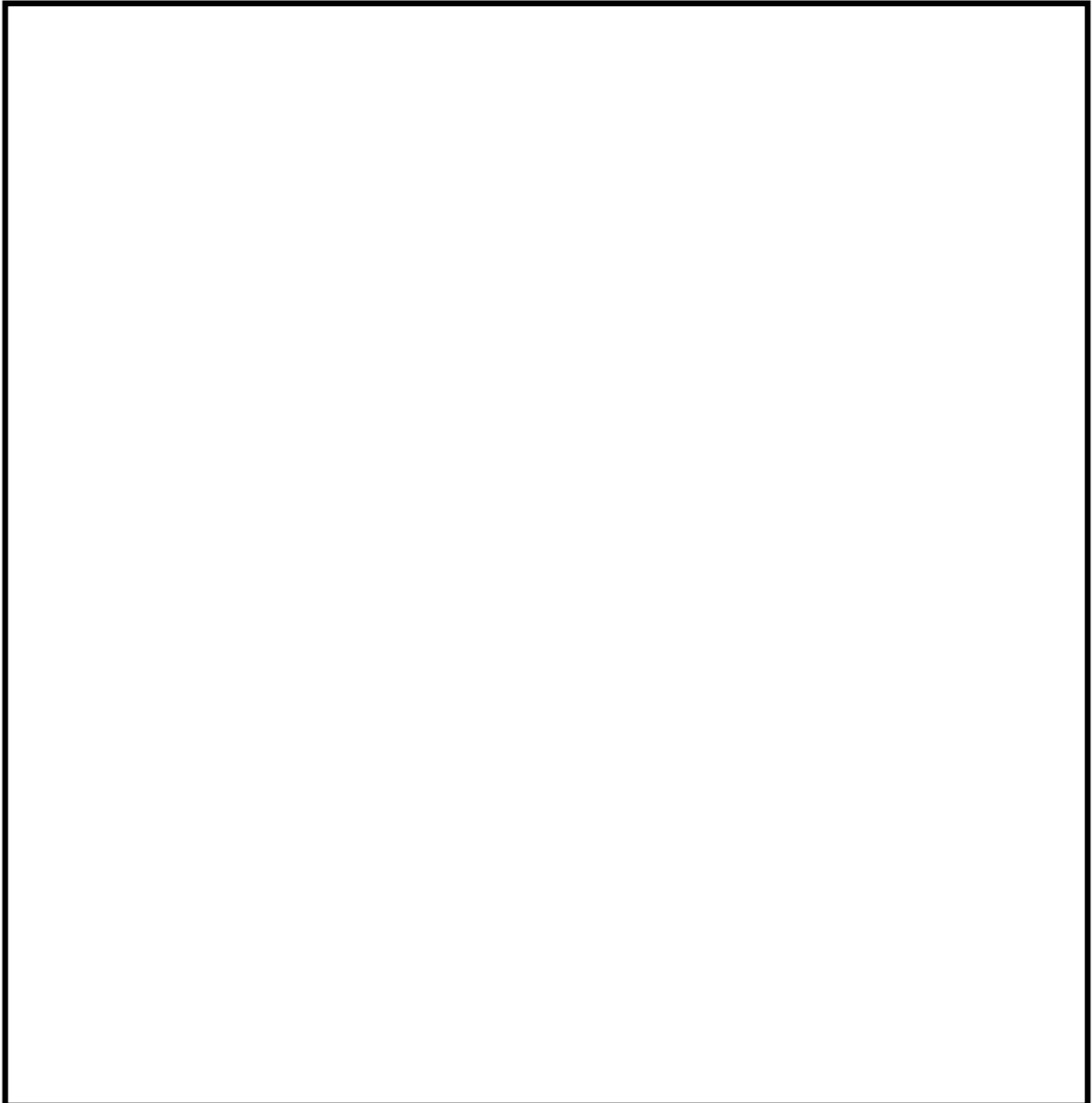


Activity #2

What's Your Perfect Habitat?

Now that you know what other animals need in their habitat, make your own! What would your perfect habitat look like? What do you need to live? Think of all the living and non-living things you may need. Draw the living things below in one color. Then, draw the non-living things in another color.

Materials: Pencil/crayons/markers/colored pencils



Optional Activity

We Need Water Challenge

There are so many ways to save, protect, and care for our water. At the end of every daily lesson, we will be giving a challenge to help you show off what you've learned.

Materials: Pencil, colors, computer/phone/tablet, internet

Nature isn't somewhere far away, it's all around us! There are plants and animals everywhere if you look carefully, and they all need water to survive just like us! For today's #WeNeedWater challenge find an animal that you think is really cool and draw a picture of it. You can do the same with a plant if you'd like!

If you can go outside, remember to be safe, responsible, and respectful. If you can't go outside, you can still find nature by looking out a window, or staying on your balcony, porch, or front steps. Remember that bushes, birds, trees, ants, worms are all nature, and they all need water!

To share your work, post your challenge to Facebook and/or Instagram (with an adult) so other people in your community can learn, too! Don't forget to use the hashtag #WeNeedWater and tag @weneedh20 and @naturevisionorg in your post so we can see your work!

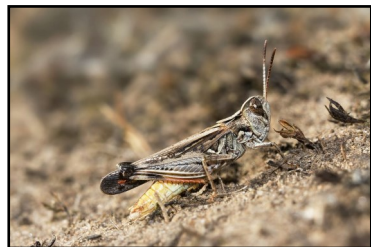
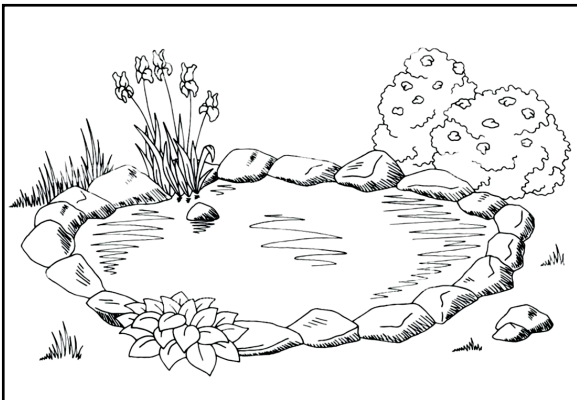
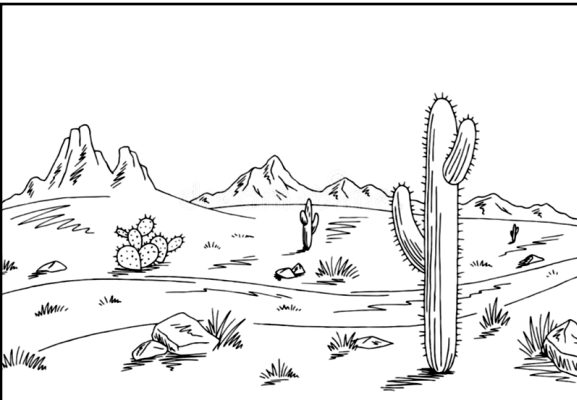
Optional Activity

Habitat Match-Up

Animals live in many different habitats. Can you match the animal with its habitat home?

Hint: Some animals may live in more than one!

Materials: Pencil



Optional Activity

Video

Please ask for an adult's permission to watch this video.

“Habitat Basics”: This short video from PBS shows us the basics of what makes a healthy habitat and the role that animals play in those habitats! This video can be found at <https://www.pbs.org/video/habitat-habitat-basics-buxg6x/>

You can also find this video by doing a YouTube search for:
“PBS science trek habitat basics”

Materials: Computer/phone/tablet, internet connection

DAY 3 / DAY 4

Salmon Life Cycles

(You may want an adult to help you read this)

We share our water and our habitats with many different plants and animals. One of the most important is salmon. Salmon are also very important to the animals, plants and people in our home.

There are five kinds of salmon in Washington. We can remember each of them by using our fingers! To help you learn them, hold up your hand and wiggle your fingers.

First, hold up your thumb... thumb rhymes with **Chum**, which is the name of our first salmon!

Second is your pointer, or poking, finger... if you are not careful you might accidentally poke yourself in the eye, which helps us to remember the **Sockeye** salmon!

Third is your middle finger, usually the largest and longest of all the fingers. It stands above the rest of your fingers like a king... that gives us the name of the largest salmon of all, the King salmon! This salmon also has another possible name: the **Chinook** salmon.

Fourth, we have the ring finger, where people often wear jewelry made of shiny metals... maybe something made out of silver? That's what we call this next salmon, the **Silver** or Coho salmon!

Fifth, raise your pinkie finger. This will remind us of our last kind of salmon, the **Pink** salmon!

The Salmon Life Cycle

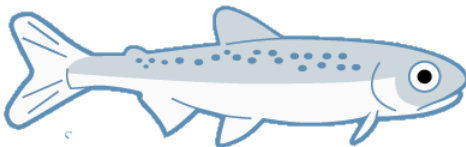
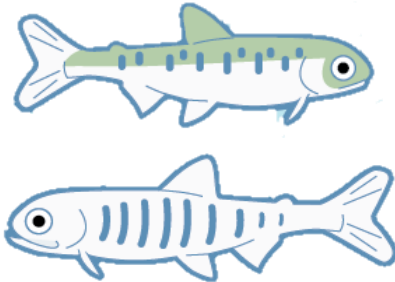
All living things have a **life cycle**. All of these different kinds of salmon go on an amazing journey. They are born in streams in the mountains, swim to the ocean, and swim back to the streams to lay their eggs. Where they lay their eggs is called a **redd**, which is a nest dug into the bottom of the stream. Along the way, they help make sure that the habitats in the mountains, forests, streams, and oceans are all healthy. We learned that all living things change as they get older. Let's look at how salmon grow!

Salmon start their lives as tiny, orange eggs. They can lay up to 4,000 eggs at a time. That is a lot of siblings!



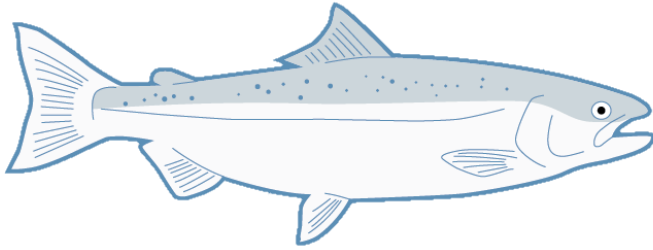
After they hatch, baby salmon are called **alevin**. They still have part of the egg attached to them. Do you see the orange bump on the alevin's belly? They can eat this as they grow!

When the salmon eat the egg and grow up more, they become a **fry**. They hide in the stream a lot so hungry animals won't eat them. When they get ready to leave home, they grow stripes to hide from other animals. After they grow their stripes, they become a **parr**.

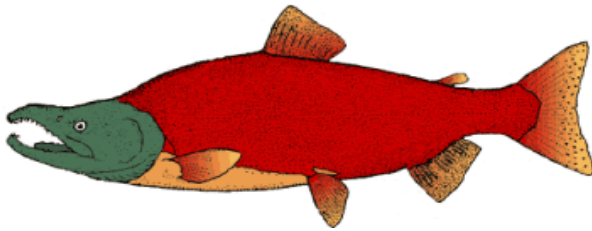


When the salmon get close to the sea, they turn silver and lose their stripes. These are called **smolt**.

When the salmon swim into the ocean, they are now adults. They will stay in the sea for years as they eat and grow big and strong.



At the end of their lives, salmon turn bright colors and swim all the way back to their home in the stream where they hatched. These salmon are called **spawning** salmon.



This is a very hard swim! When they get back home, they lay their eggs and die.

Now the salmon's journey is complete! They have used up all the energy and strength they had, and die soon after laying their eggs. It is not all sad, however; as a final gift to nature, the bodies of the salmon are a source of food for hungry animals. They start to break down in the soil to provide energy for trees and plants, which helps the whole forest grow green and healthy!

Vocabulary

Alevin: Freshly hatched salmon, still with their egg yolk attached as a food source

Fry: Baby salmon that are still living in their home stream

Life Cycle: The stages that a living thing goes through as it grows

Parr: Young salmon that have developed stripes as camouflage in the river

Smolt: Young salmon transitioning from fresh water to salt water

Spawning: When a salmon returns home to mate and lay eggs

Redd: A salmon's nest, dug into the bottom of a stream

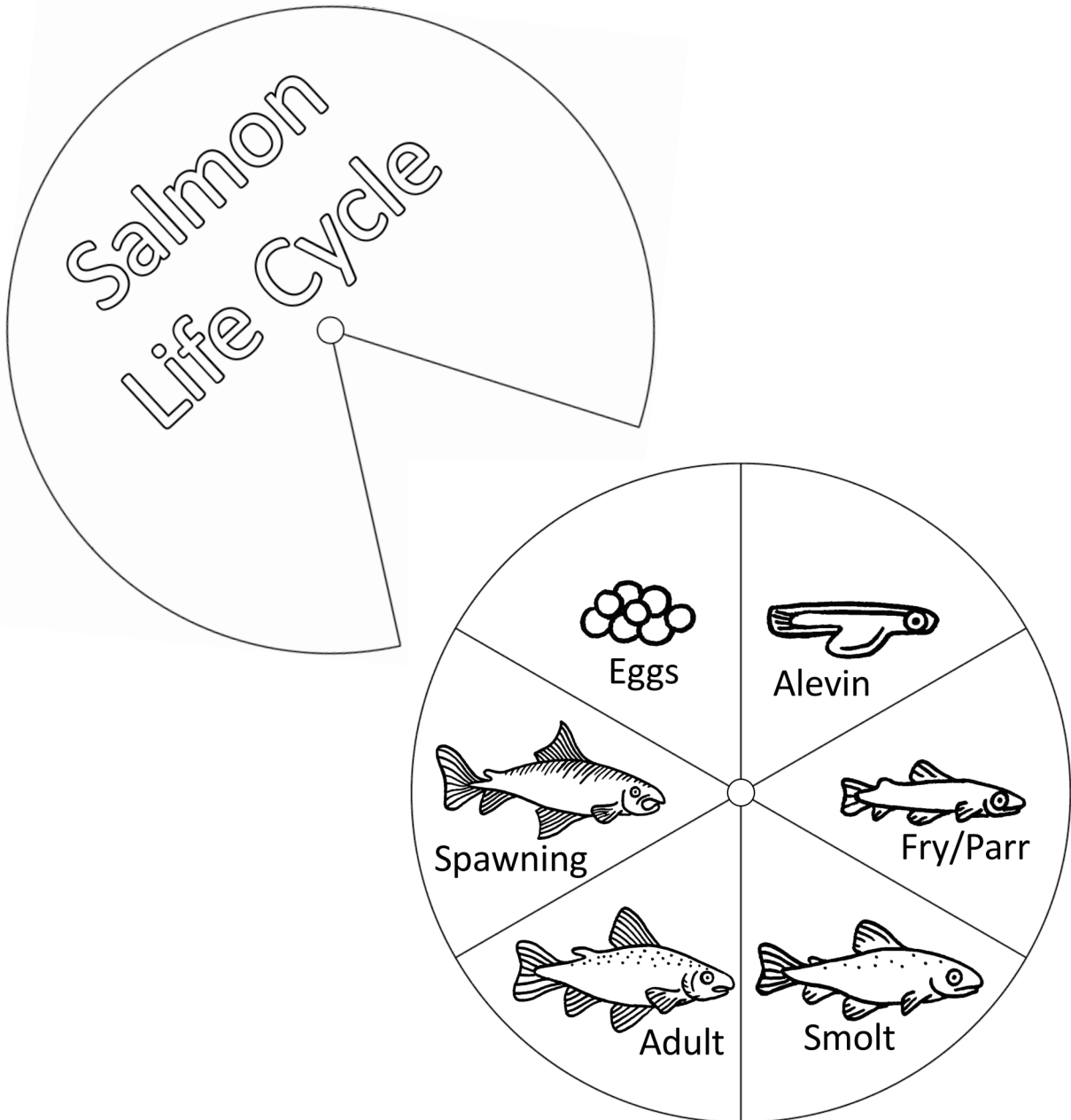
Chum/Sockeye/Chinook/Coho/Pink: The 5 species of salmon found in Washington

Activity #1

Salmon Life Cycle Spinner

With an adult, cut out and color in the shapes below. Once everything is colored, place the top wheel over the bottom wheel and push an unfolded paper clip through the center. Your life cycle spinner can now rotate around and show you all the stages of a salmon's life!

Materials: Scissors, pencils/crayons/markers/colored pencils, paper clip



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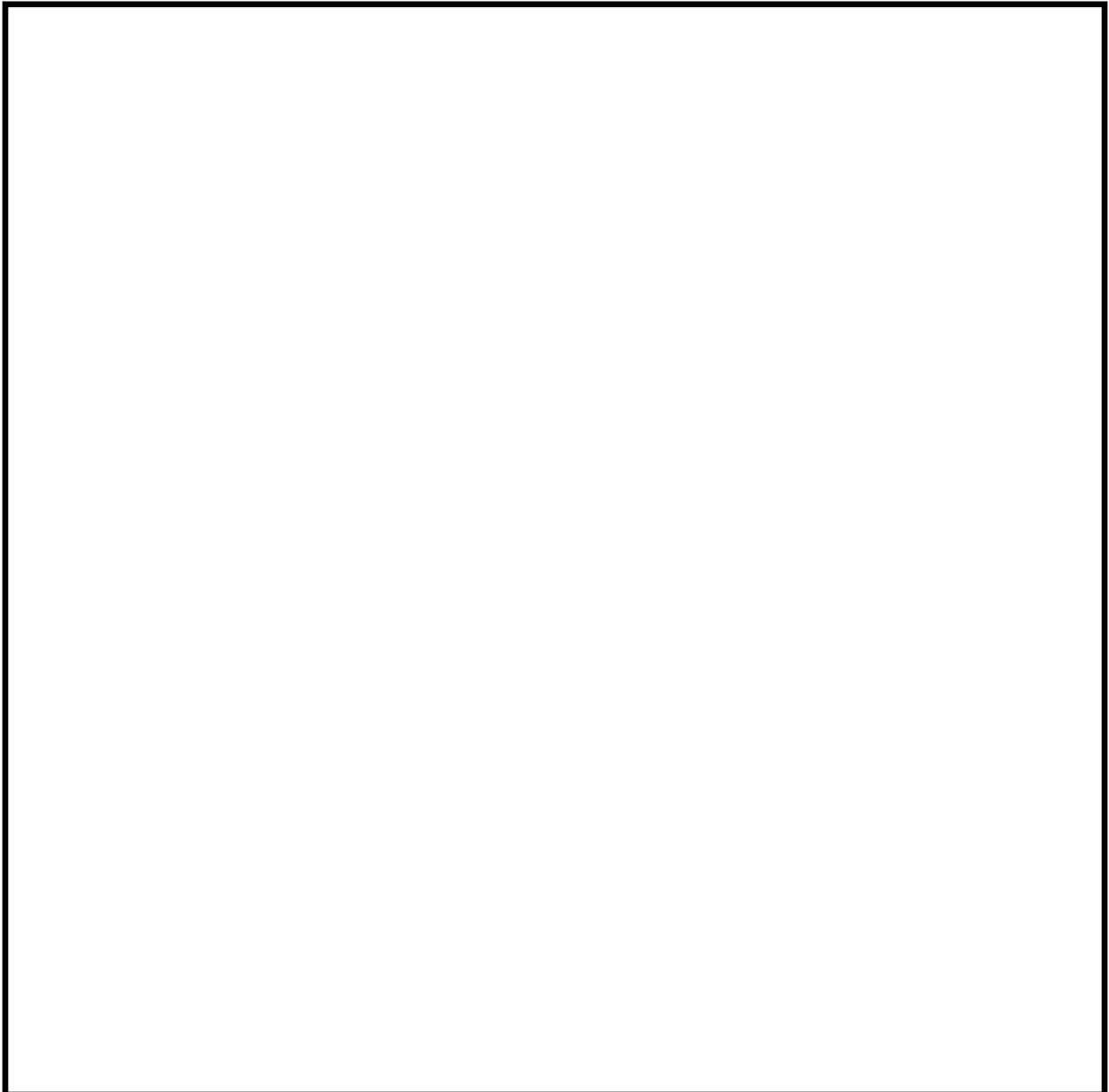
Activity #2

Salmon Stream

Salmon need clean rivers to grow. Some of the things they need are: clean, cold water, shade, lots of places to hide, rocks to keep eggs safe, plenty of plants to cover the sides.

In the space below, draw the best salmon stream you can. Add other animals that share the water. Can people help? Draw some people helping the salmon to stay healthy.

Materials: Pencil/crayons/markers/colored pencils



Optional Activity

We Need Water Challenge

There are so many ways to save, protect, and care for our water. At the end of every daily lesson, we will be giving a challenge to help you show off what you've learned!

Materials Pencil, colors, computer/phone/tablet, internet

You are part of nature! Did you know that humans are animals, just like salmon, bears, and all the rest?

Yesterday you found an animal you thought was interesting. Today, your challenge is to think about the connections you share with it. Do you and this animal both eat the same kind of food? Do you both drink water? Do you both live in the same neighborhood? Write down any connections you can think of.

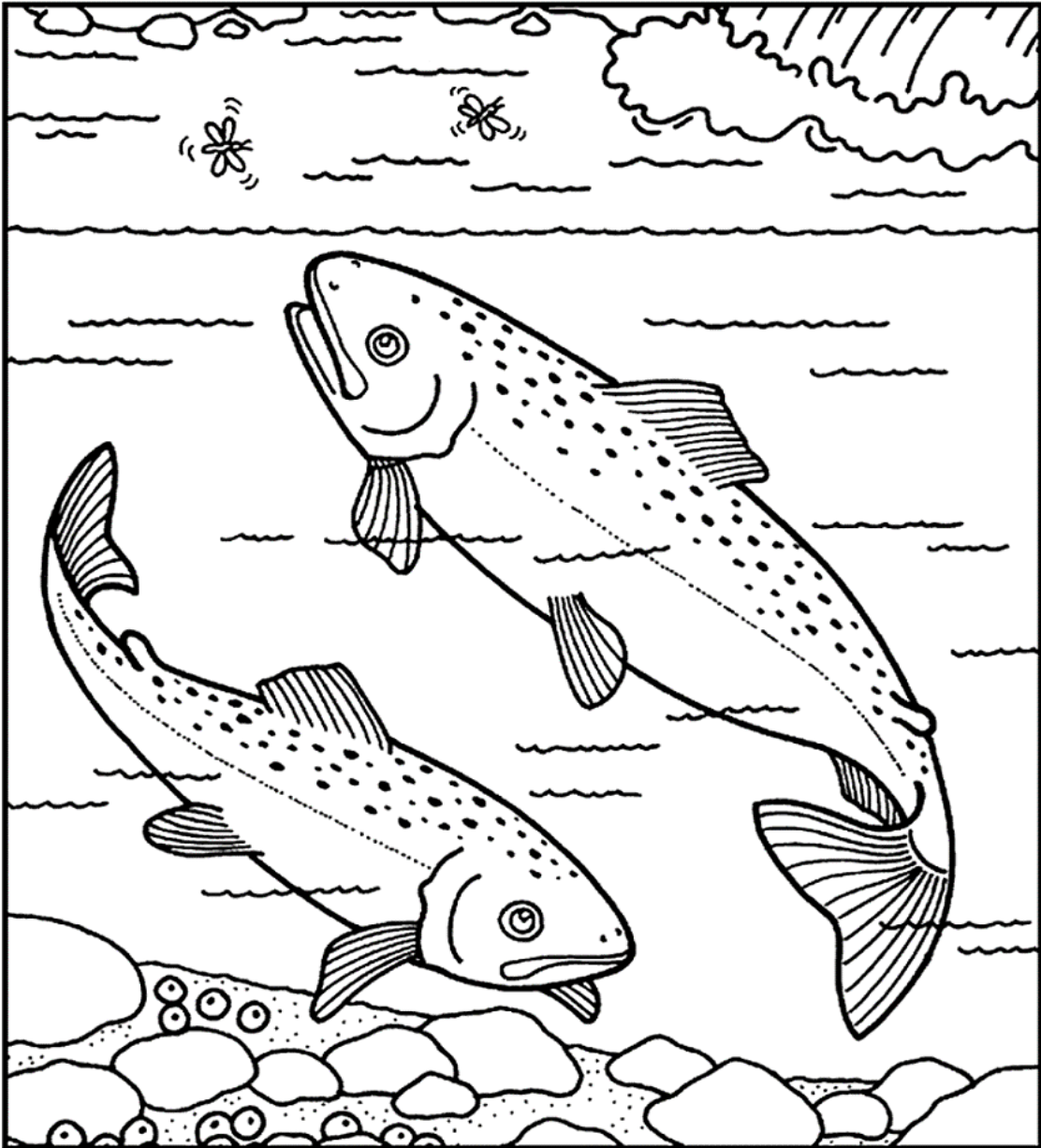
To share your work, post your challenge to Facebook and/or Instagram (with an adult) so other people in your community can learn, too! Don't forget to use the hashtag #WeNeedWater and tag @weneedh20 and @naturevisionorg in your post so we can see your work!

Optional Activity

Salmon Coloring Sheet

These salmon are old and ready to go home. Can you help them turn bright colors so they can spawn? Are there other animals with them? Draw some others that share the stream!

Materials: Crayons/markers/colored pencils



Downloaded from azcoloring.com

DAY 5 / DAY 6

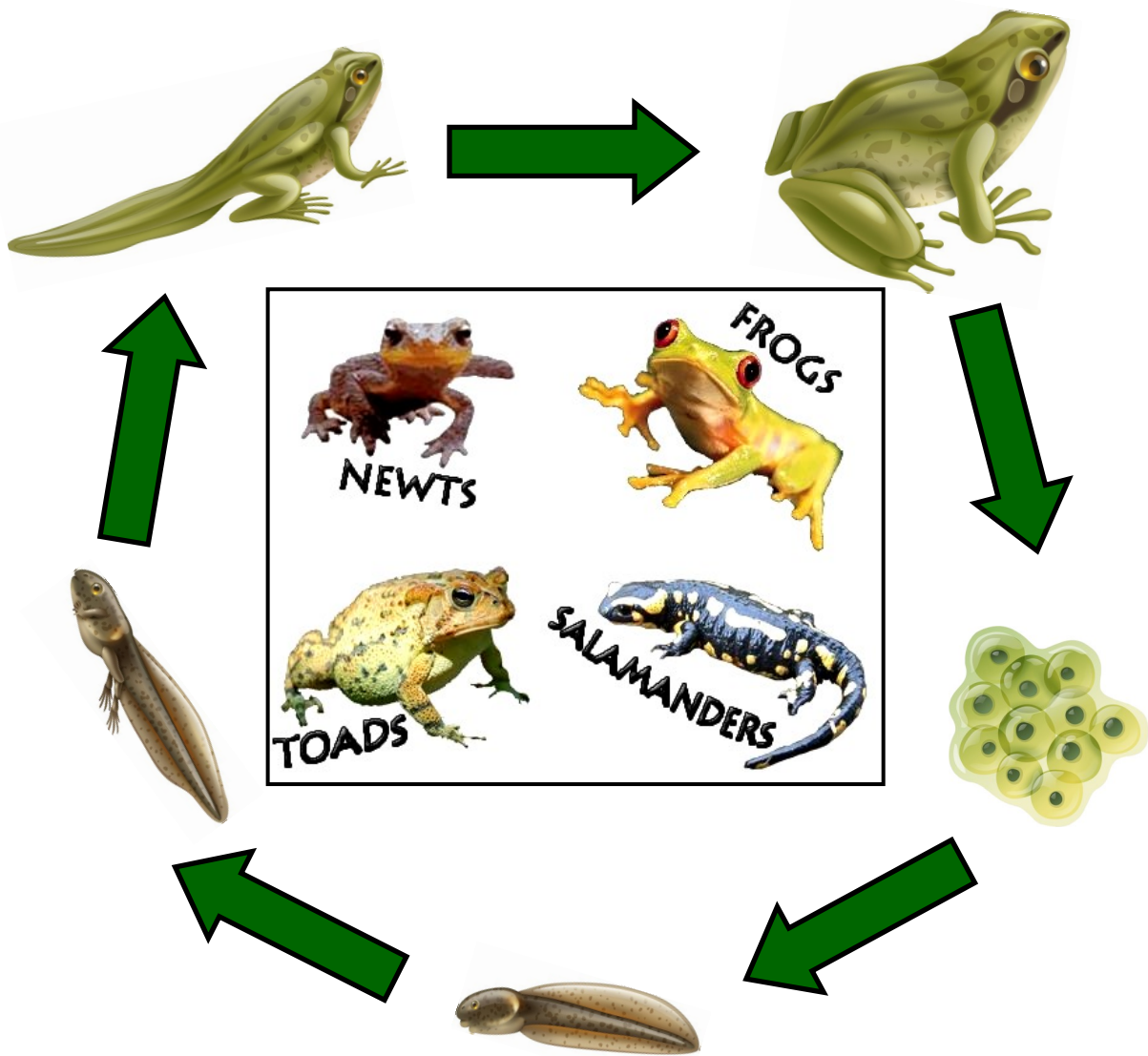
Amphibians and Local Water Connection

Yesterday, we learned about salmon, an important animal that needs lots of clean water to survive. Today we are going to learn about other animals that need lots of clean water: **amphibians!**

Can you name one kind of amphibian? They live in a place that looks like this picture. Take a moment to think and write a guess above the picture.



Amphibians are the kind of animal that frogs, toads, salamanders, newts, and caecilians (not found in Washington) are. Just like the salmon we learned about, these animals all are born in water, but as they grow their bodies change so they can live on land when they are all grown up. These changes that amphibians go through are called **metamorphosis**, which give them different things that help them survive, called **adaptations**.



Vocabulary

Adaptation: A change to an animal species that allows them to more easily survive

Amphibian: A cold-blooded vertebrate with a water-based, gill-breathing larval stage and a land-based, lung breathing adult stage (e.g. frogs, toads, newts, salamanders, caecilians)

Metamorphosis: A physical change in body structure after birth (i.e. changing from a tadpole to a frog)

Activity #1

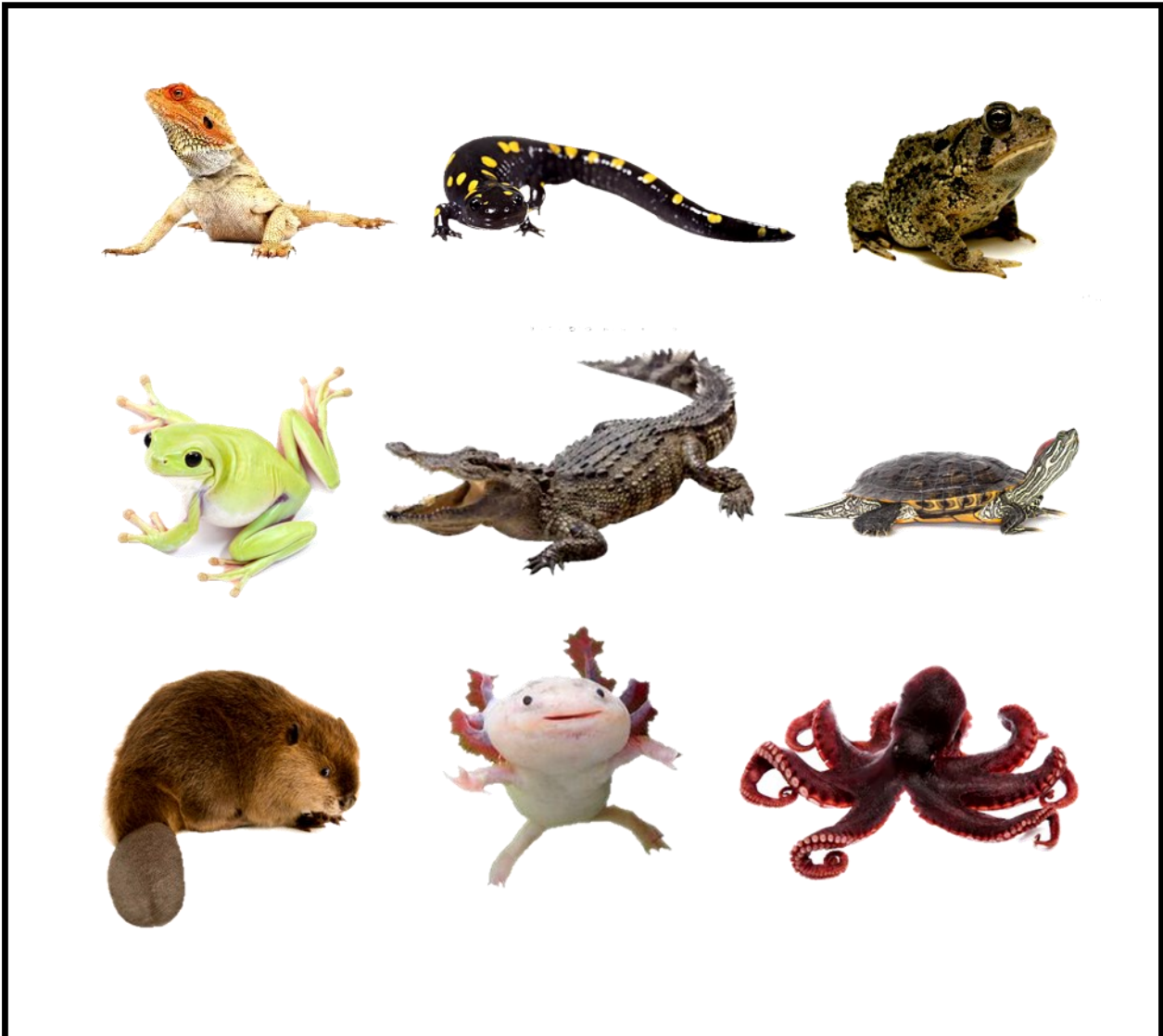
Find the Amphibian

There are some other things that most amphibians have in common:

- They have soft toes (no claws!)
- They have smooth, wet skin (no scales!)
- They are cold-blooded, meaning their body doesn't make its own heat
- They breathe with gills (like fish!) when they are young

Now that we know what an amphibian is, can you find any below? Circle any amphibians you find and put an X over the animals that are not amphibians.

Materials: Pencil



Activity #2

Build an Amphibian

Amphibians come in all shapes and sizes. Now that you know what amphibians are, make up your own below! Look at the last page if you need help. Make sure to draw your animal's habitat around it!

(Remember, habitats are the places amphibians call home, and amphibians need to have lots of clean water!)

Materials: Pencil/crayons/markers/colored pencils

Optional Activity

We Need Water Challenge

There are so many ways to save, protect, and care for our water. At the end of every daily lesson, we will be giving a challenge to help you show off what you've learned.

Materials: Pencil, colors, computer/phone/tablet, internet

For today's #WeNeedWater challenge, Make a sign for your yard or a street-facing window that will teach or remind neighbors to water their lawns either in the early morning or in the evening to save water. You can also make a sign with another smart water saving idea that you like! Saving water is the best thing we can do to make sure there is enough water for animals, plants, and humans.

To share your work, post your challenge to Facebook and/or Instagram (with an adult) so other people in your community can learn, too! Don't forget to use the hashtag #WeNeedWater and tag @weneedh20 and @naturevisionorg in your post so we can see your work!

Optional Activity:

Hop and Leap Game

You have seen how special the legs of a frog or toad are; strong legs are one of the many adaptations that helps these animals survive. How do human legs compare to those of a frog or toad? Go find out!

With adult permission, find a safe and open area to test out how good your own legs are at jumping.

Materials: None

Hop like a toad

Bend your knees and do 10 tiny, short hops like a toad.

Would you be able to move very fast like that?



Leap like a frog

Squat down and do 5 giant leaps straight into the air!

How high were you able to get?



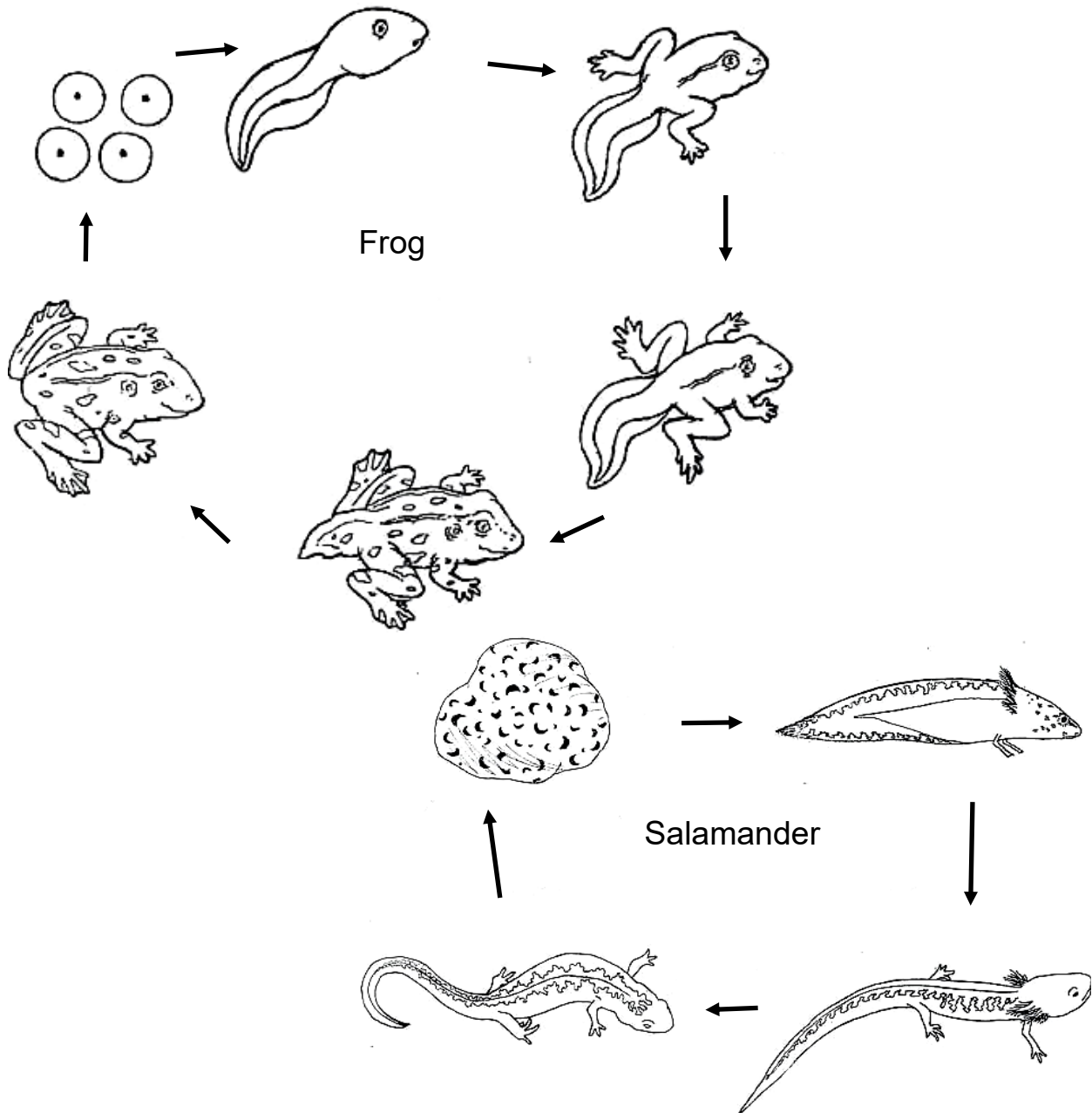
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Optional Activity

Life Cycle Matching

Color then cut out the pictures below. Afterwards, let's see if you can remember the life cycle of both the frog and the salamander. Shuffle them up and see if you can remember the order they go in!

Materials: Scissors, crayons/markers/colored pencils



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DAY 7 / DAY 8

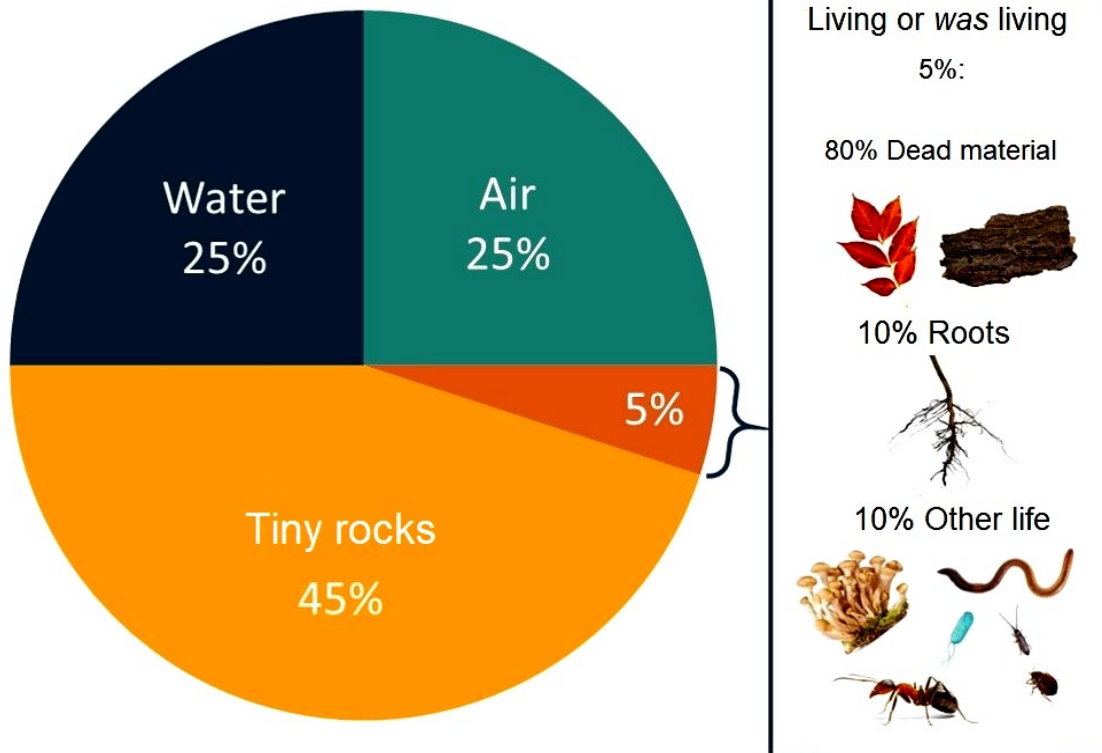
Healthy Soil and Decomposers

When our **soil** is healthy and growing a lot of plants, it helps to clean the water. Without plants and soil, there would be nowhere for water to soak in when it rains. All that rain would carry things like dirt, litter, and pollution into the streams and ponds where salmon and amphibians live. So, having healthy soil makes better habitats for salmon and amphibians.



Soil is really cool, and we can find it in a lot of places. You have probably explored soil in a garden or at a park already! Soil is made up of water, air, little pieces of rocks, and living things inside called **decomposers**. These things all help plants to grow. In our activities today, we'll get to explore some soil and meet the creatures who call this their habitat.

What is Healthy Soil?



Vocabulary

Decomposers: Animals that live in the soil

Soil: The upper layer of earth in where plants grow

Activity #1

Soil Observation

With adult permission, find a place outside where you can explore the soil. **An adult must be outside with you.** This might be by a bush near your home or apartment or a tree in the park. If you stay inside, you can also use soil found in a flower pot on your windowsill. With adult permission, you can use kitchen utensils like spoons or chopsticks to carefully move the soil around. Remember, this is a habitat, so we have to be *really* careful about the plants and animals that live here.

Think about the questions below and answer them after you have explored the soil!

Materials: Trowel, spoon or chopsticks, pencil

How does this soil look, smell, and feel? Is it dry and sandy? Or wet and muddy?

Are there any plants growing in this soil?

Where do they get their food?

Where do they get their water?

What makes this a good habitat for them?

What would happen if this soil were not here?

Activity #2

Meet a Decomposer

Below are some of the most common creatures you'll find in the soil. Circle the ones you have found or seen before, maybe when you were playing with your soil in the first activity.

Can you tell the adult working with you about where you think the creatures in the soil get their food, how they get the air and water that they need, and how they help plants to grow?

Materials: Pencil



Springtails look like small white specks in the soil. At first you might not even think they are living things!

Red Wiggler Worms are wiggly worms that tunnel through the soil to make room for air and water. Have you seen these kind of worms before?



Potworms are the tiny white worms in the soil. Some people think these are baby Red Wiggler worms, but they are actually a different species called potworms.



Mites are a tiny group of bugs that love to eat rotting things!

Millipedes are long animals that have a lot of little legs. They break down dead leaves and vegetation in the soil.



Can you tell which three different soil-friendly critters are in this photo?



Optional Activity

We Need Water Challenge

There are so many ways to save, protect, and care for our water. At the end of every daily lesson, we will be giving a challenge to help you show off what you've learned.

Materials: Pencil, colors, computer/phone/tablet, internet

All plants, animals, and humans need clean water! Sometimes there are things in nature that do not belong. We call that pollution. When pollution mixes with rain, it goes down stormdrains. From the stormdrains, it will go into the closest river, stream, lake, or Puget Sound. That means pollution goes where animals and plants live! With an adult, go for a walk to see if there are any stormdrains in your neighborhood! Please be careful when walking through your neighborhood! Make sure you and an adult are looking for the stormdrains together. Always walk on the sidewalk or off the road to avoid cars and other forms of traffic. Be safe, responsible, and respectful when outdoors!



If you can't go looking for a stormdrain, that's okay! Here's an example of a real stormdrain that's been painted by an artist!

You don't have to go too far! With an adult, you can also go to the edge of the front of your house or apartment. Count how many stormdrains you can see from the edge without walking away from your home. Do you see any in the parking lot? At the end of your driveway? Next to a sidewalk? How many did you find?

Make Your Own Stormdrain Art!

Draw or write an animal that needs clean water on the space next to the stormdrain below.



To share your work, post your challenge to Facebook and/or Instagram (with an adult) so other people in your community can learn, too! Don't forget to use the hashtag #WeNeedWater and tag @weneedh20 and @naturevisionorg in your post so we can see your work!

Optional Activity

Video

Please ask for an adult's permission to watch this video.

“What’s the Dirt on Dirt?”: This short video from “SciShow Kids” shows how soil helps keep our habitats healthy. It can be found at <https://www.youtube.com/watch?v=if29mjcd5bc>

You can also find this video by doing a YouTube search for “SciShow Kids dirt”.

Materials: Computer/phone/tablet, internet connection

Optional Activity

Decomposer Storytelling

Decomposers do an amazing job, but people do not often think about how important they are. Can you think of a story where worms or other decomposers are the main characters? Who would they meet and what would they do with their time? How would they help the plants and animals around them?

Using the space below, write down your story about the decomposer and how they will help all of the animals and plants in their habitat.

Materials: Pencil

DAY 9 / DAY 10

Stewardship

Stewardship is a big word that means taking care of something. This week we learned a lot about nature. We want to take care of it by taking care of things like water, our habitat, and other things that other living things need to survive. Another big word is **conservation**, which means taking care of nature and doing our best to make sure that we do positive things for the world.

This is a picture of students taking care of nature by planting more native plants, like trees, that will help to make good, healthy soil for decomposers to live in and for water to soak in, which will help make better habitats for us and other animals.



Vocabulary

Conservation: Protecting the natural world, especially by making smart choices about our natural resource use

Stewardship: Taking care of something; being a protector

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Activity #1

Stewardship Matching Memory Game

Below, we have a lot of pictures that show us ways you can help take care of our water and keep it clean. On the side with a happy water drop is a way that we can save water and keep it clean. On the side with the sad water drop, we see ways that water gets dirty or is wasted.

Materials: Scissors

With an adult, cut out each picture. Then cut them in half so the happy and sad water drop are separated. You can then practice matching them up!

For an added challenge, arrange them face down in 4 x 4 grid and play "memory" by turning over one card, and then trying to find the matching piece. If you guess right, you keep the pair, if not, turn them back over and try again. Can you match all the ways to save water? What do you see that you already do at home or could start doing?



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Activity #2

Stewardship Ideas Poster

Now that we have seen some ways to save water, let's think of other things you can do to care for the environment!

Make your own poster to put in your house to remind you and your family about ways to help keep water clean and make sure there is enough for animals like salmon and amphibians. Remember how important native plants and healthy soil are, too! When you're done, feel free to cut out the poster you drew on this page. You can also make a larger poster on another piece of paper if you'd like!

Materials: Pencil/crayons/markers/colored pencils, scissors (optional)

Optional Activity

We Need Water Challenge

There are so many ways to save, protect, and care for our water. At the end of every daily lesson, we will be giving a challenge to help you show off what you've learned.

Materials: Pencil, colors, computer/phone/tablet, internet

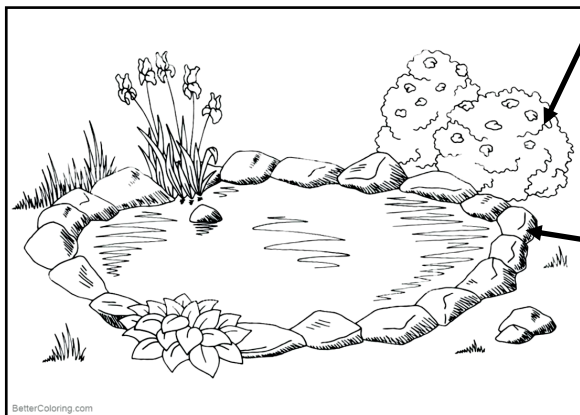
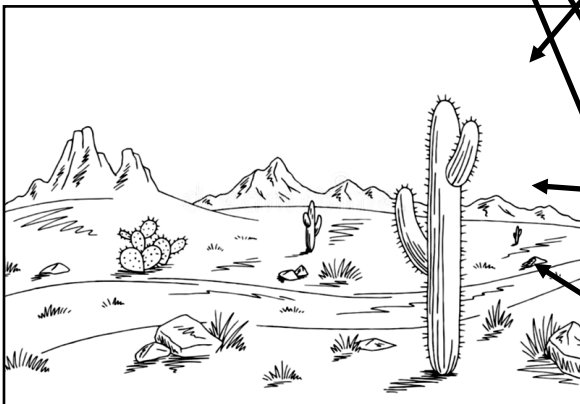
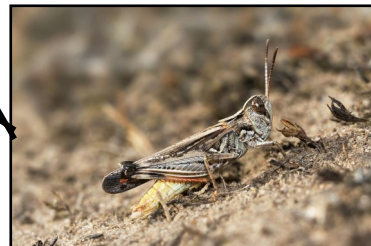
Using what you've learned this week, it's time to make your own #WeNeedWater challenge! Think about all of the things we learned about habitats, native plants, soil, decomposers, water, salmon, amphibians, and more. What new thing can you do to share what you now know or new ways you've learned to save water? If you'd like, feel free to add whatever you think of to your poster activity (Activity #2)!

To share your work, post your challenge to Facebook and/or Instagram (with an adult) so other people in your community can learn, too! Don't forget to use the hashtag #WeNeedWater and tag @weneedh20 and @naturevisionorg in your post so we can see your work!

ANSWER KEY

Day 1 / Day 2 Optional Activity

Habitat Match-Up



BetterColoring.com

Day 5 / Day 6 Activity #1

Find the Amphibian

