



# From Plankton to Plate

“The story of edible oysters”

## **Introduction:**

This project is supported by Ocean Watch Australia and NSW Farmers Association through funding from the Australian Government's Caring for our Country.

Ocean Watch Australia is a national environmental, not-for-profit company that works to advance sustainability in the Australian seafood industry through protecting and enhancing fish habitats, improving water quality and advancing the sustainability of fisheries through action based partnerships with the Australian seafood industry, Government, natural resource managers, private enterprise and the community.

This resource is designed for **Years 6 and 7** with links to the Australian Curriculum. The focus is on land and water management and waste management issues in a coastal environment and how these affect the NSW oyster industry.

## **Background:**

There are 32 oyster producing estuaries in NSW, ranging from Wonboyn Lake in the south, up to the Tweed River in the north. Oyster farming is the oldest and most valuable aquaculture industry in the state, with a current annual production of about 70 million oysters worth \$40 million at the farm gate, and over \$200 million when sold through restaurants.

All marine life need healthy rivers and estuaries – healthy aquatic habitats and salt marsh, mangroves and sea grass, to thrive, breed and shelter. Good quality water is a critical element in fish and shellfish harvest areas for the supply of sustainable oysters, prawns, mussels, scallops and other seafood.



## 1. Key messages:

- Oysters are an important part of marine ecosystems
  - Considered the canary of an estuary
  - A source of food for some birds, fish and humans
  - Good cleaners of river water (stormwater run-off may be contaminated with fertilisers, dog poo, pesticides, grass clippings, bits off car tyres etc)
- Oyster farmers have a vested interest in good water quality
- Oysters are very healthy and nutritious

## 2. Aims:

- Facilitate the communication of key environmental issues that impact upon the oyster industry (e.g. actions that impact on water quality)
- Highlight the significance and value of the NSW oyster industry
- Facilitate the communication of key environmental issues that are mitigated by a healthy oyster industry (esp. high nutrient loads)

## 3. The resource consists of:

1. A selection of lesson ideas (included in this document)
2. Fact sheets to facilitate learning:
  - Funky fact about oysters
  - History of oysters
  - General oyster biology
  - Oyster farming in NSW
3. A power point presentation for teacher and student use that can be downloaded from:
  - MESA website [www.mesa.edu.au](http://www.mesa.edu.au)
  - MDCA website [www.mdca.org.au](http://www.mdca.org.au)
  - OceanWatch website [www.oceanwatch.org.au](http://www.oceanwatch.org.au)
  - Adventure education website [www.adventureeducation.info](http://www.adventureeducation.info)

#### 4. Australian Curriculum links in Science:

<b>Year 6</b>	
<b>Science Understanding</b>	
Biology:	The growth and survival of living things are affected by the physical conditions of their environment
Use and influence of science:	Scientific knowledge is used to inform personal and community decisions
<b>Science Inquiry Skills</b>	
Planning and conducting:	With guidance, select appropriate investigation methods to answer questions or solve problems

<b>Year 7</b>	
<b>Science Understanding</b>	
Biology:	There are differences within and between groups of organisms; classification helps organise this diversity
Biology:	Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions
<b>Science as a Human Endeavour</b>	
Use and influence of science:	Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management
<b>Science Inquiry Skills</b>	
Planning and conducting:	Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed
Communicating:	Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate.

#### **A note for teachers:**

Teachers and marine educators can use this package in a number of ways. *‘Plankton to plate: The story of edible oysters’* covers many aspects of marine science, ecology, environmental management, biological issues and classification. Opportunities may also exist to use the activities to explore use of language, develop an understanding of literature and develop literacy skills.

## Outline of activities:

- Activity 1: ***Oyster anatomy***  
 Activity 2: ***So what's inside an oyster?***  
 Activity 3: ***My life in a estuary***  
 Activity 4: ***Oyster farming***  
 Activity 5: ***Tuning in on oysters***  
 Activity 6: ***Edible oyster research***  
 Activity 7: ***Estuary mural***  
 Activity 8: ***Can't see the water for the dirt : an experiment with sediment***  
 Activity 9: ***Storm water – an issue for oysters***  
 Activity 10: ***Role play activity –Hypothetical - masterful thinking!***  
 Activity 11: ***From plankton to plate!***  
 Activity 12: ***Shell sense***

Lesson 1	Discoveries about the oyster (small group)	Activity 1
	Dissecting an oyster online and identifying the functions and parts of an oyster	Activity 2
Lesson 2	Review the anatomy of an oyster online and power-point slides with puzzle maker activities	Activity 2
Lesson 3	My life in an estuary activity. Discussion, student research and report writing	Activity 3
	What do we know about oyster farming?	Activity 4
Lesson 4	What do consumers know about oysters?	Activity 5
	Edible oyster research – digging a little deeper	Activity 6
Lesson 5	What do we know about catchment management?	Activity 7
	An experiment to discover more about water quality and the effects on oysters	Activity 8
Lesson 6	What human influences affect areas where oysters are grown?	Activity 9
Additional	Extension opportunities for the classroom	Activities 10 - 12



## Activity 1

<b>Title:</b>	<b>Oyster anatomy</b>
<b>Objectives:</b>	Students will discover that an oyster is much more than a blob of tissue by observing its complex body parts
<b>PowerPoint slides:</b>	2, 3, 4, 5, 6
<b>Resources required:</b>	Oysters

### Option1

Hold up some oysters and discuss how they are, as invertebrates, adapted to the environment

### Option2

1. Organise students into small groups
2. Provide each group with an oyster shell to touch and look at
3. Give each student in the group ONE of the questions below.
4. Allow 2 minutes for each student to investigate the oyster and to come up with an answer to the question.
5. Discuss and refine the answers with other members of the group.

Q1. **Can** an oyster move?

Q2. **What** is the purpose of the shell?

Q3. **Where** do they come from? (How do they reproduce?)

Q4. On **what** and **how** does an oyster feed?



## Activity 2

<b>Title:</b>	<b>So what's inside an oyster?</b>
<b>Objectives:</b>	Students will learn about the anatomy of an oyster in this step-by-step practice dissection activity at: <a href="http://www.qm.qld.gov.au/microsites/qx/dissection.html">http://www.qm.qld.gov.au/microsites/qx/dissection.html</a>
<b>PowerPoint slides:</b>	6, 7, 8
<b>Resources required:</b>	Oysters (preferably already opened)

Teachers to open an oyster following the techniques suggested (or buy them already opened) and allow students to touch and look at the animal.

- a) Identify parts of the oyster, particularly the gills, adductor muscle, hinge and stomach. Mention that oysters feed by filtering river water, and trap suspended particles and plankton in the mucus of the gills. This trapped material is then transported to the mouth, where they will be eaten.
- b) Complete the identification activity at <http://livingclassrooms.org/lbo/aa/cbmantest.html> or provide an outline drawing of an oyster and have student complete the sketch, colour and name the parts.
- c) To review what students have learnt have them select 6 words from the following list and write their own brief clues for each word.

Sediment, Spat, Phytoplankton, Mouth, Stomach, Filter feeder, Gills, Mollusc, Bivalve, Adductor muscle, Heart, Mantle, Oxygen, Omnivore

Go to the website <http://en.puzzle-maker.com/crossword>  
Enter the details to create their own puzzle



### Activity 3

<b>Title:</b>	<b>My life in an estuary</b>
<b>Objectives:</b>	To encourage participants to closely analyse an oyster's life in an estuary and to understand the influences and interactions that affect the survival of organisms in this environment.
<b>PowerPoint slides:</b>	2-23
<b>Resources required:</b>	None

Students are asked to undertake one of the tasks below:

- 1) Imagine they are an oyster and to write a story describing one day in their life  
OR
- 2) Write a Science Report for a Student Environmental Magazine on "The Amazing Oyster"

Headings written as framing questions could include:

- Where do oysters live?
- Why oysters are designed the way they are?
- What do they need to survive and reproduce?
- What roles does the oyster play in the estuary ecosystem?
- What would endanger oysters?

Encourage participants to think about aspects that affect them including:

- Tidal influences
- Feeding
- Moving around (or lack of movement)
- Protection from predators
- Reproduction
- Relationship with other organisms in the estuary

## Activity 4

<b>Title:</b>	<b>Oyster farming</b>
<b>Objectives:</b>	Students will develop an understanding of the world of the oyster farmer. Could you be an oyster farmer?
<b>Powerpoint slides:</b>	11-23
<b>Resources required:</b>	None

By watching the video link <http://www.oceanwatch.org.au/publications-and-videos/oceanwatch-videos/3742-> discuss as a group what you have discovered about oyster farming in NSW.

- List 10 things that you would have to know about the oyster to ensure that you would be a successful oyster farmer. Read the blog written by an overseas oyster farmer <http://reluctantoplayerfarmer.blogspot.com/> Check the points that you have listed against those identified by a real oyster farmer. Are there things on your list that he does not mention and vice versa? Discuss these and together devise a 10 point plan for successful oyster farming.
- Where are oysters farmed in NSW?
- What species of oyster are farmed in Australian waters?
- What types of structures / methods are used to grow oysters? Why are these structures used?
- Do you need a license to set up a farm? Why?
- There are concerns about the sustainability of oyster farming, what are these?





## Activity 5

<b>Title:</b>	<b>Tuning in on oysters</b>
<b>Objectives:</b>	To develop simple survey techniques
<b>PowerPoint slides:</b>	None
<b>Resources required:</b>	None

- As a group of 4 students, design 5 questions that you can ask people to get an understand of what they know about oysters and the NSW oyster industry
- As a class, select the 10 best questions put forward by the groups
- Prepare one survey sheet for each interview (double sided if possible to save paper)
- Make sure to complete your own details as the researcher on each sheet before you begin (name, address, contact email at school or home)
- Fill out one sheet with your own answers
- Survey five people of different ages and both sexes
- Collate the data
- Extension: write a summary analysis of the data that has been gathered



## Activity 6

**Title:** Edible oyster research

1. Choose 1 activity from each section.
2. Collate the information in order to produce a PowerPoint on oysters and the oyster industry to demonstrate your knowledge, understanding and comprehension of the oyster, its adaptations and its environmental and economic value.

Use the fact sheets provided and source additional pictures and maps you may scan for the presentation. Draw on the information that you have gathered through the activities that you have already completed.

### List of Activities:

<b>Knowledge</b>
Make a list of important facts about the NSW oyster industry
What can you say about how an oyster reproduces?
<b>Comprehension</b>
Draw or paint a picture labelling the anatomy of an oyster
Describe the habitat of an oyster
The oyster is a mollusc. What are similarities & differences of an oyster compared to other shellfish? Prepare a dichotomous key and describe some of the special features of oysters
<b>Application</b>
Write a story for the newspaper on the current threats to the NSW oyster industry
Design an advert for an oyster to highlight its vulnerability to water quality.
<b>Analysis</b>
Design a quiz with multiple choice answers using 'how' and 'why' questioning framework
Why are oysters important to the estuary environment?
What might happen in an estuary if the oyster disappears? Why?
How do other coastal industries impact on oyster farming?
<b>Analysis</b>
Read the poem 'The Walrus and the Carpenter' by Lewis Carroll and describe what the habitat might have looked like in 50 – 100 years. Present your assessment as a set of drawings OR present your thoughts as a diorama or dramatic performance
Design a front cover for a pamphlet about oysters. The cover should show the role of the oyster in the environment, as well as the value of oysters as a source of food
What could be done to help the oyster farming industry and wild populations of oysters?
<b>Evaluation</b>
Write or list changes you would make to the habitat to improve living conditions for oysters? Do you feel it is important to help protect oysters?
Is oyster farming good or bad for the environment?



## Activity 7

<b>Title:</b>	<b>Estuary manual</b>
<b>Objectives:</b>	This is a fun, art-based activity that lets students use their scientific thinking skills to reflect on and organize their knowledge of what makes for a healthy estuary. In this activity, students will create a large wall mural of an estuary and illustrate the variety of life that thrives there and the factors that threaten it.
<b>PowerPoint slides:</b>	12-23
<b>Resources required:</b>	Roll of mural paper; paint; pencils; construction paper

1. Ask students to imagine that they are going to build an estuary in the classroom. Discuss what a healthy estuary looks like, as well as what could make an estuary sick.
2. On the whiteboard using the information learnt from the PowerPoint slides & oyster farming video <http://www.oceanwatch.org.au/our-work/ems-nsw-oysters/> create a list of factors under 2 categories: 1) A Healthy Estuary 2) An Unhealthy Estuary

***Items might include plentiful crabs, large algae blooms, good fishing, clean beaches, polluted water, cattle grazing in creeks, bank erosion, oil spills, lots of fish, variety of birds, mangrove trees, seagrass beds, oyster, fertilisers, dog poo***

3. After the list is completed, write each item on a separate sheet of paper and place in two bowls representing the 'Healthy Estuary' and the 'Unhealthy Estuary'.
4. Divide the class in half. One half of the class will work on the 'Healthy Estuary' section of the mural while the other will work on the 'Unhealthy Estuary' section.
5. Within each section, divide students into smaller groups of three or four students. Each group should select an item from those in the bowl.
6. Allow student's time to decide how they want to represent the factor in their drawing, and in a low-traffic area of the room, lay the mural paper out on the floor.
7. Tape down the paper and using a pencil, mark off the boundaries of workspace for each group and label them. Each group should get an equal portion.
8. Schedule the students to work in shifts to paint their portion of the mural.
9. Hang the mural and allow each group to talk about the ideas they wanted to capture in painting their section.



## Activity 8

<b>Title:</b>	<b>Can't see the water for the dirt: An experiment with sediment</b>
<b>Objectives:</b>	Students will construct a model of an estuary to study how sediment affects aquatic life.

When people think of water pollution, they often think of chemicals; however there are other issues of concern, including effluent and dirt. Dirt is washed into the water during a process known as erosion, and when in the river or estuary this sediment can smother plants and animals and accumulate on the river-bed causing issues for boat navigation.

Erosion occurs when rain or other moving water hits bare soil. The soil is loosened and is carried downhill into the closest body of water.

Option 1	
<b>Resources required:</b>	2 clear jars of the same size filled with tap water; 2 plastic aquarium plants; dried beans; macaroni or other shaped pasta noodles; 1 small container filled with dirt

### • Setup

Using the first four items in the material lists, students should construct two identical "estuaries" that they will use to observe the effects of sediment on aquatic life. The water represents their local estuary, creek or river. The beans and pasta shapes can represent some of the ecosystems animals and plants. Students can make their own list based on the research they have conducted into the flora and fauna of these ecosystems

### • Predictions

Ask students to describe three ways they think dirt or sediment affects the plants and animals living in this ecosystem

### • Observation #1

Students should draw a diagram of the two jars. On the diagram, students should label the beans and pasta with the names of the creatures they have selected to be part of their ecosystem

### • Observation #2

Students can add a handful of dirt to one of the jars. They should then cap and shake the jar. After observing what has happened to the jar with dirt, students should list the differences they notice between the two ecosystems

### • Questions

- Through which jar could sunlight pass most easily?
- To which organisms in your jar would sunlight be important and why?



• **Reading**

Wait five minutes for the dirt to settle. While you wait, read the following paragraph:

*Sediment pollutes by smothering fish eggs, by tearing at fragile gills of just-born fish, and by covering gravel bottoms that are prime habitats for fish spawning and for aquatic insects. Further down river it may cover oyster beds. Sediment also clouds the water cutting off sunlight needed to grow the submerged grass that is critical habitat in estuaries and rivers. (Horton & Eichbaum 1990)*

Encourage students to describe two ways that they think the submerged grass mentioned in the paragraph is important to animals living in an estuary.

• **Observation #3**

After the dirt has settled in the jar, students can observe the jars again, and make a diagram of what they see in each. You may want to direct them to work in small groups to compare their drawings and form conclusions about the experiment.

• **Conclusions**

Groups can report to the class, discussing how sediment affects aquatic life in an estuary, based on what they have seen in their experiment. Additional topics may include:

- What effects might the sediment have on the life of the oyster?
- Why is run-off a problem? What else can the run-off contain that might be harmful to estuary animals and plants?
- What are the leading contributors to the run-off problem?
- How might the oyster, being a filter feeder, be able to assist 'clean' the water?

Option 2	
Resources required:	Seawater or freshwater; dark room; light source i.e. slide projector; white card; small glass water tank; pinhole slide; mud or dirt

Algae, seaweeds and phytoplankton require light for life. Light can penetrate water only to a certain depth depending on a variety of factors including turbidity.

• **Setup**

Use a pinhole slide to concentrate the light source from a projector. Direct the light through a tank / jar of water. Hold a white sheet to catch the light passing through the water. Next, add mud or dirt to increase the turbidity. Note the effect on the light beam. The light through the water is reduced in intensity and is scattered. Turbidity may also be increased and the effects noted.

• **Discussion**

What are the effects of erosion or heavy rain falling upon cleared land near waterways? How can this impact on phytoplankton as a source of food for oysters and water quality in general?



## Activity 9

<b>Title:</b>	<b>Stormwater – an issue for oysters</b>
<b>Objectives:</b>	Using the downloadable poster or source copies in advance <a href="http://www.oceanwatch.org.au/wp-content/uploads/2010/01/ove-vision-poster-5.jpg">http://www.oceanwatch.org.au/wp-content/uploads/2010/01/ove-vision-poster-5.jpg</a>
<b>PowerPoint slides:</b>	17-23
<b>Resources required:</b>	Some tongs & long sticks; gum boots; a note book

It is important to realize that everyday things done on the land can affect life in an estuary and far out into the ocean. This has a lot to do with the nature of water itself, and its ability to dissolve and move things around. Polluted water coming from the land has a profound effect on the marine environment. 'Run-off' water picks up and transports all kinds of suspended matter and litter, and transports it to the nearest receiving waterway; creek, river, lake and sooner or later to its final destination, the ocean. Rain showers dislodge pollutants that have collected on hard surfaces like roads and car parks. Some of the pollutants that come from people or business in cities and towns are:

<b>Nutrients</b> from:
Garden fertilizer
Carwash detergent
Grass clippings
<b>Poisons (toxicants)</b> from:
Paint & thinners
<b>Hydrocarbons (oil &amp; petrol)</b> from:
Leaking cars
Engine degreaser
<b>Sediments</b> from:
Cleared land
Eroded landscapes

### Mutant pollutants

Ring your local council to find out the name of the company that cleans out local Gross Pollutant Traps (GPT). Arrange a visit to view the clean-out of a local GPT.

### Your job, should you choose to accept it, is to:

1. Take note of the kinds of rubbish observed.
2. Record the numbers of each kind of litter using tongs.
3. Collate your information.
4. Enquire about some of the dissolved & suspended pollutants that are not trapped by these GPT devices

- 
5. Identify the pollutants that can contaminate the ocean then choose one you have observed that will have an effect on the oyster industry. Consider what set of circumstances might cause that pollutant to find its way into the sea and how it would affect the oysters.

### **Additional tasks**

#### **Primary students:**

- Prepare a chart of the pollutants you have observed and illustrate it.

#### **Secondary students:**

- Prepare a graph of the pollutants observed. Did the GPT collect all of the pollutants?
- Develop a strategy for educating, regulating and then enforcing storm water quality improvements.
- Research and write either a media release for a newspaper or design a public service announcement to be aired on television that highlights this problem



## Activity 10

<b>Title:</b>	<b>Role play activity – Hypothetical – Masterful thinking!</b>
<b>Objectives:</b>	To encourage students to recognise that an issue can be seen from different perspectives.

1. Provide a scenario to be challenged. e.g.

### SCENARIO 1:

The local council wants to dredge the estuary to allow boats to navigate more easily from the river into the sea. The estuary however, has 2 important oyster farms. Both farms have been struggling to make money, as the estuary is becoming more polluted as urban development is occurring upstream.

### SCENARIO 2:

Farmer Bill owns an extensive property comprising crops and cattle. His land adjoins a creek that flows into a nearby estuary inhabited by many plants and animals including a large population of oysters. The combined effects of removing trees and overgrazing his property caused soil to be largely exposed. At the end of summer, a storm washed large amounts of soil into the creek and estuary. Turbidity increased and the water appeared very muddy / murky. After losing a lot of his soil, Bill decided to increase the productivity of his land by adding fertilizers and to be manage pests by using pesticides. With heavy rain, the nutrients and chemicals washed from the property into the creek and estuary. Farmer Bill also allows his cattle down into the creek, and effluent from the cattle washes into the water. Farmer Bill establishes an irrigation system on his property and collects the water from upstream to irrigate his crops, thereby, reducing the flow of water downstream to the estuary.

2. Ask students to create a number of stakeholder role cards (OR provide completed role cards for students) to cover environmental, economic, social and political perspectives (e.g. oyster farmer, land farmer, marine scientist, developer, local councilor, conservationist).
3. Students select 1 role card each
4. They form into their 'role' group and devise their arguments from the perspective of the role
5. The teacher manages the scenario by directing questions to the groups
6. Students respond to the questions according to their particular role and have the opportunity to 'argue' their specific positions on the issue.



7. At the conclusion of the hypothetical, students complete a SWOT analysis of the issue
8. Students evaluate the issue using their SWOT analysis and arrive at a decision of their own, providing 3-5 arguments which they believe are the most important ones. S – Strengths, W – Weaknesses, O – Opportunities, T - Threats

Strengths (S):	Weaknesses (W):
Opportunities (O):	Threats (T):



## Activity 11

<b>Title:</b>	<b>From plankton to plate</b>
<b>Objectives:</b>	Students will focus on the fact that for many decades many NSW oyster farmers have made their living harvesting oysters for resale to restaurants and seafood wholesale companies. What most people know about oysters is how they like to eat them - raw, roasted, fried, smoked, steamed, in fritters or in stew! Few really understand just how important they are to different industries.
<b>PowerPoint slides:</b>	15-16
<b>Resources required:</b>	Coloured cardboard; felt pen; Access to Mind Mapping software such as Inspiration or Kidspiration Website: <a href="http://www.inspiration.com/Freetrial">www.inspiration.com/Freetrial</a>

Students are asked to construct a MIND MAP or SEQUENCING LINE, and then analyse and explain the interdependent relationships that exist between the various aspects of the oyster industry

1. Organise groups of 4
2. Examine slides 16 of the PowerPoint, where images provide clues to some of the stages from the planktonic beginnings of an oyster to it being served in a top restaurant in Sydney.
3. Construct a MIND MAP or SEQUENCING LINE to identify and record the many facets of the oyster industry (use the template provided or construct your own)
4. Share your group's ideas with other groups, revising, removing or adding to your original work so that your final product is a comprehensive overview of the full operations of the oyster industry.

## Activity 12

<b>Title:</b>	<b>Shell sense</b>
<b>Resources required:</b>	Collection of shells including oyster shells from different species and/or oyster shells with distinctive physical characteristics that can be determined by touch; blindfolds

Depending on the quantity of shells available, this activity can be undertaken as a whole class or in small groups. Advise students that they will be blindfolded for this activity to heighten their sense of touch to give them information about a variety of shells. The aim is to give each student a shell to feel, whilst blindfolded, after which it is returned to the collection of shells. Each student can then remove their blindfold and attempt to locate the particular shell they were feeling. They may wish to discuss the characteristics of the shell that they felt and had helped them to identify it.

Extend the discussion with respect to the oyster shells and the individual characteristics or characteristics that distinguish certain species of oyster.

### A very crafty extension

#### **Resources:**

- Pre drilled collection of shells including oyster shells from different species
- String
- Small bits of driftwood

If a teacher is able to drill holes in a collection of shells, they are fantastic for creating visually stunning mobiles along with bits of driftwood.





## Activity 13

<b>Title:</b>	<b>Field Trips</b>
---------------	--------------------

**Field Trips** – suggestions:

1. Visit an estuary to study its biodiversity and the place of the oyster in the ecosystem
2. Visit an oyster farm to investigate how the natural cycle of life of the oyster is replicated
3. Visit a fish market to identify the place of the oyster in the seafood industry.
4. Visit a 'Gross Pollutant Trap' (GPT) to investigate the waste/pollution that can impact on oysters



## The Walrus and The Carpenter

### By Lewis Carroll

(from *Through the Looking-Glass and What Alice Found There*, 1872)

The sun was shining on the sea,  
Shining with all his might:  
He did his very best to make  
The billows smooth and bright--  
And this was odd, because it was  
The middle of the night.

The moon was shining sulkily,  
Because she thought the sun  
Had got no business to be there  
After the day was done--  
"It's very rude of him," she said,  
"To come and spoil the fun!"

The sea was wet as wet could be,  
The sands were dry as dry.  
You could not see a cloud, because  
No cloud was in the sky:  
No birds were flying overhead--  
There were no birds to fly.

The Walrus and the Carpenter  
Were walking close at hand;  
They wept like anything to see  
Such quantities of sand:  
"If this were only cleared away,"  
They said, "it would be grand!"

"If seven maids with seven mops  
Swept it for half a year.  
Do you suppose," the Walrus said,  
"That they could get it clear?"  
"I doubt it," said the Carpenter,  
And shed a bitter tear.





"O Oysters, come and walk with us!"  
The Walrus did beseech.  
"A pleasant walk, a pleasant talk,  
Along the briny beach:  
We cannot do with more than four,  
To give a hand to each."

The eldest Oyster looked at him,  
But never a word he said:  
The eldest Oyster winked his eye,  
And shook his heavy head--  
Meaning to say he did not choose  
To leave the oyster-bed.

But four young Oysters hurried up,  
All eager for the treat:  
Their coats were brushed, their faces washed,  
Their shoes were clean and neat--  
And this was odd, because, you know,  
They hadn't any feet.

Four other Oysters followed them,  
And yet another four;  
And thick and fast they came at last,  
And more, and more, and more--  
All hopping through the frothy waves,  
And scrambling to the shore.

The Walrus and the Carpenter  
Walked on a mile or so,  
And then they rested on a rock  
Conveniently low:  
And all the little Oysters stood  
And waited in a row.

"The time has come," the Walrus said,  
"To talk of many things:  
Of shoes--and ships--and sealing-wax--  
Of cabbages--and kings--  
And why the sea is boiling hot--  
And whether pigs have wings."

"But wait a bit," the Oysters cried,  
"Before we have our chat;  
For some of us are out of breath,  
And all of us are fat!"  
"No hurry!" said the Carpenter.  
They thanked him much for that.





"A loaf of bread," the Walrus said,  
"Is what we chiefly need:  
Pepper and vinegar besides  
Are very good indeed--  
Now if you're ready, Oysters dear,  
We can begin to feed."

"But not on us!" the Oysters cried,  
Turning a little blue.  
"After such kindness, that would be  
A dismal thing to do!"  
"The night is fine," the Walrus said.  
"Do you admire the view?"

"It was so kind of you to come!  
And you are very nice!"  
The Carpenter said nothing but  
"Cut us another slice:  
I wish you were not quite so deaf--  
I've had to ask you twice!"

"It seems a shame," the Walrus said,  
"To play them such a trick,  
After we've brought them out so far,  
And made them trot so quick!"  
The Carpenter said nothing but  
"The butter's spread too thick!"

"I weep for you," the Walrus said:  
"I deeply sympathize."  
With sobs and tears he sorted out  
Those of the largest size,  
Holding his pocket-handkerchief  
Before his streaming eyes.

"O Oysters," said the Carpenter,  
"You've had a pleasant run!  
Shall we be trotting home again?"  
But answer came there none--  
And this was scarcely odd, because  
They'd eaten every one.

