

VANCOUVER BIENNALE EDUCATION

**BIG IDEAS**

# WE ARE OCEAN VANCOUVER

ACTIVITY GUIDE

**VANCOUVER BIENNALE**  
**VANCOUVER BIENNALE**

ARTPORT  
MAKING WAVES



United Nations Decade  
of Ocean Science  
for Sustainable Development

# TABLE OF CONTENTS

	INTRODUCTION .....	1
	INDIGENOUS PRINCIPLES OF LEARNING .....	1
	RECOMMENDED APPLICATIONS .....	3
	VIDEO 1: THE LOST LAGOON .....	4
	VIDEO 2: WHAT WE DON'T SEE .....	7
	VIDEO 3: ARE WE ROBOTS? .....	10
	VIDEO 4: DECOLONIZATION .....	13



## INTRODUCTION

WE ARE OCEAN VANCOUVER has been commissioned by the Vancouver Biennale and is part of the art-science-education WE ARE OCEAN Global Program of ARTPORT\_making waves. Curated by Anne-Marie Melster, the program is an artistic contribution to the Preparatory Phase of the UN Decade of Ocean Science for Sustainable Development (2021-2030) through IOC-UNESCO.

Led by Vancouver-based artists and educators **T'uy't'ananat Cease Wyss** and **Olivier Salvas**, the Vancouver Biennale program is unique in its focus on Indigenous knowledge of the ecosystems that affect Squamish, Tsleil-Waututh and Musqueam First Nations land. Students learn about Indigenous plant and marine life, the impacts of colonization, and ideas for decolonization activities that support ocean health.

WE ARE OCEAN VANCOUVER consists of four 30-minute videos and an optional activity guide with a multitude of learning activities for children at various grade levels drawing upon STEAM (Science, Technology, Engineering, Arts, Mathematics)-based learning.

The entire program is free, fully accessible online, and self-paced for teachers, parents and children to do as much as they want, whenever they want.

Note that the examples contained in the videos and activity guide are Vancouver based; however, the key concepts and learnings are widely applicable to any location.



## INDIGENOUS PRINCIPLES OF LEARNING

WE ARE OCEAN VANCOUVER is an educational journey that respects the First Peoples Principles of Learning and the core competencies of the curriculum of British Columbia.

**C - COMMUNICATION**

**T - THINKING**

**PS - PERSONAL AND SOCIAL**

Learning ultimately supports the well being of the self, the family, the community, the land, the spirits, and the ancestors.

- C** connect and engage with others; collaborate to plan, carry out and review activities
- T** generate ideas; question and investigate relationships and cultural contexts
- PS** contributing to community and caring for environment; personal values and choice; well-being

Learning is holistic, reflexive, reflective, experiential, and relational-focused on connectedness, on reciprocal relationships, and a sense of place.

- T** question and investigate
- C** connect and engage with others: recount and reflect on experiences: collaborate to plan, carry out and review activities
- PS** relationships and cultural contexts: valuing diversity

Learning involves recognizing the consequences of one's actions.

- PS** self regulation; self-determination; personal values and choices

Learning involves generational roles and responsibilities.

- PS** relationships and cultural contexts; building relationships
- C** connect and engage with others

Learning recognizes the role of Indigenous knowledge.

- T** generating ideas; question and investigate; analyze and critique
- PS** relationships and cultural contexts; valuing diversity

Learning is embedded in memory, history, and story.

- C** acquire, interpret, and present information; explain and reflect on experiences
- T** novelty and value; question and investigate; analyze and critique
- PS** personal values and choice; relationship and cultural contexts; valuing diversity

Learning involves patience and time.

- C** collaborate to plan, carry out, and review constructions and activities
- T** develop and design; generating ideas
- PS** personal strengths and abilities; self-determination

Learning requires exploration of one's identity.

- T** question and investigate
- PS** relationships and cultural context; well-being; building relationships; self-determination

Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

- C** acquire, interpret and present information
- T** question and investigate; analyze and critique; novelty and value
- PS** personal values and choice; relationships and cultural contexts



## RECOMMENDED APPLICATIONS

Here is a list of recommended apps you may consider downloading to make the most out of WE ARE OCEAN VANCOUVER projects:

### **DRAWING PAD**

Drawing Pad was conceived to create digital art. It contains different sets of markers, pencils, paint brushes, stencils, coloured pencils and stickers with the added option to upload your own images or pictures. Drawing Pad allows students to reach visual-spatial learning objectives by creating artistic activities that can be achieved in a restrained time frame. Drawing Pad can be integrated in oral comprehension activities, reading comprehension strategies, creative writing, and math.

### **BOOK CREATOR**

Book Creator allows you to type, draw, and add images, sounds, and videos all within the same application. This multi-media platform can appeal to different kinds of learners all within one application. This app can substitute or even redefine students' projects in WE ARE OCEAN VANCOUVER, elevating them to a higher level of critical thinking.

### **GARAGE BAND**

Garage Band is an application that allows students to record voice and to record music. Students are able to edit their recordings and to add effects of their choice.

### **COMIC LIFE**

Comic Life allows students to create their own comic books using pictures they have taken or images they have drawn.

### **PUPPET PALS**

Students are able to use or to create their own characters and settings to tell a story. Students can also record their own voices to make their characters speak.

### **iMOVIE**

Students are able to create their own movies.

### **SCRATCH JR.**

A platform students can use to make presentations or games through coding.





## VIDEO 1: THE LOST LAGOON

This video explores Lost Lagoon and provides an introduction to the history of Indigenous people here, their perspectives about the water, and their knowledge of the surrounding ecosystems.

### Key Question:

How does the ocean play a crucial part in the ecosystems on the territory colonially known as Stanley Park?

### Objectives

- To practise art observation techniques.
- To understand the history of Indigenous peoples in this area long before colonization.
- To become familiar with the ecosystems of Lost Lagoon.



### ACTIVITY 1 - LIVING THINGS + ECOSYSTEMS

Look at a photo of Vancouver's Lost Lagoon in real life. Compare the photo with the painting *The Lost Lagoon* by Olivier Salvat.

- What are some of the similarities between the painting and the photo?
- What are some of the differences between the painting and the photo?
- What are some of the important details that you see in the real Lost Lagoon that we do not see in the painting? Hint: animals, insects, birds.
- What are the differences between living and non-living things? Provide examples for each.



Photo by Olivier Salvat



Art by Olivier Salvat



## ACTIVITY 2 - AN INDIGENOUS LAND

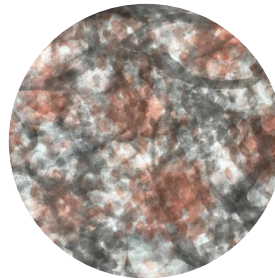
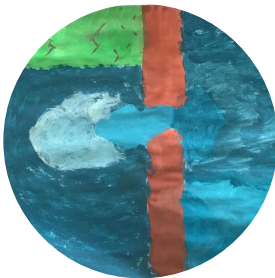
What have you learned about the Indigenous history of Lost Lagoon?

- Write a journal entry reflecting on what you have learned.
- How can you make a connection to the land where you are?
- How can you share that connection with your friends?
  - In the place I am right now, **I see** . . .
  - In the place I am right now, **I hear** . . .
  - In the place I am right now, **I smell** . . .
  - In the place I am right now, **I touch** . . .
  - In the place I am right now, **I taste** . . .
  - In the place I am right now, **I am** . . .



## ACTIVITY 3 - ART PROJECT

Create your own artwork based on Lost Lagoon. Draw inspiration from what you have learned about Indigenous history of the land and its ecosystems.



*Student Artwork Examples*

### WAYS TO SHARE YOUR CREATIVITY

Everyone is encouraged to share photos and videos so that we can create a community of WE ARE OCEAN learners. We would love to see your projects and activities, hear your ideas for positive change, and see what inspires you most about the ocean and environment around you. There are several easy ways to share:

**FREE WE ARE OCEAN VANCOUVER APP** | [weareocean2.goodbarber.app/](https://weareocean2.goodbarber.app/)

**FACEBOOK** | [facebook.com/VancouverBiennale](https://facebook.com/VancouverBiennale)

**TWITTER** | [twitter.com/Van\\_Biennale](https://twitter.com/Van_Biennale)

**INSTAGRAM** | [instagram.com/van\\_biennale/](https://instagram.com/van_biennale/)

**YOUTUBE** | [youtube.com/thevancouverbiennale](https://youtube.com/thevancouverbiennale)



Tag your photos with **#VanBiennale!**

## MORE LEARNING RESOURCES

**Follow the links below to learn more about Lost Lagoon in Stanley Park:**

City of Vancouver - Lost Lagoon

[vancouver.ca/parks-recreation-culture/stanley-park-lost-lagoon.aspx](http://vancouver.ca/parks-recreation-culture/stanley-park-lost-lagoon.aspx)

The Creature from Lost Lagoon

[stanleyparkecology.ca/2017/08/29/creature-lost-lagoon/](http://stanleyparkecology.ca/2017/08/29/creature-lost-lagoon/) .

Stanley Park's Lost Lagoon beaver 'friend' urged to stop

[cbc.ca/news/canada/british-columbia/stanley-park-s-lost-lagoon-beaver-friend-urged-to-stop-1.2918289](http://cbc.ca/news/canada/british-columbia/stanley-park-s-lost-lagoon-beaver-friend-urged-to-stop-1.2918289)

Stanley Park's Lost Lagoon: Taking a fresh look at an old salt-water flat

[vancouver.sun.com/news/local-news/vancouver-fresh-idea-to-turn-stanley-parks-lost-lagoon-salty-again](http://vancouver.sun.com/news/local-news/vancouver-fresh-idea-to-turn-stanley-parks-lost-lagoon-salty-again)

The History of Lost Lagoon

[miss604.com/2016/01/the-history-of-lost-lagoon.html](http://miss604.com/2016/01/the-history-of-lost-lagoon.html)

7 Things You Didn't Know About Lost Lagoon

[citymash.com/vancouver/2017/01/25/7-things-you-probably-didnt-know-about-lost-lagoon/](http://citymash.com/vancouver/2017/01/25/7-things-you-probably-didnt-know-about-lost-lagoon/)

Salmon & Prospect Point

[pwlpartnership.com/projects/stanley-park-lost-lagoon-salmon-stream-and-prospect-point](http://pwlpartnership.com/projects/stanley-park-lost-lagoon-salmon-stream-and-prospect-point)

Aquatic Birds at Lost Lagoon in Stanley Park, Vancouver

[wanderwisdom.com/travel-destinations/Water-Birds-in-Stanley-Park-Pictures-and-Facts](http://wanderwisdom.com/travel-destinations/Water-Birds-in-Stanley-Park-Pictures-and-Facts)





## VIDEO 2: WHAT WE DON'T SEE

Continuing to explore Lost Lagoon and the shore of the Pacific Ocean, this video looks more closely at the consequences of colonization and human interaction in the area. The exploration ends at Third Beach with an Indigenous story about Siwash Rock.

### Key Question:

How is colonization affecting the ecosystems in the ocean and on the shorelines?

### Objectives:

- To practise art observation techniques.
- To understand the history of Indigenous peoples in this area before colonization.
- To become familiar with the ecosystems of Lost Lagoon.



## ACTIVITY 1 - WORLD MAP DISCUSSION

- Do you know the name of the ocean that is on the border of British Columbia?
- Do you know other oceans?
- How much of our planet's surface is covered with water?
- Are the different oceans separated by land?
- Are the oceans separated at all?
- If the oceans are not separated, why are we referring to them by different names?
- Explore the connection between the oceans through virtual maps and videos.
  - World Map 2020 Geography Maps
  - NASA
  - Google Earth
  - World Map



*Lost Lagoon (Water Gateway) - Photo by Olivier Salvat*



*Siwash Rock - Photo by Olivier Salvat*



## ACTIVITY 2 - HUMAN ACTIVITY AND THE PACIFIC OCEAN

### Part 1: The arrival of humans on the territory of British Columbia

How do you think the first humans arrived on the territory of British Columbia? Some of the first traces of human activity in North America were in British Columbia.

How do you think the ocean is connected to this?

Here are some articles to help your research:

Northwest Power and Conservation Council: First Humans  
[nwcouncil.org/reports/columbia-river-history/firsthumans](http://nwcouncil.org/reports/columbia-river-history/firsthumans) Oldest

Human Footprints in North America Discovered  
[history.com/news/oldest-human-footprints-in-north-america-discovered](http://history.com/news/oldest-human-footprints-in-north-america-discovered)

New Study Refutes Theory of How Humans Populated North America  
[history.com/news/new-study-refutes-theory-of-how-humans-populated-north-america](http://history.com/news/new-study-refutes-theory-of-how-humans-populated-north-america)

First humans arrived in North America a lot earlier than believed  
[sciencedaily.com/releases/2017/01/170116091428.html](http://sciencedaily.com/releases/2017/01/170116091428.html)

### Part 2: Indigenous Perspectives on the arrival of explorers in North America

Reflections: How are Indigenous and scientific perspectives connected? How do they differ?



*Third Beach - Photo by Olivier Salvat*



## ACTIVITY 3

Are there similarities between the Indigenous connection to water and other civilizations' connections to water?

Research the main ancient civilizations including Mesopotamia, Egypt, Rome, Greece, China, and India to learn about their connection to water.

Create a chart to compare and contrast the settlement of BC First People with that of other ancient civilizations.



## ACTIVITY 4 - INDIGENOUS STORIES AND MYTHOLOGY

In the video you hear an Indigenous mythical story. Explore similar stories from the ancient world such as Greek, Roman and Chinese mythologies.

In a journal entry, make up your own story about the creation of the land inspired by local geology.



## ACTIVITY 5 - GEOLOGICAL TIMELINE

Tell the Earth's story by creating a time line made out of ribbons. Use a different coloured ribbon for each era. Work on proportions by making sure the amount of ribbon used represents the approximate length of the era in centimetres.

- Cenozoic Era: 12.7 cm
- Mesozoic Era: 43.18 cm
- Paleozoic Era: 58.42 cm
- Proterozoic Era: 396.24 cm
- Archaean Era: 259.08 cm
- Hadean Era: 139.7cm



## ACTIVITY 6 - ELEMENTS OF AN ECOSYSTEM

What is biodiversity? Create a model or a drawing illustrating several elements that make up the biodiversity within the ecosystem that you live. What is the connection to the ocean?

### MORE LEARNING RESOURCES

Beaty Museum

[beatymuseum.ubc.ca/](http://beatymuseum.ubc.ca/)

Biodiversity BC

[biodiversity.ubc.ca/](http://biodiversity.ubc.ca/)

Visualizing BC Biodiversity

[medium.com/ubcscience/visualizing-vancouvers-biodiversity-127ca0bb9a45](https://medium.com/ubcscience/visualizing-vancouvers-biodiversity-127ca0bb9a45)

Raincoast

[raincoast.org/2011/05/bc-coastal-biodiversity/](http://raincoast.org/2011/05/bc-coastal-biodiversity/)

Raincoast Applied Ecology

[raincoastappliedecology.ca/status-of-biodiversity-in-the-city-of-vancouver/](http://raincoastappliedecology.ca/status-of-biodiversity-in-the-city-of-vancouver/)

Nature Trust

[naturetrust.bc.ca/conserving-land/about-biodiversity](http://naturetrust.bc.ca/conserving-land/about-biodiversity)

Government of Canada

[canada.ca/en/environment-climate-change/services/biokits/explore/vancouver-urban/explore-biodiversity.html](http://canada.ca/en/environment-climate-change/services/biokits/explore/vancouver-urban/explore-biodiversity.html)

Metro Vancouver

[metrovancover.org/services/regional-planning/PlanningPublications/BiodiversityActionProfiles2007.pdf](http://metrovancover.org/services/regional-planning/PlanningPublications/BiodiversityActionProfiles2007.pdf)

Vancouver Aquarium

[vanaqua.org](http://vanaqua.org)

Stanley Park Ecology Society

[stanleyparkecology.ca](http://stanleyparkecology.ca)





## VIDEO 3: ARE WE ROBOTS?

Glaciers are melting due to global warming. This video explores the consequences that the melting is having on bodies of water along the land colonially known as British Columbia, and the direct repercussions on local ecosystems, particularly how Pacific salmon are being threatened by warmer water temperatures.

### Key Question:

With melting glaciers, what are some of the repercussions on local biodiversity such as Pacific salmon?

### Objectives:

- To recognize that the ocean has an impact on the ecosystems in the forest.
- To understand that global warming has an effect on local glaciers.
- To make connections with a reduced streamflow on BC rivers and how this reduction impacts the ecosystems.
- To observe ways to support local ecosystems such as the salmon.



### ACTIVITY 1

Design a prototype of a robot that will look for evidence of climate change impacting glaciers, the ocean, rivers, or lakes.

#### Step 1: Choose a location to explore

Choose a body of water or a glacier.



Artwork by Olivier Salvat - Photography by Rory McLeod

**Step 2: Discover types of robots**

Research the different types of robots to see which one would fit best the environment you would like to explore. Here are some suggestions:

- Articulated robot.
- Crab bot.
- Cylindrical.
- Frogbot.
- Humanoid.
- Rover.
- Snakebot.
- Spiderbot.

**Step 3: Research the environment**

In order to design an appropriate robot, consider the location and type of environment you'd like to explore.

1. The geographic location.
2. The climate.
3. The components of the soil.
4. The local biodiversity and the ecosystems.
5. Is this place an extreme environment?
6. Is there evidence of climate change at this location?
7. What type of data would be beneficial for scientists to study the impacts of climate change in this area?
8. Who are the Indigenous people living in the area? How are they connected to the location? (mythology, culture, food, transportation, etc.)

**Step 4: Design considerations**

- How will your robot communicate with a base? (radio wave, electromagnetic wave, etc.)
- How will the robot travel in this environment?
- What types of materials need to be used to deal with the temperature, soil and other elements?

**Step 5: Build the robot**

Go over the engineering process:

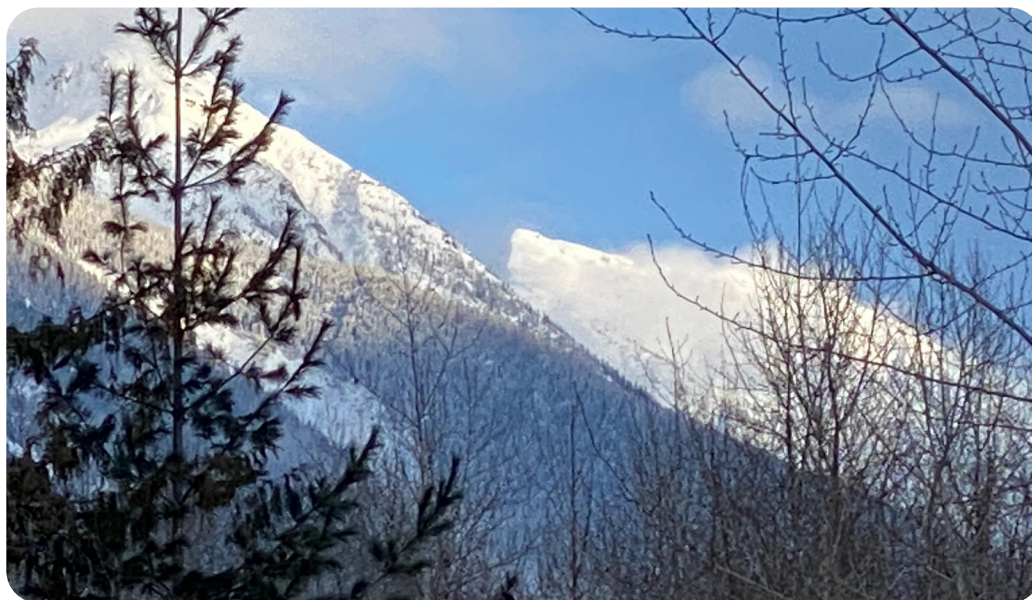
1. Inquire  
Go over the notes from the research. Make connections with Steps 3 and 4.
2. Imagine  
Brainstorm different concepts and choose the best solution.
3. Plan  
Draw the model and gather the necessary materials.
4. Create  
Follow the plan. Build a prototype. Test the solution.
5. Improve  
Go over what works and what does not work. Modify the design if necessary.





## MORE ACTIVITIES

- Study the life cycle of the Pacific salmon.
- Learn about glacial pressure (marshmallow experience, for example). Build a miniature-scale glacier.
- Create a kahoot or a padlet using facts about salmon.
- Research the Coast Salish peoples' connections with salmon.
- Research the use of the cedar tree for local Indigenous people (brentwood box, totem poles, Coast Salish regalia, canoes).
- Watch and react to *The Story of Cedar* by Herb Rice.
- Design a weather station (measuring air pressure, wind speed, temperature, precipitation, etc.).
- Design an aquascope that would observe water life.
- Design a system that could produce fresh water from salt waste.



*Photo by Cease Wyss*



*Photo by Cease Wyss*





## VIDEO 4: *DECOLONIZATION*

This video explores Maplewood Flats, a site where the impacts of colonization on the ecosystems and ocean are clearly evident. Get a deeper meaning of colonization, Indigenous plants and decolonization practices; then learn how you can support ocean health through what you've learned.

### **Key Question:**

How can decolonization of the land support ocean health?

### **Objectives:**

- To understand the meaning of decolonization.
- To understand what an Indigenous plant is.
- To learn the consequences of colonization on a territory.
- To learn what we can do to decolonize a space for a healthier shoreline and less polluted oceans.
- To take on personal and collective initiatives to fight climate change and support ocean health.



*Photo by Olivier Salvas*



## ACTIVITIES

- Create posters to inform your friends and family about ocean health and climate change.
- Organize a shoreline cleanup within your community.
- Create a collective book that informs your community about local Indigenous plants.
- Take decolonization actions by removing invasive species from your environment.
- Plant Indigenous plants in your yard or schoolyard.
- Create an Indigenous garden for your community and label the plants.
- Create a model for a greenhouse.
- Make edible greenhouse-gas models.
- Create a short film about the effect of climate change on the ocean.
- Create paintings of Indigenous plants.
- Create memes on the theme of ocean health.
- Create TikTok videos on the theme of climate change.
- Organize a silent protest in your school.
- Organize a walk for water in your community.
- Take photographs of Indigenous plants (or the ocean) and organize an art event to discuss ocean health and actions.
- Write a blog post or a reflection on our key question: How is fighting climate change our responsibility towards reconciliation with Indigenous people?
- Organize a cleanup of a nearby shore or park.

## WAYS TO SHARE YOUR CREATIVITY

Everyone is encouraged to share photos and videos so that we can create a community of WE ARE OCEAN learners. We would love to see your projects and activities, hear your ideas for positive change, and see what inspires you most about the ocean and environment around you. There are several easy ways to share:

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**FACEBOOK** | [facebook.com/VancouverBiennale](https://facebook.com/VancouverBiennale)

**TWITTER** | [twitter.com/Van\\_Biennale](https://twitter.com/Van_Biennale)

**INSTAGRAM** | [instagram.com/van\\_biennale/](https://instagram.com/van_biennale/)

**YOUTUBE** | [youtube.com/thevancouverbiennale](https://youtube.com/thevancouverbiennale)

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**Is understanding the  
repercussions of climate  
change on the ocean our  
responsibility towards  
reconciliation with local  
Indigenous People?**