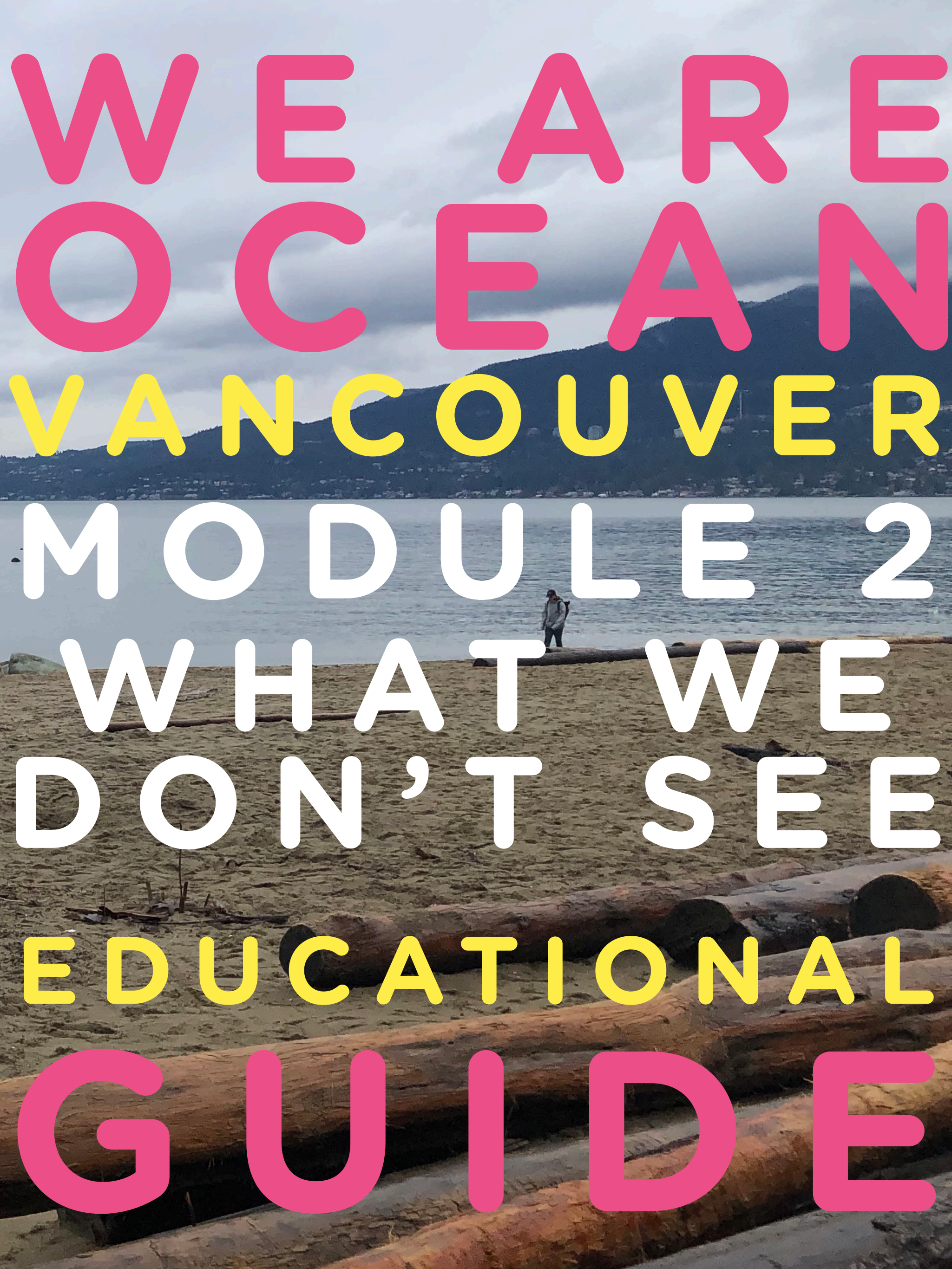

WE ARE OCEAN

VANCOUVER

MODULE 2

WHAT WE DON'T SEE

EDUCATIONAL

GUIDE

WE ARE OCEAN - Vancouver

PRESENTED BY

ARTPORT
MAKING WAVES

VANCOUVER BIENNALE
VANCOUVER BIENNALE

ARTISTS & EDUCATIONAL DIRECTION

CEASE WYSS & OLIVIER SALVAS

EDUCATIONAL ACTIVITIES WRITTEN BY

OLIVIER SALVAS, mED

WE ARE OCEAN - VANCOUVER is an artistic project contributing to the Preparatory Phase of:

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Design by Olivier Salvas

All photography by Olivier Salvas with the exception of page 1 (Rory McLoed) and page 23 (Jason

INTRODUCTION

WE ARE OCEAN – Vancouver is an interactive journey where the students of British-Columbia will reflect on the effects of climate change on the ocean and how this is affecting the ecosystems and the indigenous culture of the land of the Squamish, Tsleil-Waututh & Musqueam First Nations through activities based on STEAM (Science, Technology, Engineering, Arts, Mathematics) principles and on the First People Principles of learning. The end project will result in students inquiring about what would the land look, feel and taste like without the presence of salmon in our ecosystems due to its disappearance because of climate change.

Open Ocean, Victoria BC - Photography by Olivier Salvas (2020)

This project will run through the 2020-2021 school year in two phases. The first phase will run from October 15 2020 to Match 15, 2020 and will contain five interactive courses based on inquiry-based education. The courses will be delivered for students on an application, WE ARE OCEAN, available for free on iOS and Android as well as on the ARTPORT_makingwaves and Vancouver Biennale websites. The application will feature animated videos of artists Cease Wyss and Olivier Salvas addressing the learners , video footage of the related topics, photography, artwork and links to an exclusive podcast where Cease and Oli will be discussing issues related to climate change and education. This podcast will also be available for streaming on Google Play, Spotify, Apple Podcast and more. The multimedia components (Samples of paintings, videos, podcasts, etc) can be streamed in a classroom by the teacher or by a student on their personal device, making these activities accessible for both home learning and in class learning. Each section will have a STEAM-based activity students will be encouraged to complete and to send a digital copy (photo or video) to Cease and Oli. Cease and Oli will then upload the work of the participants on the app and they will discuss some of the work they have received in their podcast as a form of communication with the students.

MODULES

The 4 activities students will work on are the following. Each section can be adaptable according to the age group.

Activity 1: The Lost Lagoon

An observation of the Lost Lagoon: Introduction to the Indigenous Perspectives and the living and non-living things around a body of water.

Activity 2: The local history of the Ocean and its people.

An observation of the Pacific Ocean through a cultural journey of the meaning of salmon for the residents of British-Columbia from pre-colonization until today. Students will explore a living thing living on the BC Coast and will recreate their ecosystems.

Activity 3: Are we robots?

Two Perspectives: Human vs Nature: Effects of Climate change in the ocean Activities created around the impact of human activity on the pollution and of climate change on the ocean and on the Students will be asked to share their eco-friendly initiatives for their homes and schools. Francesca Santoro jumps in to the podcast for a very special talk!

Activity 4: Shore Explorers?

How healthy are the BC Shores and what can we learn from them? Exploration of the different types of shorelines in BC and the connection with the ecosystems. Students will be asked to design different types of shorelines or to study the ecosystems that live on shorelines. This activity will also introduce the impact of the rising ocean on the ecosystems and the livelihood in Vancouver.

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

INDIGENOUS PRINCIPLES OF LEARNING

This academic journey respects the First People Principles of learning and the core competencies of the curriculum of British-Columbia.

C- COMMUNICATION ` T - TINKING ` 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 relationship and cultural contexts;

PT - 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).

CT - 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 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 – relationship and cultural contexts; building relationships

C – connect and engage with others

CONNECTING THE DOTS

Picture: Olivier Salvas

Learning recognizes the role of indigenous knowledge.

T – generating ideas; question and investigate; analyse and critique

PS – relationship 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 – relationship and cultural context; wellbeing; 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; relationship and cultural contexts

RECOMMENDED APPLICATIONS

Here is a list of recommended applications you may consider to download with your class to complete this project:

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 also the possibility to upload your own images or pictures. Drawing Pad allowed students to reach visual-spatial learners by creating artistic activities that can be achieved in a restrained time-frame. Drawing Pad was integrated in oral comprehension activities, reading comprehension strategies, creative writing and Math.

BOOK CREATOR

Book Creator allowed you to type, draw, add images, add sounds, add videos all within the same application. I appreciated that the multi-media platform can appeal to different kinds of learners all within one application. This application not only substituted but redefined a project to a higher level of critical thinking.

GARAGE BAND

Garage Band is an application that allowed students to record voice and to record music. Students were able to edit their recordings and to add effects of their choice. This application played a crucial role in the final part of this inquiry, as the students were asked to create a spoken word track.

COMIC LIFE

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

PUPPET PALS

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

iMOVIE

Students were able to create their own movies, and response videos to practice their oral language skills.

SCRATCH JR.

A platform students used to make presentations or games through coding.

Swim - Art by Olivier Salvas

SUGGESTED CURRICULUM

Gatway of the Lost Lagoon - Photography by Olivier Salvas

Key Question:

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

Objectives

- To practice art observations techniques in order to apply them independently in upcoming modules.
- To understand that Indigenous people had a home before colonisation on the territory of the Lost lagoon.
- To familiarise ourselves with the ecosystems of the Lost Lagoon
- To understand the indigenous practices of indigenous people on the territory now known as the Lost Lagoon.

BIG IDEAS

Kindergarten: Plants and animals have observable features.

Grade 1: Living things have features and behaviours that help them survive in their environment.

Grade 2: Water is essential to all living things, and it cycles through the environment.

Grade 3: Living things are diverse, can be grouped, and interact in their ecosystems.

Grade 4: All living things sense and respond to their environment.

Grade 7: Evolution by natural selection provides an explanation for the diversity and survival of living things.

Grade 8: Life processes are performed at the cellular level.

Grade 10: Energy is conserved, and its transformation can affect living things and the environment.

Grade 11: Complex roles and relationships contribute to diversity of ecosystems.

Grade 12: Human actions affect the quality of water and its ability to sustain life.

STEP 1: WORLD MAPPING

1. Have a whole-class discussion about oceans.

Ask:

- 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 as different entities?

As a class or as groups, explore the connection between the oceans through virtual maps and videos. Suggested applications are:

- World Map 2020 Geography Maps
- NASA
- Google Earth
- World Map

As students are exploring the maps, ask them to identify the areas are land and which are ocean. Ask the students if the world has more land or more ocean?

What is the difference between the land and the ocean? What are the similarities? Do they have commonalities? You can answer this question as a group or have the students create a Venn Diagram that they will share with the class after.

STEP 2: THE WATER CYCLE AND THE OCEAN IN THE PACIFIC NORTH WEST

Mention to students: As explored in the first step of this section, the ocean represents the majority of the surface of the world and it is composed of water (a liquid) where the land is solid.

Ask: Do you know how the ocean replenishes its water?

Challenge your students to represent how the ocean replenishes its waster using elements from a maker space.

You can make this activity more challenging by asking the students to organize their project using elements of nature located in British-Columbia. Have them include major nearby mountains, lakes, and rivers by where you live. Make sure students can explain how these features are linked to the Pacific Ocean.

The end project should include a representation of the water cycle and the connection between the precipitation on land with the ocean.

STEP 3: HUMAN ACTIVITY AND THE PACIFIC OCEAN

Part 1: The arrivals of humans on the territory of British-Columbia

Ask students about their theories about how they think the first humans arrived on the territory of British-Columbia.

Tell students that some of the first traces of human activity in North America was in British-Columbia

Share or print some of the articles below for students to read.

Ask students the following question: How is the ocean connected to the arrival of humans on the territory of British-Columbia?

Have students develop their theories based on science about the settlement of humans on the land using graphs and drawings.

Northwest Power and Conservation Council: First Humans

https://www.nwcouncil.org/reports/columbia-river-history/firsthumans

Oldest Human Footprints in North America Discovered

https://www.history.com/news/oldest-human-footprints-in-north-america-discovered

New Study Refutes Theory of How Humans Populated North America

https://www.history.com/news/new-study-refutes-theory-of-how-humans-populated-north-america

First humans arrived in North America a lot earlier than believed

https://www.sciencedaily.com/releases/2017/01/170116091428.htm


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

Refer to the last part of the We Are Ocean Vancouver.

Cease is telling a story about the origins of the territory.

Reflections:

How are the indigenous perspective and the scientific perspective connected?

How do they differ?

ACTIVITY

Can you make a connection between Cease's story and other civilizations?

Split the class into groups and ask them to research the connection to the water for the main Ancient Civilizations (Mesopotamia, Egypt, Rome, Greece, China, India). You can extend this activity by having students create maps using Minecraft or models using elements of the maker-space.

Have students use charts to compare and contrast the settlement of BC First People with other Ancient civilizations.

COLONIZED OCEAN

STEP 4: INDIGENOUS STORIES & MYTHOLOGY

Watch the fourth segment in the We Are Ocean Vancouver video called story time where Cease will a story related to the creation of the world and the installation of First People on the land we colonially know as British-Columbia

Ask students to explore similar stories from the Ancient World such as Greek, Roman and Chinese mythologies.

In a journal entry, ask students to compare and contrast the different mythologies or ask students to write their own story on the creation of the land inspired by the local geology.

STEP 5: GEOLOGICAL TIMELINE

Have the students tell the Earth's story by creating a timeline made out of ribbons and elements from a storytelling studio (Reggio).

Use a different coloured ribbon for each era.Work on proportions with your students by making sure the amount of ribbon used represents the length of the era in centimetres. The calculations in the end should be about:

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

For each era, have students use figurines or elements from a story studio to add in the major elements of this particular era. Focus on what is happening to the ocean,

Use post-it notes to identify the eras.


TAKING
OVER

CLOSING PROJECT

This project is to be shared with other participants of ***We Are Ocean Vancouver*** *through the application. The application is available via web or the app store of your choice.*

ELEMENTS OF AN ECOSYSTEM

For this final project, students will be asked to research an element of biodiversity in Vancouver and to create a model or a drawing of the element of the biodiversity of their choice within the ecosystem that they live in. When working on their research, students must find the connections between the element of diversity and the Ocean.

The model/drawing can be done using elements of a maker space or at the computer.

When adding the picture/video of the project on the app, have the students write in the description how the element of biodiversity they chose is related to the Ocean.

As a teacher, you can use this activity as part of one you currently are doing in class. We are leaving this activity open enough so you can create criteria of research according to the needs you have in your class and of the Grade level you are teaching.

Here's links to support your students in making their choice for their inquiry:

Beaty Museum

https://beatymuseum.ubc.ca/

Biodiversity BC

https://biodiversity.ubc.ca/

Visualizing BC Biodiversity

https://medium.com/ubcscience/visualizing-vancouvers-biodiversity-127ca0bb9a45

Raincoast

https://www.raincoast.org/2011/05/bc-coastal-biodiversity/

Raincoast Applied Ecology

http://www.raincoastappliedecology.ca/status-of-biodiversity-in-the-city-of-vancouver/

Nature Trust

https://www.naturetrust.bc.ca/conserving-land/about-biodiversity

Government of Canada

https://www.canada.ca/en/environment-climate-change/services/biokits/explore/vancouver-urban/explore-biodiversity.html

MetroVancouver

http://www.metrovancouver.org/services/regional-planning/PlanningPublications/BiodiversityActionProfiles2007.pdf

Vancouver Aquarium

https://www.vanaqua.org/

Stanley Park Ecology Society

https://stanleyparkecology.ca/

When assigning the project to your group of students, you can elaborate of the following topics using the resources you have in class: or choose to cover one of the following topics for your project according to the age-group you are teaching.

- **Living vs/ Non-Living Things**
- **Kingdoms**
- **Methods of classifying**
- **Classifying trees**
- **Ecosystems and adaptations**

<u>Alternative Examples of work according to the age groups</u>

Kindergarten/Grade 1 - Drawing of a bear. A bear is a living thing. A bear drinks water from the ocean.

Grade 2/3: A bear made out of play dough. A bear (a mammal) eats the salmon from the ocean.

Grade 4 - Drawing of a cedar tree and short description about how decor tree strives according to the wether patterns in British-Columbia.

Grade 5 - Model showcasing how everything in the environment is one/connected (e.g., sun, sky, plants and animals).

Grade 6/7 - A model of an eagle in their environment followed by a classification tree of the eagle.

Grade 6/7 - Indigenous Legends around a living or non-living thing connected to the ocean.

Grade 8 - The relationship of micro-organisms in the ecosystem.

Please note that the participants will inquire further on the element of biodiversity they chose in the next module. They will work on connections with this element of biodiversity with climate change and with colonization.


NATURE
TAKING
OVER

WE ARE OCEAN

Vancouver

MODULE 2

What We Don’t See