

South Australian Maritime Museum

Leviathan – The Astonishing Science and History of Whales

Teacher Resource

Years 5 – 7

This digital learning inquiry enables students to engage with the South Australian Maritime Museum's exhibition, *Leviathan*. It unpacks the *historical* concepts of evidence, continuity and change, cause and effect, perspectives, empathy and significance. It also explores the *scientific* concepts of biological science and science as a human endeavour.



This education resource for schools has been developed through a partnership between DECD Outreach Education and the South Australian Maritime Museum.



Government of South Australia
Department for Education and
Child Development



AUSTRALIAN CURRICULUM OUTCOMES:

Cross Curriculum Priorities: Aboriginal and Torres Strait Islander Histories and Cultures, Asia and Australia's engagement with Asia and Sustainability.

Key Concepts:

- Function (whale science)
- Change (conservation and sustainability)
- Perspective (subsistence and commercial whaling)
- Connection (spiritual and cultural outcomes)



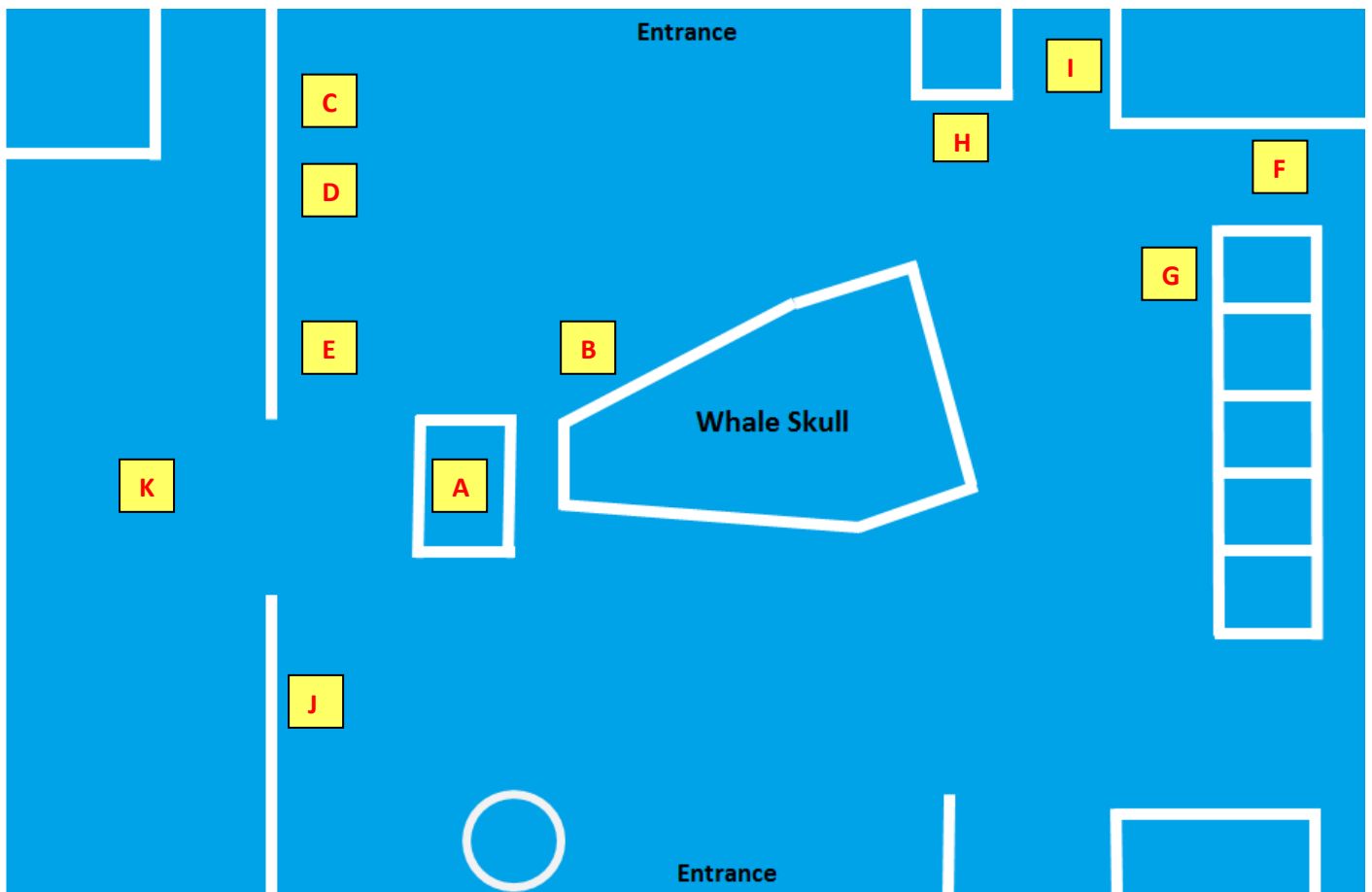
General Capabilities: ICT Capabilities, Ethical Understanding and Critical and Creative Thinking,

	Science	HASS / History
	<p>Inquiry Skills: Questioning and predicting, processing and analysing data and information and communicating.</p>	<p>Researching: Locate and collect relevant information and data from primary sources and secondary sources (Yr 5& 6) Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources (Yr 7)</p>
Year 5	<ul style="list-style-type: none"> • Living things have structural features and adaptations that help them to survive in their environment • Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions • Scientific knowledge is used to solve problems and inform personal and community decisions 	<p>Australian communities - past, present & possible futures</p> <ul style="list-style-type: none"> • Locate and collect relevant information and data from primary sources and secondary sources • Examine primary sources and secondary sources to determine their origin and purpose • Examine different viewpoints on actions, events, issues and phenomena in the past and present • Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships • Evaluate evidence to draw conclusions • Work in groups to generate responses to issues and challenges
Year 6	<ul style="list-style-type: none"> • The growth and survival of living things are affected by physical conditions of their environment • Scientific knowledge is used to solve problems and inform personal and community decisions 	<p>Australia in the past and present and its connections with a diverse world</p> <ul style="list-style-type: none"> • Locate and collect relevant information and data from primary sources and secondary sources • Examine primary sources and secondary sources to determine their origin and purpose • Examine different viewpoints on actions, events, issues and phenomena in the past and present • Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships • Evaluate evidence to draw conclusions • Work in groups to generate responses to issues and challenges • Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects
Year 7	<ul style="list-style-type: none"> • Interactions between organisms, including the effects of human activities can be represented by food chains and food webs • Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available • Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures • Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations • People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity 	<p>Sustainable pasts, present, futures</p> <ul style="list-style-type: none"> • Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources • Examine primary sources and secondary sources to determine their origin, purpose and reliability • Analyse primary sources and secondary sources to identify values and perspectives on people, actions, events, issues and phenomena, past and present • Interpret and analyse data and information displayed in a range of formats to identify and propose explanations for distributions, patterns, trends and relationships • Evaluate and synthesise evidence to draw conclusions • Develop and use criteria to make informed decisions and judgements

This inquiry trail unpacks the history and science of whales and the special attachment humans have with them, now and in the past. It investigates whale science, conservation, spiritual and cultural connections. Follow the points on the map and record your responses as you work through the learning challenges.





Students work through 11 learning stations, exploring 5 themes.







Whale Science - What have scientists learnt from studying whales?	
A	Douglas Mawson – Early Whale Science
B	Strange Strandings
C	Great Whales and Southern Australia
D	Cetacean Order
E	Squeaks, Clicks, Grunts and Song
Feared and Revered - How have cultures viewed and interacted with whales, now and in the past?	
F	Aboriginal Connections
G	Fijian Tabua and Wasekesaka
Whale Wars - Why is whale conservation important? What actions are in place to protect whales?	
H	Whale Wars
I	Whaling Today
A Special Bounty - Which cultures rely on hunting whales for subsistence?	
J	Arctic Subsistence
Industrial Slaughter - How and why were whales hunted in the past?	
K	Commercial Whaling












Inquiry Challenges:




Follow the points on the map to learn more about the history and science of whales.

Whale Science - What have scientists learnt from studying whales?				
Sub Theme	Inquiry question	Correct Response	Background Information for Teachers	Pre / Post Visit Learning Engagements
<p>A</p> <p>Douglas Mawson – Early Whale Science & Conservation</p> 	<p>In 1931- 32 the British, Australian and New Zealand Antarctic Research Expedition (BANZARE) led by Douglas Mawson visited Antarctica. They laid claim to much of the continent and studied the marine environment to find out if Antarctica’s waters were rich in natural resources from which governments and industry could make money.</p> <p>Photograph an instrument or tool the scientists used to tag and identify whales.</p>		<p>During the BANZARE expedition, they observed through research that whale species were being over harvested. In response to this finding, from 1935 many scientists shifted their energy and studies towards understanding whale behaviours and conservation.</p>	<p>Locate Antarctica on a map or globe of Earth. Discuss what students know about its climate and conditions. How cold might it get? Refer to the average maximum temperatures for Mawson station.</p> <p>Antarctica is known as the driest and windiest continent. Why might this be? It also has winters with a period of no or limited hours of daylight. It has summers with long hours of daylight. Think about how these conditions impact daily life. View the gallery of Antarctic images that show the types of conditions that are encountered.</p> <p>Pose the question: ‘What would it be like to live for a year in Antarctica?’</p> <p>Ask students to brainstorm their ideas and record them using a bubble or mind map graphic organiser. Encourage them to think about the challenges, opportunities, living conditions, types of weather, seasonal changes, what role they might play, what they might see.</p>
<p>B</p> <p>Strange Strandings</p> 	<p>This large whale skull is from a sperm whale that was stranded on the beach at Ardrossan on 8th December 2014. Once stranded, whales overheat quickly, often dying from heat exhaustion, lung collapse, stress or a combination of these.</p> <p>Take a photograph of the sperm whale’s skull.</p> <p>Use the large iPad to learn about the whale’s features. Record a video response describing the skull.</p>		<p>Reasons for strandings are unclear and scientists often carry out research on stranded whales to expand their scientific knowledge.</p>	<p>Locate Ardrossan on a map of South Australia. Calculate the distance and time to travel from the Adelaide GPO to Ardrossan, using various forms of transport (car, boat, aeroplane).</p> <p>Create an information poster providing information about whale strandings, why they occur and actions to do to support whales stranded.</p> <p>Useful websites for research: http://www.parks.tas.gov.au/?base=2984 http://155.187.2.69/coasts/species/cetaceans/conservation/rescue.html#why http://www.australiangeographic.com.au/topics/wildlife/2016/05/why-do-whales-strand-themselves</p>

<p>C</p> <p>Great Whales and Southern Australia</p> 	<p>There are many species (types) of whales, with different behaviours and anatomy.</p> <p>Use the chart to order the whales from the largest to the smallest.</p> <p>Whales have evolved (changed) over 50 million years. They were once very similar to cows and hippopotamuses, but have adapted to survive in aquatic environments.</p> <p>Use the rearrange tool to match the whale adaptations to the aquatic environment or conditions.</p>	<p>Blue whale (31metres, 130 tonnes) Southern Right whale (18m, 80 tonnes) Sperm whale (18metres, 60 tonnes) Humpback whale (16metres long, 50 tonnes)</p> <p>Flippers: front legs evolved to flippers to make them streamlined. Blood: carries more oxygen to allow them to remain under water longer. Blubber: to protect from freezing water temperatures – warm blooded. Echolocation: find and locate food in deep dark waters.</p>	<p>Sperm whales dive to great depths up to 1000 metres and hold their breath for up to 60 minutes to feed on giant squid. At these depths there is no light, great pressure and water temperatures between 0 and 3 ° C.</p>	<p>Size comparison chart: Create a pictorial chart that shows a number of different whale and dolphin species in order of size (length). Students devise Their own key for the scale. You can extend this into a physical outdoor maths activity – using materials such as pegs and string to “peg out” the length of each whale, measuring outside on a school oval or against a hall or gym building to create a visual graph. The graph should be labelled by creating cardboard titles with the name and length of each whale, also pegged into the ground or on a wall.</p> <p>Try this Blubber Investigation – to see how whales adapt to freezing water temperatures. https://tenplay.com.au/channel-eleven/scope/extra/season-2017/diy-science-blubber-glove</p> <p>Do you know of another animal that has adapted to its habitat? Find out more about this animal and compare its adaptations and habitat to whales.</p>
<p>D</p> <p>Cetacean Order</p> 	<p>Whales can be classified into 2 groups, toothed whales (<u>Odontoceti</u>) and baleen whales (<u>Mysticeti</u>).</p> <p>Baleen whales have plates of baleen, which hang down from their upper jaw. It filters the food from the water. Baleen is similar to bristles and is like the keratin substance found in human fingernails and hair.</p> <p>Look at the chart on display and take a photograph of a baleen whale.</p> <p>Take a photograph of the fringe sieve from a baleen whale’s mouth that separates the small plankton and krill from the water.</p>	<p><u>Baleen whales:</u></p>  <p>Blue whale</p>  <p>Humpback whale</p>  <p>Southern Right whale</p> 	<p>The distinction between whales, dolphins and porpoises is based on anatomical and genetic features. Whales tend to be large, 10 metres body length, although there are some smaller species. There is much clearer biological distinction between toothed (Odontoceti) and baleen whales (Mysticeti).</p> <p>South Australia is a very popular destination for tourists to whale watch. From Victor Harbor just south of Adelaide to the spectacular 90m high cliffs at the Head of the Great Australian Bight near the Nullarbor Plain. Hundreds of whales migrate to the safe waters to give birth to their calves. In SA, the most commonly seen large whales are the southern right whales and humpback whales because they come close to the coast. Sperm whales and blue whales are seen further offshore.</p>	<p>Plan and create an episode for a children’s TV Show – outlining many interesting facts about Cetaceans.</p> <p>To help your research play the interactive online 'Discovery Game' found on the Australia Government Department of the Environment and Government website.</p> <p>Write a glossary of whale science terminology.</p> <p>Create a crossword or word search including whale vocabulary and facts.</p> <p>Whales & their food Matching Game: Devise a game that the whole class can play, based on the idea of matching whales to the types of food they each eat. The object of the game is to match the cards of particular whales to the corresponding card that contains an illustration of the appropriate food type they prefer to eat.</p> <p>Create a diorama depicting the food web of a species of whales.</p> <p>View this video showing how the sperm whale uses echolocation to feed on giant squid https://www.youtube.com/watch?v=DT-TDegf-Xo</p>

	<p>Take a photograph of a toothed whale.</p> <p>Prey is an animal that is hunted and killed by another animal for food. Circle the prey for the Odontoceti (toothed) whales.</p>	 <p>Sperm whale Giant Squid, fish, Octopus and seals</p>		<p>Did you know humpback whales feed together by making bubble nets? Watch this National Geographic video to view whales feeding on herring. https://www.nationalgeographic.org/activity/whales-benefits-of-blubber/</p>
<p>E</p> <p>Squeaks, Clicks, Grunts & Song</p> 	<p>Listen to the whale sounds at the sound station and read the exhibit text.</p> <p>Do you agree or disagree with the following statement? Use the sliding scale to show your opinion.</p> <p><u>Whales are highly intelligent animals.</u></p> <p>Record a video response to support your point of view.</p>	<p>Highly social – communicate to mate and feed using echolocation. Human ears hurt with sounds over 120-130 decibels – can blow out ear drums.</p>	<p>A whale’s eyesight and sense of smell are not as developed as terrestrial mammals, but their hearing is excellent and whales communicate and hunt using this sense.</p> <p>Did you know that whales do not have vocal cords like other mammals and have developed special ways of creating sound in an underwater environment?</p> <p>Some species of baleen whale have been known to produce loud melodic tones often referred to as whale songs. Many of the toothed whale species communicate using a variety of high-pitched clicks and whistles which are distinct among each whale.</p>	<p>Listen to different whale sounds.</p> <p>Watch the video of free diver receiving a kiss from a Sperm Whale. Can you hear the echolocation clicks?</p> <p>Do other animals use echolocation to find food, navigate and communicate?</p> <p>Useful websites for Echolocation Research: http://www.discoverwildlife.com/animals/what-echolocation</p> <p>Sperm Whales are the loudest whales and have been recorded making sounds up to 230 decibels. The Space Shuttle take off is recorded at 170 decibels. Record an audio response to discuss reasons why it may be dangerous for humans to dive with whales.</p>
Feared and Revered - How have cultures viewed and interacted with whales, now and in the past?				
<p>F</p> <p>Aboriginal Connections</p> 	<p>Connections to the land and sea are important to Aboriginal people.</p> <p>Find and photograph an object made out of pearl shell (guwan) that shows Aboriginal peoples’ connections to the Humpback Whale (Minimb).</p> <p>Take a photograph of your favourite Aboriginal painting that shows a creation story about whales.</p>	 	<p>Whales feature in the myths and creation stories of many cultures.</p> <p>Australian Aboriginal people have extensive connections with whales. There is evidence that some coastal Aboriginal people benefited from beached whales including eating of the meat, using the whale bone to build huts and fashioned water carriers from ear bones. People whose totem animal was a whale were not allowed to eat the meat.</p> <p>Painting Jidirah and the Bunda Cliff by artist Verna Lawrie (2017) depicts the following creation story:</p>	<p>Kondili the Whale – A Ramindjeri and Kurna story Read the story aloud and discuss what can be learnt from the story about how to behave, the environment and spirit world. Retell the story in words and later through art, drama, song. Make puppets or costumes. Paint a relevant backdrop and perform the story. Make a video essay of it and/or record it in photographs of your art with text. https://www.youtube.com/watch?v=AA2BQxyH7FI</p> <p>For thousands of years, Aboriginal and Torres Strait Islander people have used the natural environment and its resources for both cultural and economic purposes in a sustainable way. The colonisation of Australia brought about rapid</p>

	<p>Record a video response outlining the different symbols and methods the artist used to portray meaning in your chosen painting.</p> <p>Aboriginal men worked in Australia's early whaling industry. They were often not paid for their work.</p> <p>Do you agree or disagree with the following statement? Use the sliding scale to show your opinion. <u>Aboriginal workers should have been paid for their work.</u></p>		<p><i>Jidirah was on the run from the Seven Sisters and tried to hide in the Wunna, the ocean but they found him, he tried to push into the Youla (the land) but they pulled him out, then he went up the coast and found a cave in the Bunda Cliff. He made his way underground and became a great serpent. Slithering beneath the Nullarbor his body formed the caves and blow holes. When you stand near the blowholes you can hear Jidirah breathing and roaring.</i></p>	<p>changes to Aboriginal and Torres Strait Islander people and has dramatically affected the land and the way people live.</p> <p>Watch 'Behind the News episode' about Dugongs. Dugongs have played an important role in the traditions and culture of Indigenous Australians, who've hunted them for centuries. A group in WA are tracking and tagging them to learn more about them and to protect them from extinction.</p> <p>Complete a Venn Diagram to show the similarities and differences between whales and dugongs – focusing on anatomy, behaviours, diet, habitats and threats (natural and human).</p>
<p>G</p> <p>Fijian Tabua and Wasekesaka</p> 	<p>In Fijian culture, people have a spiritual connection with the ocean, animals and objects. Tabua is made from a single whale tooth and is given as a gift, but never worn. Create an audio response detailing how Tabua is used in Fijian culture.</p> <p>Find and photograph a Wasekaseka - a Fujian necklace.</p> <p>Talk with your partner and come up with a reason as to why you think the Wasekaseka is rarely seen or worn in Fiji today. Record a video response.</p>	<p>Used as gifts and not worn. Engagement ring - Wedding Money – deposit for a house or land Written contract – agreement</p>   <p>Lack of whale teeth available. Whales are not being commercially hunted.</p>	<p>Wasekasekas were made mostly after Europeans arrived in Fiji, when whale ivory (sperm whale teeth) was more common and iron tools for splitting the ivory were introduced. Worn closely around the neck.</p> <p>Necklaces were amongst the most valuable of ornaments and were used as presentations to chiefs in securing their help in war and in domestic pursuits. Whales were not hunted in Fiji before European contact, though they were sometimes stranded on the shore. So until the early nineteenth century, whale ivory was only available in small quantities, and used by influential, high-status individuals.</p>	<p>Watch the BTN Segment about elephant ivory trade and answer the following questions.</p> <p>How did this story make you FEEL? What did you SEE in this video? What do you THINK about what you saw in this video? What does this video make your WONDER? What did you LEARN from this story?</p> <p>Research other animals that are endangered due to poaching/hunting practices though viewing posters about conserving and protecting animals from poaching for human gain. Choose an animal that needs protection and create a poster to persuade others to stop poaching. Support your poster with an information flyer about your animal and the threats it faces.</p>
<p>Whale Wars - Why is whale conservation important? What actions are in place to protect whales?</p>				
<p>H</p> <p>Whale Wars</p> 	<p>Whales are an important part of the marine food chain and in maintaining the health of our oceans.</p> <p>Do you agree or disagree with the following statement? Use the sliding</p>		<p>International Whaling Commission After centuries of slaughter many whale stocks had fallen to just 2% of pre-hunting levels and the industry was unsustainable. In 1946 the International Convention for the Regulation of Whaling was signed to establish an International Whaling Commission (IWC).</p>	<p>Despite the global ban of commercial whaling, Japan uses the provision in the 1946 whaling convention which allows whales to be killed for scientific purposes. The 'scientific whaling' provision has also been used by Norway and Iceland as a way of getting around the rules. However little, if any useful information comes from 'scientific whaling' and it is quite simply commercial whaling conducted under the guise</p>

	<p>scale to show your opinion. Whales should be hunted to make money. Record a video response to explain your opinion. Give 2 reasons as to why you agree or disagree.</p> <p>The International Whaling Committee banned commercial whaling in 1986. However, 3 countries continue to ignore this ban and kill thousands of whales every year for their meat. Use the drawing tool to circle the 3 countries that still undertake commercial whaling today.</p>	<p>Norway, Iceland and Japan</p> <p>Circle the 3 countries that still undertake commercial whaling</p> 	<p>The aim was to balance conservation with the requirements of industrial whaling.</p> <p>Whaling Now Some nations continue to hunt whales against the IWC. Norway and Iceland still hunt whales commercially – these nations set their own catch limits, and hunt only in their exclusive economic zones – the sea within 200 nautical miles of the coast. Japanese whaling ships operate under special scientific permits within their exclusive economic zone and the southern ocean near Antarctica. Japan continues to whale despite ongoing questions about the validity of their whaling program.</p>	<p>of science. Whaling countries issue their own catch limits, not the International Whaling Commission. Watch BTN segment to learn more about Japanese Whaling. Is there a better way to gain scientific research? Write a letter to the Prime Minister of Japan outlining your views on their ‘scientific whaling’ practices. Offer at least 3 alternative methods scientists can use to monitor and research whale populations and behaviour.</p> <p>Further inquiry research questions: Investigate the history of how people around the world have used whales. How is this different today? Why do you think it changed? Investigate Australia’s whaling history. How were whales used in the past? How is this different to today? Why did it? What is the Australian government’s position on whaling?</p>
<p>I</p> <p>Whaling Today</p> 	<p>There are a number of conservation groups that research and work to protect whales. Photograph an image that shows the actions by an organisation or individual that protects whales. Large scale whaling is no longer the greatest threat to whales. Many human activities have a negative impact on whale population and behaviours. Match the hazards to the corresponding consequence or impact to whales.</p> <p>What can you do to reduce your impact on our ocean ecosystems? Record a video response explaining some of the actions you can take to help protect our ocean ecosystems.</p>	 <p>Collisions between whales and large ships. Entanglement in fishing nets and lines. Whales are susceptible to consuming plastics. Noise pollution interferes with the communication of whales, making it more difficult to find mates.</p>	<p>Greenpeace Greenpeace is an independent campaigning organisation that uses non-violent direct action to expose global environmental problems and to force solutions which are essential to a green and peaceful future. Greenpeace's goal is to ensure the ability of the earth to nurture life in all its diversity.</p> <p>Sea Shepherd Sea Shepherd is an international direct action ocean conservation organisation. Their mission is to defend, conserve and protect our oceans and all marine wildlife. They act because our oceans and its inhabitants are dying from over-killing and habitat decimation. They take action to expose and confront illegal activities on the high seas.</p>	<p>Watch a short video about the Victorian Government’s efforts in helping entangled whales. http://splash.abc.net.au/home#!/media/2438593/whale-rescue-team</p> <p>You are an anti-whaling activist. Write and film a passionate speech encouraging the community to implement actions to protect whale species and their habitats. Ensure you use action words, emotions, images and facts and figures to support your argument/position.</p> <p>Write an article for your school newsletter about whales and current threats to whale populations. Educate readers on what they can do to reduce harm to whales and their habitats.</p> <p>Create a class art gallery of whale inspired art and craft. Challenge... Can your art and craft all be made out of recycled materials?</p> <p>Create a bumper sticker to promote the conservation of whales. Research the Great Pacific Garbage Patch. Collect and recycle plastic bottles. Donate the money collected from recycling to an organisation that benefits whales and/or marine environments.</p>

A Special Bounty - Which cultures rely on hunting whales for subsistence?

J

Arctic Subsistence



There are cultures today that still rely on hunting whales for food. The hunting of whales for food sources is called subsistence hunting.

Discuss with your partner why cultures in the arctic circle need to hunt whales for food. Think about the environment these people live in. **Record an audio response explaining why Arctic Indigenous cultures need to hunt whales for food.**

Find and photograph the image of Marie Rexford, showing her preparing muktuk (cured blubber) for Thanksgiving.

In Indonesia is an island called Lembata Lamalera is a poor village on the island and villagers have relied on hunting dolphins, rays, sperm whales and killer whales for hundreds of years. The hunting of baleen whales is not allowed.

Look at the photograph of the Lamaleran woman carrying blubber. Record an audio response explaining how the photograph makes you feel.

Very cold and dry climate. Not a lot of food sources available – especially fruits and vegetables and other mammals.



There are cultures today that continue to rely on hunting whales for food. The hunting of whales for food sources is called subsistence hunting. Across the Arctic circle, Inuit, Inupiat and Eskimo hunt bow head and grey whales.

For people living in these communities whale meat provides protein where food is difficult to grow and imported produce is expensive. Uncooked, cured whale blubber and meat supplement the Arctic diet with much needed vitamins, including Vitamin C.

Whaling underpins these cultures. Small scale open boat whaling requires considerable cooperation. It is preceded by ritual and followed by sharing the catch, often with celebration.

The IWC oversees Arctic and Bequian whaling, recognising them as Aboriginal Subsistence Whaling.

The village Kaktovik in Alaska catches one whale at a time so there is less time for polar bears to come while the meat is prepared.

In Lamalera, the choice cuts of whale meat go to the boat owner and harpooner. The lesser cuts are given to the crew and wider community. Oil from the spermaceti organ is shared equally, and is used to light lamps. Excess meat, blubber and oil are taken to neighbouring villages and traded for rice and bananas, which are difficult to grow in Lamalera.

Research more about Arctic Indians and their culture. (Inuit peoples of Greenland, Alaska and Canada)

Compare their culture and environment with traditional Indigenous Australians living remotely. (Diet, housing, hunting methods, climate, languages, clothing, celebrations and art and craft)

Useful websites for research:

<https://www.warpaths2peacepipes.com/native-american-indians/arctic-indians.htm>

<http://beyondpenguins.ehe.osu.edu/issue/climate-change-and-the-polar-regions/people-of-the-whale>

<http://static.ehe.osu.edu/sites/beyond/penguins/downloads/feature-stories/igloo-45-text.pdf>

Put yourself in the shoes of the Lamaleran people. Why is hunting whales important to you and your family? What actions do you, the Lamaleran's, implement to ensure whale hunting is sustainable?

Where is Lembata, Indonesia?

Draw a map showcasing where Lembata is with regards to Australia and within Indonesia.

Find out 5 interesting facts about Indonesia.

Industrial Slaughter - How and why were whales hunted in the past?

K

Commercial Whaling

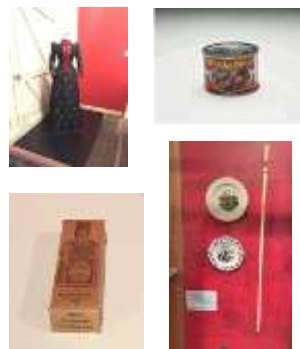


Whaling became an important industry in the 19th century when industrialisation created a demand for oil and whale products. The killing of whales to make money is called Commercial Whaling. **Find and photograph an item used and sold from commercial whaling.**

Scrimshaw is the art of engraving marine ivory. **Find and photograph an item made out of whale teeth.**

Circle the whale which is slow moving with plentiful blubber and floats when killed.

Find the harpoons on display. Take a photograph of the one you think has the best design.



The Southern Right Whale



Whales were hunted commercially from the early Middle Ages. Searching for new whale populations, nations sent fleets across the Northern Atlantic in the 1550s – a pattern repeated across the world’s oceans. They were seeking whale oil, baleen and sometimes meat. While early hunting methods were simple, rowing boats and hand held harpoons were used to devastating effect. The Japanese began using net whaling in 1675 at Taiji was industrial with dedicated shore stations.

Whaling became an important industry in the 19th Century when increased industrialisation created the demand for the lighting of oil which could be produced from whale blubber. Modern technology was introduced to make hunting more efficient. By 1900s whaling was fully mechanised and no whale species was safe. Iron hulled steamships pursued the fastest and largest whales and cannons and grenade harpoons were used to catch whales. In the 20th Century whale chasers used powered ships which employed cannons mounted on the bow which fired huge grenade tipped harpoons. These whale chasers were joined by factory ships that processed the whales at sea. This processing was developed and shared by Norway and this approach to whaling is sometimes called the ‘Norwegian method’. Whaling reached its peak in 1937 when over 40 000 whales were killed.

Whalers use hand held harpoons from small the bow of a tena (small boat) is extremely dangerous. The harpooner leaps from a platform on the bow of the tena and uses their body weight to drive in the harpoon. Lamaleran’s rejected a modern whaling ship offered in the 1970’s by the UN’s food and Agriculture Organisation because it caused unrest in the village.

Create a timeline on the history of commercial whaling including technology and methods.

Useful website for research: <http://www.whalefacts.org/history-of-whaling/>

Create a poster/billboard advertisement - advertising a whale product – think of your audience, images and language and historical contexts. For ideas [Google images](https://www.google.com/search?q=whale+product+advertisements) showing whale product advertisements – whale oil, corsetry and whale meat.

Plastic was invented to help replace the need for using ivory for corsetry and buttons. Research the harmful effects of plastic on the marine environment and human health.

Create a podcast to promote messages.

Design your own harpoon. Give a description of its features and how the Lamaleran men could use it.