**World Sailing**

**SAIL·VOILE CANADA**

Topic 3

# Navigating Wildlife & Biodiversity

## Trainer's guide

**World Sailing Sustainability Education Programme**

Supported by

**WORLD SAILING TRUST**

# Welcome to the World Sailing Sustainability Education Programme!

World Sailing has a long term sustainability strategy called 'Sustainability Agenda 2030'. The aim is to ensure that sustainability is embedded into our sport.
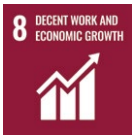
This Education Programme aims to encourage participants to:

- Implement sustainable actions on and off the water
- Increase awareness of sailors' impact on the ocean and marine life
- Increase awareness of climate change and how actions can reduce effects
- Understand sailing's place within the UN Sustainable Development Goals

The United Nations Sustainable Development Goals are 17 global goals set by the United Nations General Assembly in 2015 for the year 2030. These goals include ending poverty, combating climate change, fighting injustice and inequality for a better, more sustainable world. World Sailing is committed to contributing to the United Nations 2030 Agenda for Sustainable Development. World Sailing's Sustainability Agenda 2030 outlines the Sustainable Development Goals that the sport can contribute to, as well as the alignment with the 5 focus areas of the International Olympic Committee's Sustainability Strategy. Sailing is part of a global movement to create change and positive impact, and sailors themselves can be part of this through their actions, on and off the water.

You can access World Sailing's Sustainability Agenda 2030 at the following link: bit.ly/2sjGrKZ

# Sustainable Development Goals



4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

15 LIFE ON LAND

17 PARTNERSHIPS FOR THE GOALS

## World Sailing's Sustainability Agenda 2030 is aligned with the 5 focus areas of the IOC's Sustainability Strategy



Infrastructure and natural sites

Sourcing and resource management

Workforce

Mobility

Climate

# Topics

There are 6 topics in the Sustainability Education Programme.

| Topic 1 | Race with World Sailing! |
|---------|--------------------------|
| Topic 2 | Resources & Climate Change |
| Topic 3 | Navigating Wildlife & Biodiversity |
| Topic 4 | Reducing Waste |
| Topic 5 | Oil & Fuel |
| Topic 6 | Boat Cleaning & Maintenance |

There are links between the topics, but you can use them in any order with your students.

## For each topic, there is a...

**Booklet**   **Trainer's Guide**   +   **Colour-coded Worksheets**

## Age colour coding

**6-8 years**   **8-10 years**   **10-12 years**

This is the Trainer's Guide for **Topic 3 Navigating Wildlife & Biodiversity**. The objectives of this topic are:

- **To increase awareness of cetaceans**
- **To increase awareness of common aquatic plants and algae**
- **To develop an understanding around policies and guidelines when navigating and interacting with wildlife and biodiversity**

# Worksheet answer key

## Vocabulary review answer key

| Key word | Meaning | Trainer prompts |
|---|---|---|
| **Blubber** | The fat of sea mammals. | Under the skin of marine mammals to help keep them warm. |
| **Vessel** | A ship or boat. | A large ship like a cruise ship or cargo boat. |
| **Gyre** | A circular pattern of currents in an ocean basin. | A circular or spiral motion or form; especially: a giant circular oceanic surface current. |
| **Steward** | Someone who supervises or takes care of something. | Taking care of oceans, rivers and lakes and using natural resources carefully. |
| **Juvenile** | A baby/young animal. | Baby whale, porpoise, dolphin, turtle. |
| **Antifouling** | The treatment of a boat's hull with a paint or similar substance designed to prevent organisms growing on it. | We don't want organisms growing on the hull of our boat because we might transport them to other places and they will become invasive species. So, we need to paint the hull with a special substance to prevent this happening. |

# Join the dots! answer key

## 6-8 years

Answer: kelp
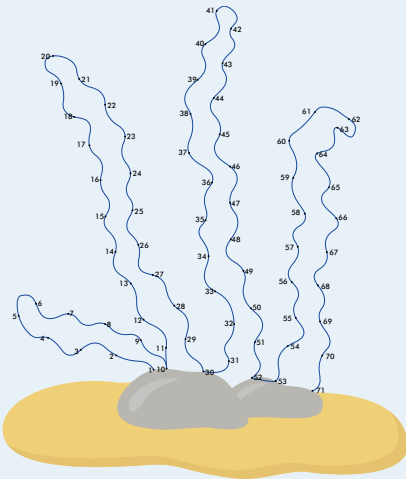


# My favourite cetacean

## Mind map

**Age: 6-8 years**

Your crew might select any 1 of the following cetaceans: whale, dolphin, porpoise.

Before beginning the task, spend some time brainstorming as a whole group, different types of cetaceans. As a crew, they can also share any information that they know about the cetaceans, to build up everyone's knowledge.

### Suggested ideas

Habitats: shallow coastal waters, deep water, tropical, subtropical, arctic, live in family groups ('pods').

Diet: fish, shrimp, larvae, plankton, crabs, krill, squid, killer whales eat sea lions, seals, sharks, seabirds.

Communication: groans, moans, whistles, clicks and even 'singing'.

## Diamante poem

**Age: 8-12 years**

A diamante poem is a poem that makes the shape of a diamond. Your crew are going to select a cetacean that they would like to describe. Before beginning the task, spend some time brainstorming different types of cetaceans and information about them. They can complete the poem individually or in teams of 2. When they have completed their poems, ask if anyone would like to share them with the group.

# Aquatic plant identification

### Step 1
Prior to starting this task, you will need to organise the following materials:

- Pens / pencils
- Coloured pencils / markers (optional)
- Ruler / tape measure

### Step 2
If the weather / tide conditions are suitable, take the crew down to the shore and give them some time to find an aquatic plant or alga that they would like to identify.

### Step 3
If the weather / tide is not suitable for outdoor activity, you will need to prepare some images or take small samples prior to the session.

### Step 4
If you operate out of a marina and there is not a selection of aquatic plants or algae to reference, photocopy (or project) the images at the end of the Trainer's Guide for your crew to select from.

### Step 5
Give the crew time to complete their illustrations and table information. They will need the prepared materials at this stage.
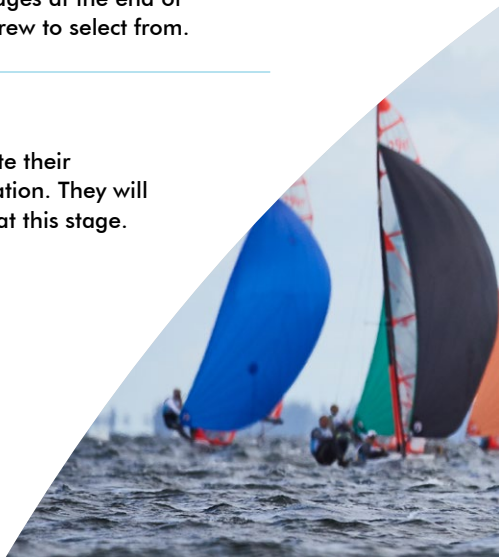
### Step 6
Monitor and discuss each crew member's identification as they are working on it. It is a great opportunity to troubleshoot and discuss the plants or algae in more detail!

### Step 7
The crew can work individually or form teams if they are working on identifying the same species.

# Extension activities

## Letter scramble!

Aquatic plants and algae are so important - not only to the ecosystem in the water, but also to humans!

Your crew will fill in the missing letters to learn more about what we can use sea plants and algae for and how they can help us.

Materials:
- Poster paper / whiteboard
- Markers / pens

### Step 1

Before your crew arrives, write the following on a whiteboard or piece of poster paper:

**What can we use aquatic plants and algae for?**

_ood

Cos_ _ _ _ _ _

_ _ _ _cine

Cli_ _ _ _ _ _ange

Fu_ _

food

Cos_ _ _ _ _ _

_ _ _ _ cine

Cli_ _ _ _ _ _ ang

fu_ _

### Step 2

**Encourage your crew to work together in small teams to fill in the missing letters.**

**Answers:**

Food: we can eat some sea plants and algae washed straight from the ocean. They are a great source of vitamins and minerals. There is also a substance that comes from algae called 'agar'. This can be used to make ice cream, soups or puddings.

Cosmetics: you can find seaweed in face creams, shampoo and toothpaste!

Medicine: research is continuing into the use of algae in different types of medication for things like skin problems, sore throats and even more serious diseases.

Climate Change: sea plants and algae can absorb carbon. Carbon dioxide is the main culprit in global warming and ocean acidification.

Fuel: scientists are researching ways to convert algae like kelp into biofuels.

## Design challenge

Your crew will be able to demonstrate their awareness of cetaceans and aquatic plants and algae in a fun, creative way. They will gain experience working in a team, critically-thinking about how they will use the materials in the design, problem-solving along the way, and presenting their design to a wider group.

**Age: 6-12 years**

**Materials:**
(if you are preparing for completing the activity in the club)

- Natural items (e.g. shells, rocks, seaweed, driftwood etc)
- Ropes
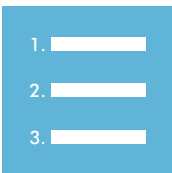- Plastic waste (make sure it is clean and safe to pick up)
- Buoys / marks
- Sails

### Step 1
Ask your crew to brainstorm different types of animals, plants and algae they remember from the booklet information and that they may have identified in their local area.

### Step 2
Form the group into crews of 2-3 people.

### Step 3
Tell them that as a crew, they are going to design a cetacean plant or algae of their choice using only 3 materials (if you are on the shore, let the crew find their own materials to use. If you are in the club, create a 'materials area' of items that have been pre-prepared).

### Step 4
Review the Design Challenge Criteria with the group.

### Step 5
Give the crews a set amount of time to complete the design challenge (10-15mins is a good suggestion).

### Step 6
Allow each crew to present their design to the group.

### Step 7
When the challenge is complete, select a winner using the Design Challenge Criteria (you could also allow each crew member to vote on the best design, but they can't vote for their own!).



Beach art examples

Design challenge criteria
- Your crew can only use 3 materials in the design
- Your crew can only design during the time limit. When the instructor says stop, you must stop!
- Your crew must explain why they chose the design and materials (if there was a choice)

# Photocopiable resource

## Aquatic plants and algae

(for aquatic plant identification activity)
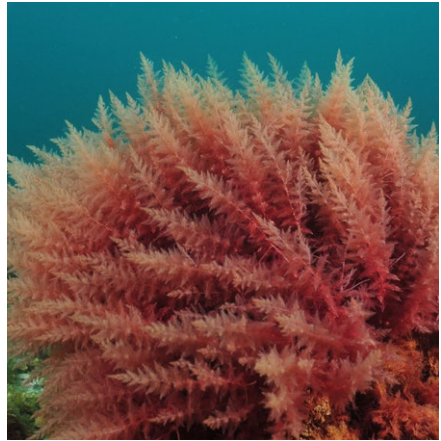
## Photos

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