



For regular **Marine Science**, visit

<https://www.wildblueclassroom.com/marine-curriculum>

The curriculum guide that was once here has been moved to  
the Wild Blue Classroom webpage!

Scroll to the next page for quick links to Lesson Plans, Pacing Guide, and a Materials List.

---

For **AICE Marine Science AS Level**, visit

<https://www.wildblueclassroom.com/aice>

for resources available

# Marine Science Lesson Plans

These lesson plans can be accessed by anyone. There are some free links included on them. However, the majority of the lesson plan utilizes the resources that are included in the Wild Blue Full Year Bundle.

## Oceanography

Intro to Marine Science  
Properties of Ocean Water  
Ocean Currents  
Tides  
Plate Tectonics & Seafloor

## Marine Ecology

Food Webs & Energy  
Marine Communities  
Nutrient Cycling

## Marine Biology

Marine Plants & Algae  
Marine Invertebrates  
Marine Fishes  
Marine Mammals  
Marine Reptiles

## Marine Ecosystems

Open Ocean & Deep Sea  
Coral Reefs  
Rocky Coasts  
Sandy Coasts

---

## Marine Science Pacing / Teaching Guide

|                               |                                         |           |
|-------------------------------|-----------------------------------------|-----------|
| <b>Back to School</b>         | Introduction to Marine Science          | 1.5 weeks |
| <b>Topic 1 Oceanography</b>   | Properties of Ocean Water               | 2 weeks   |
|                               | Ocean Currents                          | 1.5 weeks |
|                               | Tides                                   | 1 week    |
|                               | Tectonics and Seafloor Formation        | 2 weeks   |
| <b>Topic 2 Marine Ecology</b> | Marine Food Webs                        | 1.5 weeks |
|                               | Marine Communities                      | 2 weeks   |
|                               | Nutrient Cycling in the Oceans          | 1 week    |
| <b>Topic 3 Marine Biology</b> | Marine Plants and Algae                 | 2 weeks   |
|                               | Marine Invertebrates                    | 2.5 weeks |
|                               | Bony and Cartilaginous Fishes           | 3 weeks   |
|                               | Marine Mammals                          | 2 weeks   |
|                               | Marine Reptiles                         | 1.5 weeks |
| <b>Topic 4 Ecosystems</b>     | Open Ocean & Deep Sea                   | 2 weeks   |
|                               | Coral Reefs                             | 1.5 weeks |
|                               | Rocky Coasts: Tide Pools & Kelp Forests | 1.5 weeks |
|                               | Sandy Coasts: Beaches & Estuaries       | 1.5 weeks |
| <b>Bonus Topics</b>           | Full Unit on Hurricanes                 |           |
|                               | Climate Change Notes and 5 assignments  |           |
|                               | Assignment on Fisheries                 |           |

**\*\* These are for the Marine Science curriculum. There is currently no pacing guide or lesson plans for my AICE Marine products offered.**

# Marine Science Suggested Materials List

In general, the style of notebook activities will require access to colored pencils, glue sticks, and scissors every week. If you choose to do any of the lab activities or teacher demos, the following materials are what are needed.

## Intro to Marine Science / Back to School

- Large world maps with lat & long, one for each group - ([example](#)) for Puzzle Challenge
- Card stock paper, *optional* (if you plan to hang turtles on the wall) - for Turtle Activity
- Poster graphing paper or regular poster paper, *optional* - ([example](#) of graph paper, [example](#) of poster paper roll, there are many size options) I keep **both of these** on hand!

## Properties of Ocean Water:

- Toothpicks - for Cohesion Water Race
- Wax paper - for Cohesion Water Race
- Food coloring (blue) - for Cohesion Water Race and Teacher Demos
- Hot plate (or way to boil water) - for Teacher Demos
- Ice - for Teacher Demo
- Beakers, 250 mL and 1000 mL for Teacher Demos, various sizes for Mixing Seawater Lab
- Pipet/dropper - for Teacher Demos
- Refractometer - for Seawater Mixing Lab ([example](#)) make sure it is for salinity, not specific gravity
- Salt - for Seawater Mixing Lab and Teacher Demo - you can use table salt or aquarium salt
- Scale and weighing boats (medium) for measuring salt ([example](#) of cheap scales and [example](#))

## Ocean Currents

- Balloons, for optional Coriolis Activity
- Blue food coloring - for Teacher Demo on Downwelling
- Tall clear container - for Teacher Demo on Downwelling
- Ice cube tray - for Teacher Demo on Downwelling
- El Nino Doodle Notes on TPT ([link](#))

## Tides

- Globe, light bulb or flashlight, tennis ball sized ball - for Teacher Demo on moon phases

## Plate Tectonics and Seafloor Formation

- Poster paper roll ([example](#)) for Modeling Seafloor Spreading, cut into long skinny strips (same as paper listed for Intro unit)

## Food Webs and Energy Transfer

The photosynthesis lab offers an option to use a pre-filled data table. If you do not already have access to a CO<sub>2</sub> and O<sub>2</sub> sensor system with biochambers, it is unlikely worth the cost to you to purchase for this single lab.

## Nutrient Cycling in the Oceans

- Dice ([example](#), [fun example](#)) for Carbon Cycle Game - you only need one for each group

## Marine Plants and Algae

- *Optional* Plankton net ([example](#)) - OR search for online DIY instructions to create a net out of pantyhose!
- *Optional* Microscope

## Marine Fishes

- Dogfish Sharks - can be purchased from most biological supply companies

## Marine Mammals

- Gloves ([example](#)), L or XL - for Blubber Demo
- Vegetable shortening ([example](#)) - for Blubber Demo
- Cooler of ice water- for Blubber Demo

### **Additional Suggestions for Marine Science Classroom**

- **Stickers** ([example](#), [example](#)) - I keep these around for notebook grading days. Even high schoolers love stickers! I also let everyone choose a couple the first week to decorate their notebooks
- **Coloring pages** are great to have around for students that finish early ([example](#))
- **Digital microscope** ([example](#)) - these are fantastic to use if you can plug it in to your computer to be projected onto your smartboard. We have used them to look at shark skin, coral skeletons, and beach sand samples in Marine classes. There are many options out there, some are cheaper. This particular one works well on my computers, but seems to be blocked from use on our students chromebooks. I have a set of 6 and asked my IT guy for old laptops (that aren't chromebooks) so that I can have one for each lab group.
- **Marine Specimen Set** ([example](#))
- **Shell ID guide** (for example, [this one](#) in Florida)