# Ocean 11

## Introduction

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## Classroom Requirements

- Attendance is of utmost importance. Daily assignments must be completed.
- Good behavior and respect are required. No pop or chips... Water is OK.

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## Course Agreement

<table>
<thead>
<tr>
<th>Course Evaluation</th>
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<td>Tests</td>
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<tr>
<td>Assignments</td>
<td>25%</td>
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<tr>
<td>Projects</td>
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<tr>
<td>Final Exam</td>
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## Course Evaluation

- Students need to take full responsibility for missed classes.
- No makeup of work will be allowed for any absence.
- Students must write all tests during the test.
- When a student missed a test due to an excusable absence, the following procedure will be followed:
  - The test will be re-written by the teacher on the first day that the student returns to school.

Students must follow the following procedures:

1. Write the test on the first day the student returns to school.
2. If an alternate arrangement may be made with the teacher, providing the teacher is consulted the first day the student returns to school.

I understand the above and I agree to follow the procedures in following the requirements of this course. I agree.

Name: _______________________________ Date: ____________

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## Student Learning Profile

### Hours per week: ________

- Part-time work:     **Yes** ___ **No** __

### After School Commitments

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## Health Concerns

- Do you expect to miss school time this year?

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## Subject Area

- How do you learn best in subject area?

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## School Involvement/Community Involvement

- Hours per week: ________
- Part-time work:     **Yes** ___ **No** __

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## Attendance Pattern

- Students must write all tests during the year.
- This includes homework, assignments, notes, and labs.

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## Classroom Requirements

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Course Background

Oceans 11 was conceived, developed and implemented in celebration of the International Year of the Ocean.

The Oceans 11 curriculum is a joint project of the Nova Scotia Department of Education and Culture and the Federal Department of Fisheries and Oceans.

Course Outline

Structure and Motion

This module addresses the basic structure and motion of the oceans from a global perspective, integrated with meaningful local examples.

The Marine Biome

This module takes students on a voyage to explore the marine biome from a local perspective. Concepts learned are tested within the local environment, including marine biodiversity and interactions through various activities.

Aquaculture - Feeding the Oceans

The viability of an aquaculture project depend on three basic factors: the physical and social environment of the site, the methodologies used, and the business plan that supports the development. This module involves students in an examination of all these factors.

The Marine Resource

This module is divided into three sections: introduction to the marine resources, marine ecology, marine dynamics, fisheries, and fisheries management and sustainability.

Lesson One

"Perspective" means being able to view things in terms of their relative importance or relationship to one another.
The Walrus and the Carpenter

- Lewis Carroll

You will see that water, continents,
seas, oceans, sunlight, storms,
and societies are connected in subtle
and beautiful ways.

A Light-hearted Look at the Ocean

You live in a place called Earth,
possibly one of a
line in the galaxy that
contains.

From space Earth is brilliantly blue,
white in places with
deep snow, sometimes exciting with
tornadoes.

As the earth revolves,
the water is in Kapridar motion
with powerful currents that
stretch for thousands of
miles and freezing winds.

Beneath the ocean's surface, leviathans mountain ranges,
sea creatures lurk in mountains of
rock,commerce for profits, and rough exterior,
spearing matter cooked in Lesser Alps.

You will see that water, continents,
seas, oceans, sunlight, storms, revolution
and societies are connected in subtle
and beautiful ways.

To leave the oyster-bed.
Meaning to say he did not choose
And shook his heavy head--
But never a word he said:
The eldest Oyster looked at him,
We cannot do with more than four,
"O Oysters, come and walk with us!"
And shed a bitter tear.
"That they could get it clear?"
Do you suppose? the Walrus said,
Swept it for half a year,
"If seven maids with seven mops
They wept like anything to see
Were walking close at hand;
The Walrus and the Carpenter
This sea was crying, as he could,
And asked a little more
"If seven maids with seven mops
"I see not what you mean.
The eldest Oyster looked at him
The sands were dry as dry.
"To come and spoil the fun."
"It's very rude of him," she said,
Had got no business to be there
Because she thought the sun
The moon was shining sulkily,
The billows smooth and bright--
Shining with all his might:
"To come and spoil the fun."
"It's very rude of him," she said,
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The moon was shining sulkily,
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The moon was shining sulkily,
The Ocean 11 course is a science.

Who were the first scientists?

The Greeks:
- Pythagoras
- Archimedes
- Galileo
Why do we still use Greek and Latin words for scientific terms?

We use Greek and Latin words for scientific terms because:
1. The first scientists with written records were Greeks and Romans.
2. The scientific terms can be easily translated.

Aristotle kept records.

He carried out an experiment to learn what happens inside a hen’s egg.

He took 20 eggs which were laid on the same day and cracked one open each day for 21 days.

He wrote descriptions and drew diagrams of what he found.

He is called “the father of biology.”

Oceanography

Oceanographers work to understand the ocean, its various environments, and how they function.

Oceanography encompasses all that is currently known about the ocean environment, as far as we can study and interpret the processes of the ocean without endangering it ourselves.

Using ships, submersibles, and satellites, scientists collect the information that is required to understand fundamental ocean processes.

They study physical processes such as the exchange of nutrients with the atmosphere, geophysical processes such as the formation of tides, and biogeochemical processes such as photosynthesis.

What are some sciences?

Oceanography

Why is Aristotle remembered today?

He wrote descriptions and drew diagrams of what he found.

Each day for 21 days.

He carried out an experiment to learn what happens inside a hen’s egg.

He took 20 eggs which were laid on the same day and cracked one open each day for 21 days.

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Pythagoras kept records.

He stated that “The square of the hypotenuse is equal to the sum of the squares on the other two sides of a right triangle.”

This is called Pythagorean’s Theorem.

Why do we still use Greek and Latin words for scientific terms?
Paper Kettle Experiment

What you find out.

Conclusions:

Observations:

What your senses tell you.

Method:

What you use.

Materials:

Object:

What you want to find out.

An educated guess

Hypothesis:

Using the proper headings:

Scientific Method

Lesson Three
To find out what happens when water is heated in a paper kettle.

It was observed that the water gradually got warmer.

Tell you.
The water heated without burning the paper, because water

A square piece of paper was folded to make a paper kettle.

- Method:
- Materials:
- Object:

- Method:
- Materials:
- Object:

- Method:
- Materials:
- Object:

Video: Blue Planet

Brainstorming

Using markers and large sheets of newsprint paper:

• On one sheet LIST what you think of when you hear the word “ocean”.
• On another about what you think of when you hear the word “ocean”.

Some Facts about the Ocean

- Almost seventy-one percent (71%) of the Earth’s surface is covered by water.
- Human’s hand photographed covers of the ocean’s surface than they have the ocean’s floor.

- The water on earth is 97% seawater.
• Of this seawater, 96% is found in the Pacific Ocean.
- In the earth, water is three times more precious than all other substances combined.
The average depth of the ocean is -12,000 feet. This is deeper than Mt. Everest is tall.

- The Marianas Trench in the South Pacific is 36,000 feet deep and is the deepest place in the ocean. It is more than 10 Empire State Buildings stacked one on top of the other.

- At 12,000 feet depth, the pressure is 364 atmospheres (5274 psi). By example, the tires on one's car are inflated to about 32 psi.

The ocean is a source of many economic resources, including food and petroleum. It provides a means of transportation and is a nonrenewable resource.

- The ocean sustains life on the planet. It affects and regulates temperature and dramatically influences global climate.

The ocean recycles, and cleans the air that we breathe. It even absorbs the excess greenhouse gases released by the burning of fossil fuels.

The ocean is a source of many economic resources including food and petroleum. It provides a means of transportation and is a nonrenewable resource.
Why is the Ocean Important?

Recreation: Sailing
Treasure Hunting
Ecotourism

Immigration
Ships
Commerce: container ships
Growth of Seaports
Historically: fish, furs, spices
Transportation

Drugs
Medicine
Whaling
Fish
Seals
Dulse
Irish Moss
Harvesting
Oil
Minerals
Natural Gas

Climate
Effects of Migration Patterns of Sea Life
Effects on Habitats of Sea Life
Weather

Assignment