

This is **#GENERATIONRESTORATION**

"Ecosystem restoration is one of the most important ways of delivering nature-based solutions for food insecurity, climate change mitigation and adaptation, and biodiversity loss.. the beauty of ecosystem restoration is that it can happen at any scale – and everyone has a role to play." (See UNEP.org)

Human Impact & Sustainability

We all benefit from mountains and resources they provide. How can we use our mountains in sustainable ways so that that we share these resources with future generations?

Nature-Based Solutions

We can take action to assist in the restoration of ecosystems around us. The point of a nature-based solution is not to add new elements to an ecosystem, but to help replenish what has been damaged or lost with what is already native to the area.

Land Acknowledgement

The Sea to Sky Gondola is proudly and centrally located within the unceded territory of the Sk̓wx̓wú7mesh Úxwumixw, (Squamish Nation.) This land holds a diverse collection of plants, animals and other living things, that all contribute to healthy a mountain ecosystem.

Terminology:

Ecosystem:

All of the living and non-living things that interact within a given area.

Ecological Degradation

The decline of an ecosystem due to harmful changes, destruction, or lack of resources.

Climate Change

Recorded changes in the weather patterns of a specific area over a long period of time. For example, there might be more rainfall, or significantly warmer temperatures in an area compared to previous years.

Biodiversity

All of the living things that can be found in an ecosystem. These living things all interact in ways that help the ecosystem maintain a healthy balance, and they may be visible, (i.e., plants, fungi, animals), or invisible, (i.e., microorganisms, bacteria,) to the human eye.

Native Species

An organism, (i.e., a plant, animal, fungi,) that naturally occurs or grows in an environment. For example, Salal is a native species that grows in the Pacific Northwest.



Helping Alfie

#GENERATIONRESTORATION

A Letter from Alfie

Hi my name is Alfie, I am a sooty grouse.
I live up in the mountains that you see outside your house.
I blend in with the forest, with speckles brown and black.
I live in wooded areas, where I go to find my snacks.
I need the trees and berries, the buds and insects too.
If they went away, I don't know what I'd do.
Please protect my forests, please respect the land.
I'll be forever thankful, if you give me a hand.

Your friend,



Alfie

How do you help
the earth?



Activity: Take Action Today

Materials: Hiking shoes, reusable containers or bags for collecting treasures.

1. Hike out to the newly planted salal shrubs.
2. Gather needles and wood chips from the surrounding area (only gather materials from the ground and not off of living plants).
3. Cover the ground surrounding the salal plants with a thick (up to 10cm) layer of mulch. This will help keep the soil moist, prevent weeds, and support the plant's overall growth.
4. Leave the salal with a small amount of water and a positive thought!

Colour the Salal



Grades K-2

Final Activity:

Play "Natural Hazards" with the S2S Gondola Education Staff

Take Action

#GENERATIONRESTORATION

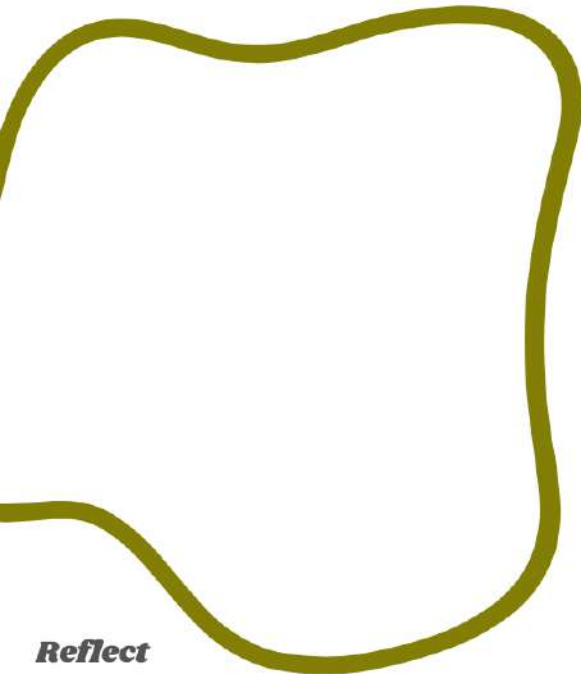
Objective: Salal is a dense evergreen shrub, which can grow to become quite large. Our intention is to plant salal as a nature-based solution; to act a natural deterrent, keeping people from hiking and stepping on the more delicate plants and fungi in the forest.

Activity

Materials: salal plant, acidic soil, watering can, and gardening gloves (optional.)

- 1. Dig a hole in the soil, deep enough to fit the roots and a few centimetres wider than the roots themselves. Try to plant your salal approximately 1 to 1.5 metres away from the next shrub.
- 2. Place the salal plant in the hole and cover it with soil.
- 3. Give the plant a small amount of water and a good thought to start it off on its' new journey.

Draw + Label Salal Below



Reflect

What is one lesson or activity that stood out to you today? Why was it meaningful to you?

Why Salal?

Salal (*Gaultheria Shallon*) is native to the Pacific Northwest. It is able to endure periods of drought, rainfall, shade and direct sunlight. It also provides various animals, including hummingbirds, bears, chipmunks, coyotes and grouse with food. In the ever-changing weather of a mountain environment, plants that can adapt to these changes are crucial for the ecosystems in which they grow.

Importance of Salal to Skwxwú7mesh People

T'áka7áy (salal), is and has been used for a variety of purposes by the Skwxwú7mesh people. Some examples include using the berries in dried berry cakes, fruit leather, or jams, and the leaves for herbal tea, made to sooth an upset stomach (Joseph 116-177).

Joseph, Leigh. *Held By The Land: A Guide to Indigenous Plants for Wellness*. Wellfleet Press, 2023.

Case Study: Nature-Based Solutions

It's summertime and that sun is hot! The tarmac and play equipment is too hot for children to play on for long periods of time, and wildlife cannot handle the dry soil and lack of shade. **What could you do to help cool down your play area at school?** Explain below, and feel free to draw your ideas on the back of this sheet.

Grades 3-6

Take Action

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Next Step: Moving Forward

Consider the ecosystems that exist around your home or school. This might be a forest, a pond, or even a lawn or garden. Come up with at least one way that humans do damage to this type of ecosystem. Then, come up with one nature-based solution to help restore the ecosystem. Share your ideas with the group!

Ecosystem

Problem

Nature-Based Solution



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Intermediate Grades

Game: Invasive species

Materials: Webbing circles or hula hoops.

Instructions:

Students (all but one) will begin as animals. You can mention that they are native to the Pacific Northwest and living in the forest surrounding the Sea to Sky Gondola. Every hula hoop or webbing circle will represent a healthy ecosystem that these animals may inhabit. Scatter 6-10 around the play area.

One student will take on the role of an "invasive species." Give examples of how Bsal fungus, prickly pear cactus, and other invasive species impact biodiversity.

When the director calls out "humungous-fungus," "prickly pear," or "invasive ivy," the animals will run around within the play boundary, trying to avoid getting tagged by the invasive species. The animals must continue running until the director calls out "safety." At this point, the animals can seek safety in an ecosystem circle. They must get to the circle (with two feet in) before getting tagged.

If the animal is tagged, they too will become an invasive species. The last animal remaining would be deemed the "winner" of the round.

Game options:

- Consider timing the rounds and keeping them shorter (5-10 minutes). Within the time frame, if there are more invasive species, they win, but if there are more animals at the end of the round, the animals win.
- Consider smaller boundaries for younger children
- Make the game more challenging by taking away ecosystem circles as time goes on.
- Consider ways to make the game inclusive for all children present that day