

Everything you need
to know about the
#OceanDecade
Challenge



Brought to you by:

Contact us at Learning@Oceannetworks.ca with questions, comments or requests for information about other educational opportunities from Ocean Networks Canada.



To find out more about Girl Guides of Canada, check out <https://www.girlguides.ca>



To see what else the Government of Canada is doing to celebrate and contribute to the UN Ocean Decade, go to <https://www.dfo-mpo.gc.ca/campaign-campagne/un-decade-decennie-nu/index-eng.html>



Fisheries and Oceans
Canada



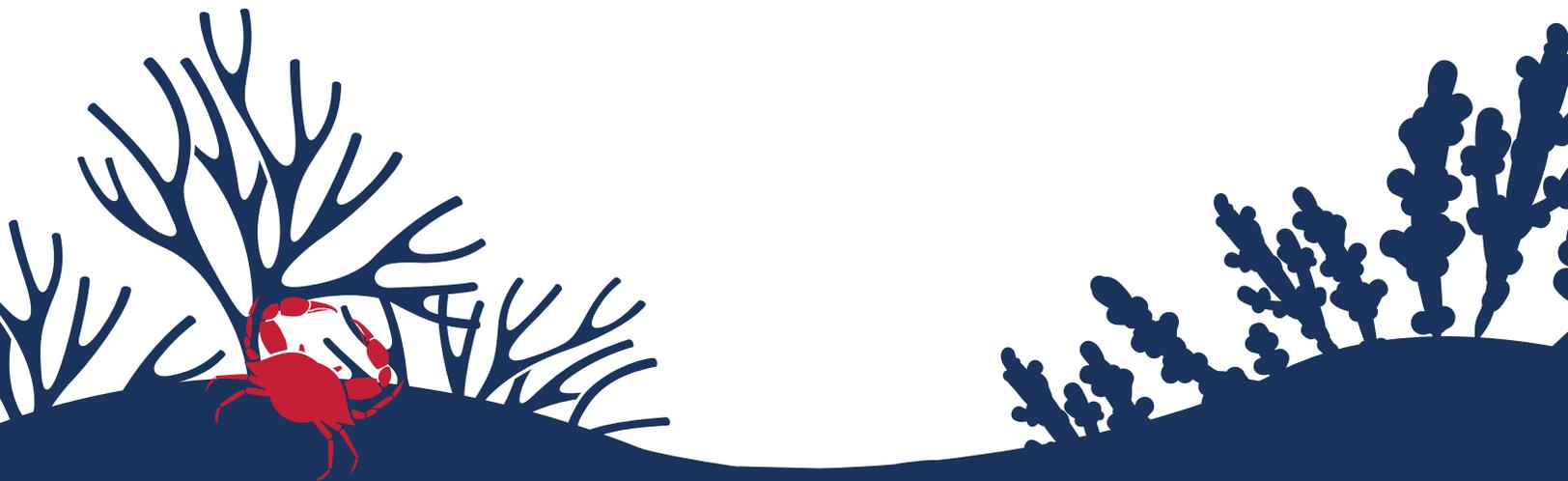
#OceanDecade Challenge

Introduction

Welcome to the #OceanDecade Challenge!

This activity pack was created in partnership with Ocean Networks Canada, Girl Guides of Canada and the Department of Fisheries and Oceans to introduce Canadian youth to the UN Decade of Ocean Sciences for Sustainable Development. The ocean needs our help, and the United Nations (UN) has declared 2021-2030 the decade to make it happen! By focusing on seven key societal outcomes, the UN hopes that people all around the world will use “the science we need for the ocean we want”: a clean, healthy, productive, predicted, safe, accessible and inspiring ocean!

From the food we eat to the air we breathe to the weather we experience, the ocean touches us all, every single day. The **#OceanDecade Challenge** is designed to bring ocean awareness to everyone regardless of where you live. Dive into these activities to explore the ocean sciences through games, experiments and hands-on activities, all while building a deeper understanding of how the ocean affects us all. The activities are centred around the UN Ocean Decade Outcomes and have been grouped into two categories – **Ocean Explorers (E) for youth in Grades 2 and 3 (ages 7-9)** and **Ocean Advocates (A) for youth in Grades 4 to 6 (ages 9-12)**. Each activity stands alone, so how many you complete and the order in which you choose to approach them is up to you, but we suggest trying one activity from each outcome and wrapping up the challenge with the activities from outcome 7.



UN Ocean Decade Outcomes and Activities



1. A clean ocean where sources of pollution are identified and reduced or removed.

There is more than just plastic polluting our ocean – pollution refers to substances, items or energies that are harmful to the natural environment. In these activities, explore how human-made noise can impact the aquatic world.



Sounds of the Sea (E)

How does underwater noise affect sea life? Try these two simple sound experiments to find out!



An Ocean of Obstacles (E/A)

How does underwater noise pollution impact marine life? Navigate an obstacle course by listening to your “pod” for help!



2. A healthy and resilient ocean where marine ecosystems are understood, protected, restored and managed.

Protecting marine environments helps the ocean remain healthy by preserving a place for fish to breed, mature and maintain populations. In these activities, see how protecting marine habitats can help maintain a productive ocean for decades to come. Younger participants can play the simplified version, while older participants are introduced to a more challenging version that incorporates the urgency to protect coral reefs.



Ocean Safe Zones (E) and Ocean Safe Zones (A)

Parks in the ocean? Find out how Marine Protected Areas help our oceans with this fast-paced game of tag!



3. A productive ocean supporting sustainable food supply and ocean economy.

The ocean provides food and income for billions of people around the globe. Keeping the ocean healthy and using sustainable practices will maintain this resource for generations to come. Try this fun new take on an old game while learning about the effects of bycatch on the fishing industry.



Go Fish! (E/A)

Does how we fish matter as much as what we fish? Try this fast-paced game to find out!



4. A predicted ocean where society understands and can respond to changing ocean conditions.

The ocean is the planet’s largest influence on weather and climate. You can think of the ocean as a “weather machine,” driving much of the weather we experience daily. As the climate warms, the weather may begin to shift and change, making it harder to predict.



Predictable Weather? (E) and Predictable Weather? (A)

Predicting the weather is a real challenge, even more so when our climate begins to change! Try this hands-on activity to see how small adjustments make for some big unpredictability.





5. A safe ocean where life and livelihoods are protected from ocean-related hazards.

Climate change is affecting the safety of our oceans, not only for the plants and animals that live there but also for humans. Ocean safety is explored in two different ways in this section – by investigating harmful algal blooms using yeast as a stand-in for phytoplankton, and by trying to safely navigate a boat using a maze as a map.



Biology in a Jar (E) and Biology in a Jar (A)

How do changes in ocean temperature and nutrients affect the organisms that live there? Experiment with yeast to find out!



Navigate Safely! (E/A)

Can you help a ship make its way safely through an ocean maze? Be an observant navigator to find the way!



6. An accessible ocean with open and equitable access to data, information and technology and innovation.

Understanding the ocean is one of the biggest challenges of our time. Although a lot of information is collected every year, this data must be shared among researchers, scientists and even the public so that everyone can work together and make informed decisions about the ocean environment. This activity is a combination puzzle and card game and has two levels of difficulty to add an extra challenge.



Ocean Data (E) and Ocean Data (A)

Can you solve a puzzle when someone else hands you the wrong pieces? Wouldn't it be easier to just cooperate? Try these games to find out!



7. An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development.

Celebrate the ocean as a source of inspiration for many forms of art and be challenged to put your learning and passion into action through community service projects, advocacy and citizen science. Then check out the online platform to share your voice, creations and actions or to see how other youth in Canada are using “the science we need for the ocean we want” to make a difference in the UN Ocean Decade for Sustainable Development!



Let the Ocean Inspire You! (E/A)

Get creative with your choice of ocean-inspired art projects.



Ocean Action (E/A)

Create a plan and take action with these ocean inspired service project ideas! “Anything you can do needs to be done, so pick up the tool of your choice and get started.” — Ben Linder, Engineer



Additional Resources

Looking for an extension for each UN Ocean Decade Outcome? Check out these real-life ocean explorers and advocates and their ocean science careers to see what their typical workday looks like and how their role contributes to the UN Ocean Decade.



Jasveen Brar

Manager at Ocean Bridge



Dr. Jennifer Clark

Chief Scientist at Cascadia Seaweed



Dr. Cherrisse Du Preez

Marine Biologist at Department of Fisheries and Oceans



Jasper Kanés

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Operational Meteorologist at the Atlantic Storm Prediction Centre



Mia Otokiak

Junior Technical Advisor at the Nunavut Impact Review Board



Karleena Squires

Marine Environmental Technologist



Once your group has completed the #OceanDecade Challenge, complete **this form** to receive your free crests!

