Virtual Aquaclass Learning Outcomes

This program is available to classes all over the world, and in settings such as our Tropical gallery or behind the scenes in our Wetlab. For this reason, we have a suggested range of topics below, though you are welcome to inquire about a specific topic you have in mind.

Students will be prompted to ask questions that lead to exploration and investigation.

Students in grades K to 3 will have the opportunity to use their senses to interpret observations, share with others the information obtained by observing and communicate their experiences while thinking in a variety of ways.

Students in grades 4 to 7 will apply critical thinking skills to compare the structures and behaviours of animals in different habitats and how organisms adapt to their environments. They will also have the opportunity to discuss how personal choices can impact the environment and discuss why sustainability is important.

Students in grades 8 to 10 will have the opportunity to demonstrate their knowledge of the characteristics of living things and discuss the interactions of biotic and abiotic factors within an ecosystem.

Students in grades 11 and 12 will apply the Kingdom system of classification to study the diversity of organisms and determine and investigate the different environmental issues facing marine wildlife.

Classes will take place in one of the following habitats: The Arctic, the Tropics, The Strait of Georgia and our very own Wetlab classroom.

Program Content

Lesson Topics

These are some of the suggested topics for the Virtual Aquaclass. Programs are customizable upon request.

Humans and the ocean

The ocean supports all life on earth by providing us with life sustaining nutrients, resources, as well as inspiration, careers and exercise. The ocean is integrated into every aspect of daily life, from the air we breathe, to the food we eat, and maybe even the clothes you wear. It is important to understand just what the ocean means to us. Through inquiry-based discussion, props and multimedia resources facilitated by our expert educators, students will stimulate their critical thinking and creativity by exploring how humans interact with the ocean.

Possible subjects

- Scientific illustration
- Coastal development
- Marine geopolitical boundaries
- Climate change
- Noise pollution
- The workings of an Aquarium
- Citizen science
Animals and their environment

As animals ourselves, humans are constantly interacting with living organisms. They have captured our interest and imagination since time immemorial. Even more mysterious are the thousands of diverse creatures who inhabit the ocean, of which less than 5% has been explored. With the guidance of an expert educator students can discover and discuss the amazing animals which inhabit the ocean. Through inquiry-based discussions, props, multimedia resources and possibly even live animals, students will examine how the environment influences an animal’s adaptions, and how animals’ characteristics help them survive.

Possible subjects:

- Tropical salt water habitats and coral reefs
- Tropical fresh water habitats
- BC coast
- Reptiles and amphibians
- Sea birds
- Sea monsters
- Sharks
- Marine mammals
- Invertebrates
- Squid dissection

The natural world

With the excitement and charisma of living organisms, the incredible processes which make the diversity of life possible are sometimes forgotten. These topics will dive into the abiotic factors of the ocean, the life science processes that sustain life in the ocean, and highlight the importance of balance in the natural world. Through inquiry-based discussions, props, multimedia resources, students will discover everything that goes on ‘behind the scenes’ in our world and learn how everything is connected.

Possible subjects:

- Ocean acidification
- Whale falls
- H₂O and the water cycle
- Hypoxic zones
- Ocean geology

Conservation and sustainability

Just as the ocean supports life on earth, it is important that we take care of this vital resource. Thanks to science, research, and dedicated citizens, we know what needs to be done. Often it feels overwhelming or impossible for one person to make a difference. Through inquiry-based discussion with an expert educator, activities, multimedia resources and props, students will explore the threats to conservation and sustainability. Using critical thinking, creativity and collaboration skills, students will discover the power they have to make a change both individually and as a community. It is an opportunity for students to learn that science and research are collaborative, interdisciplinary and creative.

Possible subjects:
• Sustainable seafood
• Sea star Wasting Syndrome
• The Great Tuna
• Shark finning
• Invasive species