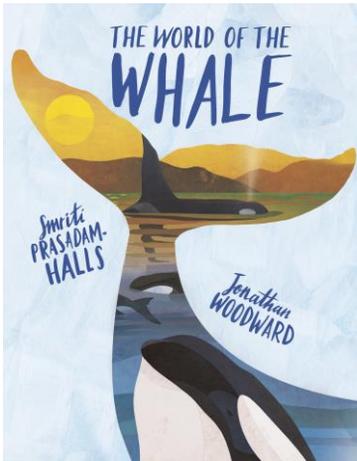


The Big Topic: Conservation



The World of the Whale

Smriti Prasad-Halls and Jonathon Woodward

Lesson ideas and Activities

Content aimed at Year 3 and Year 4, with links made to relevant National Curriculum content for those year groups.

Conservation – if we want our children to be the pioneers of a better world, the protectors of our world, we must instil in them curiosity, care and compassion. If we show them the beauty of our planet and all its creatures, they will find the reasons and the motivation to care for themselves.

Contents:

[-British Science Week](#)

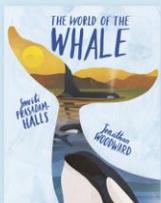
[-Maths](#)

[-The Arts](#)

[-Science](#)

[-Literacy Outcomes](#)

Resources produced by Reading Rocks



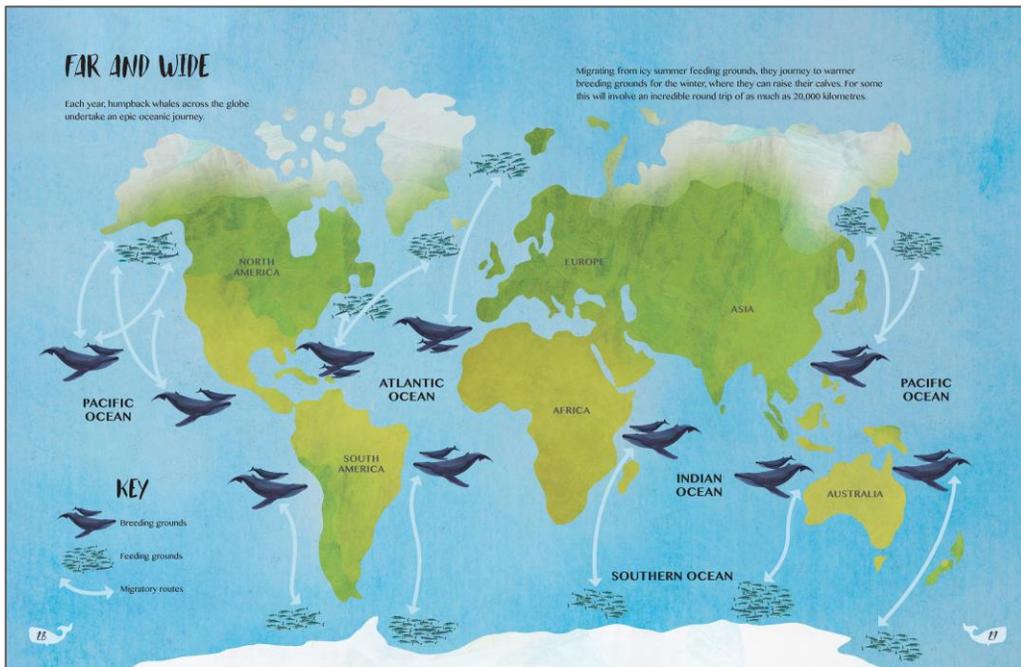
The Big Topic: Conservation – The World of the Whale

British Science Week

[British Science Week](#) takes place from 8th to 17th March. The theme for this year's British Science Week is 'journeys'. In this section, we will look at ways you can explore journeys through *The World of the Whale*.

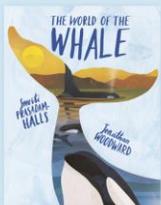
Migration Journeys:

- Take a look at pages 26 – 29 together and discover why whales make these epic journeys.
- Compare with journeys children have made themselves. Where did they go? Why did they go? Has anyone travelled as far as a whale migration journey?
- Encourage pupils to ask scientific questions, inspired by the information they have read.



Lesson Ideas:

- Make use of online mapping tools or apps to track the migration journey of a chosen whale. Use pages 28-29 to select a whale pod and support children to match up locations with a school atlas, a world map or a mapping tool. This can build on current geography learning e.g. if you are studying South America, why not choose the whales that migrate to the coast of Brazil. Mapping tools can give (rough) journey lengths. You may like to compare journeys and discover which whale travels the furthest.



The Big Topic: Conservation – The World of the Whale

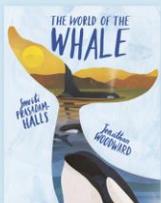
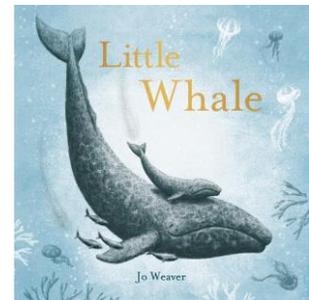
British Science Week

Lesson ideas cont'd:

- Create co-ordinate grid overlays for pages 28-29 with A3 acetate or an empty A3 laminating pouch and some dry wipe pens or permanent markers. This is a great way to develop children's use of grid references. Encourage children to record the journey of the pods shown in the book, using grid references. You could even link up with computing skills, creating algorithms for a whale's journey. How about getting children to play a version of 'Battleships' with this page, by plotting on pods instead of ships?
- Create a whale diary for the migration journey. Children could include the places passed, the changes in sea temperature, the length of the journey, the reasons for the journey.
- Use an ocean temperature map (you can find them online). Use pages 28-29 to look at the temperatures of the ocean areas the whales occupy at different times of the year. Encourage children to gather and record this information in various ways, such as a table or bar graph. Then, children can compare the temperatures. This will build on scientific and mathematical skills with a real purpose.

Other Books to share:

- *Little Whale* by Jo Weaver (9781444937503). [Find out more.](#)



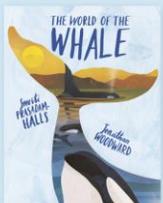
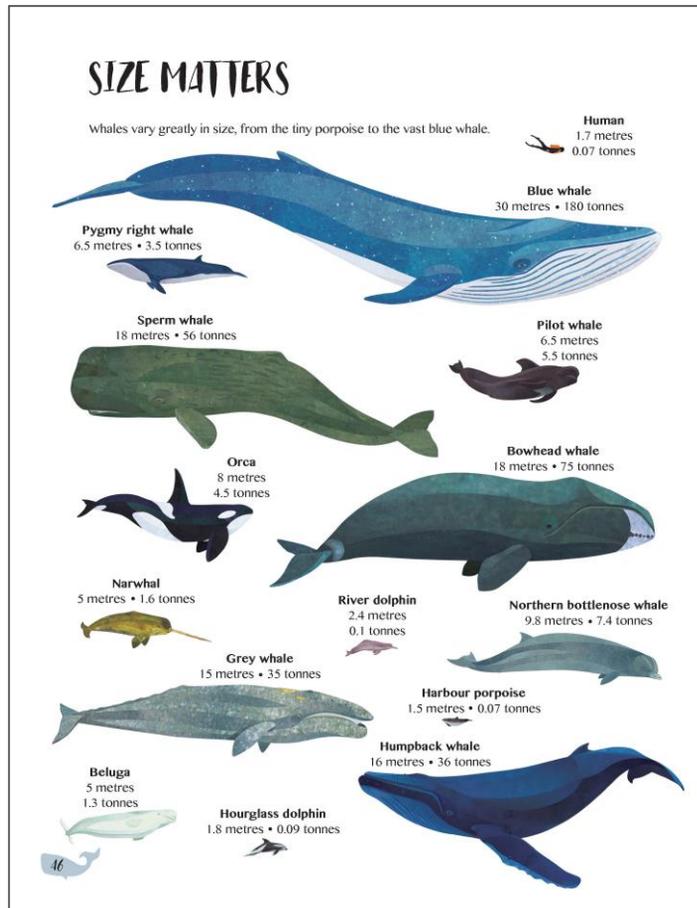
The Big Topic: Conservation

Maths

Using mathematical skills based on a book can really help children understand the purpose of maths in the real world. You will find that it can increase pupil engagement and motivation to learn. In this section, we will look at ways to apply mathematical content from the Year 3 and Year 4 National Curriculum Programmes of Study.

Measure:

- Take a look at page 46 and discover the size of a variety of whales.
- Do children know anything that is a similar length?



The Big Topic: Conservation – The World of the Whale

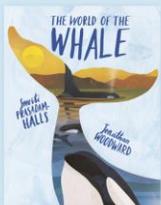
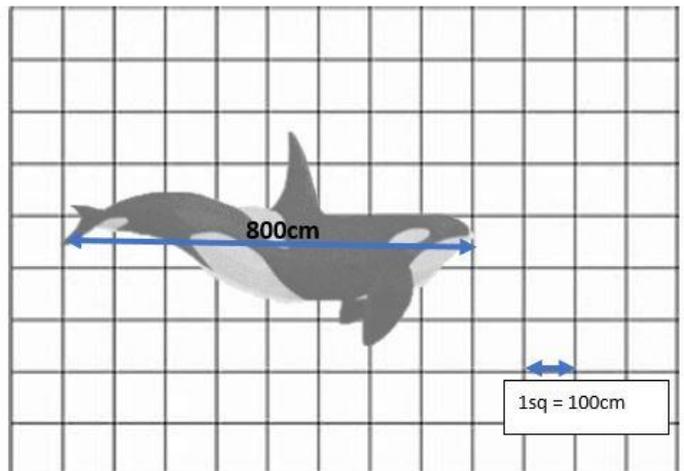
Maths

Lesson Ideas:

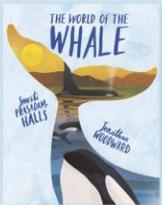
- **Ordering the whale lengths.** Use the whales on the [Ordering and Sorting sheet](#). Children should match them with the whales on page 46 and note their length. Then, they should cut and order them.
- **Practise using the $< > =$ symbols** to compare the whales e.g. Sperm whale $>$ Pilot whale $>$ River dolphin.
- **Converting measures.** Use the table on the [Whale Lengths sheet](#). Children should find the length in metres from page 46, then convert to centimetres.
- **Take the learning outdoors.** Use a ball or foam javelin to see how far children can throw. Get measuring with a long tape measure or trundle wheel. Who can throw as far as a Sperm whale or a Humpback whale? Choose a whale and draw its length with chalk on the playground. Get children to lie head to toe to see how many of them it takes to be as long as the whale.
- **Practice rounding skills.** Which whale rounds to 3m metres? Round the length of the Harbour porpoise to the nearest metre or 10cm.
- **Try a matching activity** to practise addition e.g. find 3 whales that have a total length of 15.4metres (or 1540cm); find 2 whales that have a total length less than 10metres (or 1000cm).
- **Practise multiplying three-digit numbers by one-digit numbers** with a formal written layout e.g. what is the total length (in cm) of 6 River dolphins lined up head to tail? A visual representation will support some children - Narwhal $\times 3$
- **Try the inverse** e.g. there are 4 whales each the same length lined up head to tail. The total length is 2600cm. Which whales could they be? A bar model representation may support this learning:

2600cm			
?	?	?	?

- **Try drawing the whales to scale on squared paper.** Each square could represent 50cm or 100cm, supporting children's counting in multiples. Draw a line for the complete length first, then sketch the rest of the whale.



The World of the Whale – Ordering and Sorting



World of the Whale – Whale Lengths

Whale:	Length in metres (m):	Length in centimetres (cm):
Pygmy right whale		
Blue whale		
Sperm whale		
Pilot whale		
Orca		
Bowhead whale		
Narwhal		
River dolphin		
Northern bottlenose whale		
Grey whale		
Harbour porpoise		
Beluga		
Hourglass dolphin		
Humpback whale		



The Big Topic: Conservation – The World of the Whale

The Arts

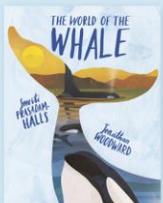
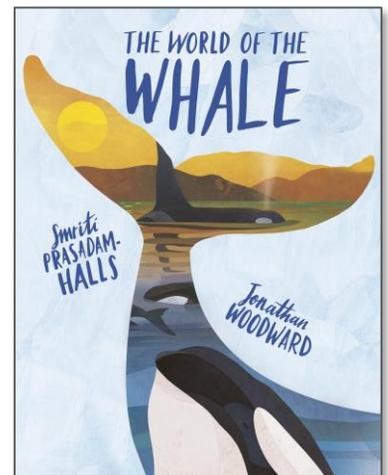
For those children who are not too keen on reading yet or find it tricky, using the arts (in which they may be more skilled or engaged in) can develop a route into reading for pleasure. In this section, we will look at ways the book can be used as a base for art, music and dance activities.

Music:

- Take a look at pages 14-15 together to discover the haunting and wistful song of the whale.
- It would be great to listen to some recordings of whale song (you can find these online).
- Whale song includes the following – clicks, whistles and calls. Explore how children can make these sounds with their voice and body percussion.
- The whale song rises and falls, builds and repeats. Play some copy and repeat games with voices to model to pupils how PITCH can rise and fall, how VOLUME can rise and fall, how TEMPO can rise and fall. Try building and repeating – sit in a circle, or try in pairs – the next person adds a new note to the pattern, the next repeats and builds on another note, and so on.
- Children could compose their own whale songs. Encourage children to include all the features above that they have explored together. Think about how they can note this down. Will they use a symbol for a click, whistle, call? How can they show it is worth 2 beats, 4 beats etc? Encourage the use of a staff for showing the pitch of call notes.
- Allow children time to practise and refine their compositions before performing to the class. A great way to capture this would be to add as a sound file to a video of whales (or photo montage) with iMovie or Windows Movie maker.

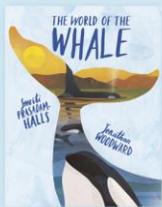
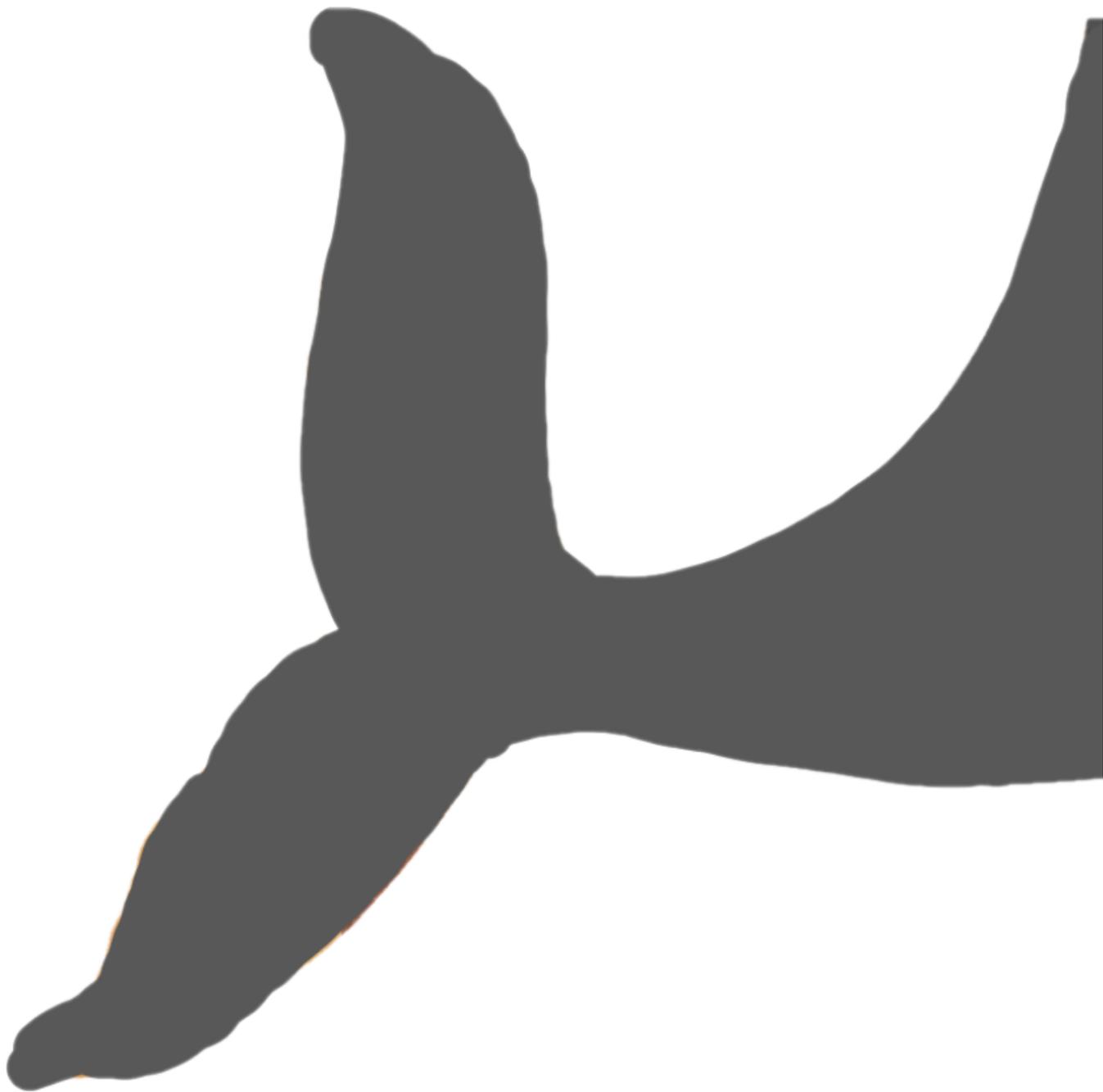
Art:

- Take inspiration from the front cover design.
- Use the [template](#) to create a 'window' to select a section of a page to sketch. You could also use photographs of whales.
- The window can be used as a stencil to draw the tail 'window' in children's sketch books or final pieces of artwork.
- Try using coloured pencils and watercolours for the same image and compare their effect.
- A collection of these artworks would make a great display. You could arrange for the children's work to be presented to families as a gallery. Donations could be made to [Whale and Dolphin Conservation](#) to purchase the artwork.



Print this sheet on card.

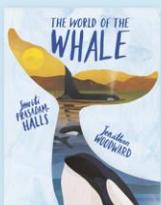
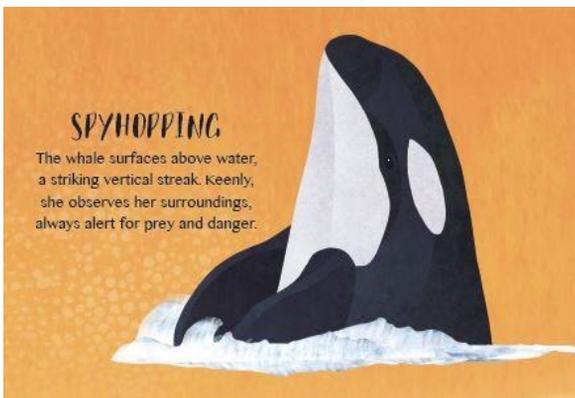
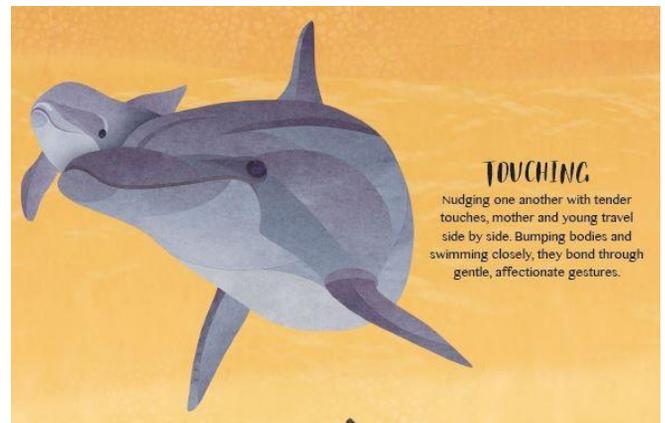
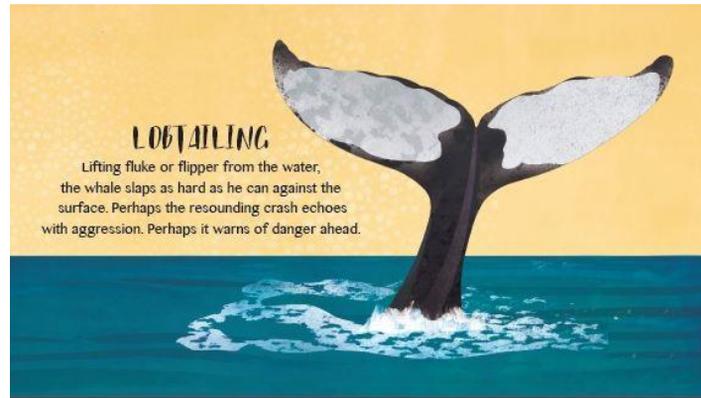
Cut out the whale tail silhouette as a window.



The Big Topic: Conservation – The World of the Whale

Dance:

- Read pages 18-19 together to discover the clever signals of the whale.
- Explore ways children can make these signals and shapes with their bodies. Can they do it individually? Collaboratively?
- Encourage children to create short dance sequences that include these signals to some whale song music, or a piece of music that has a change of dynamic. Which signal reflects the mood best?

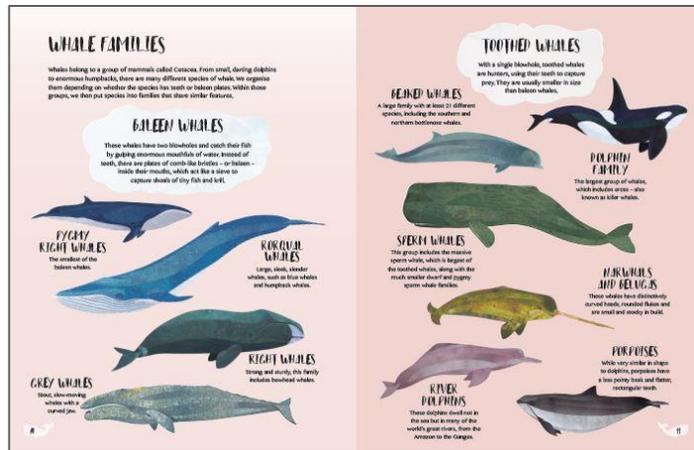


The Big Topic: Conservation – The World of the Whale

Science

This book is a great way to make science learning real. In this section, we will look at using the book as a hook into scientific knowledge acquisition and working scientifically.

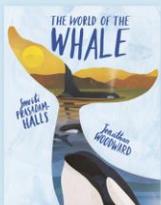
Grouping Living Things:



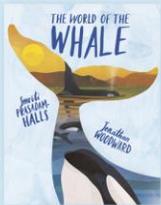
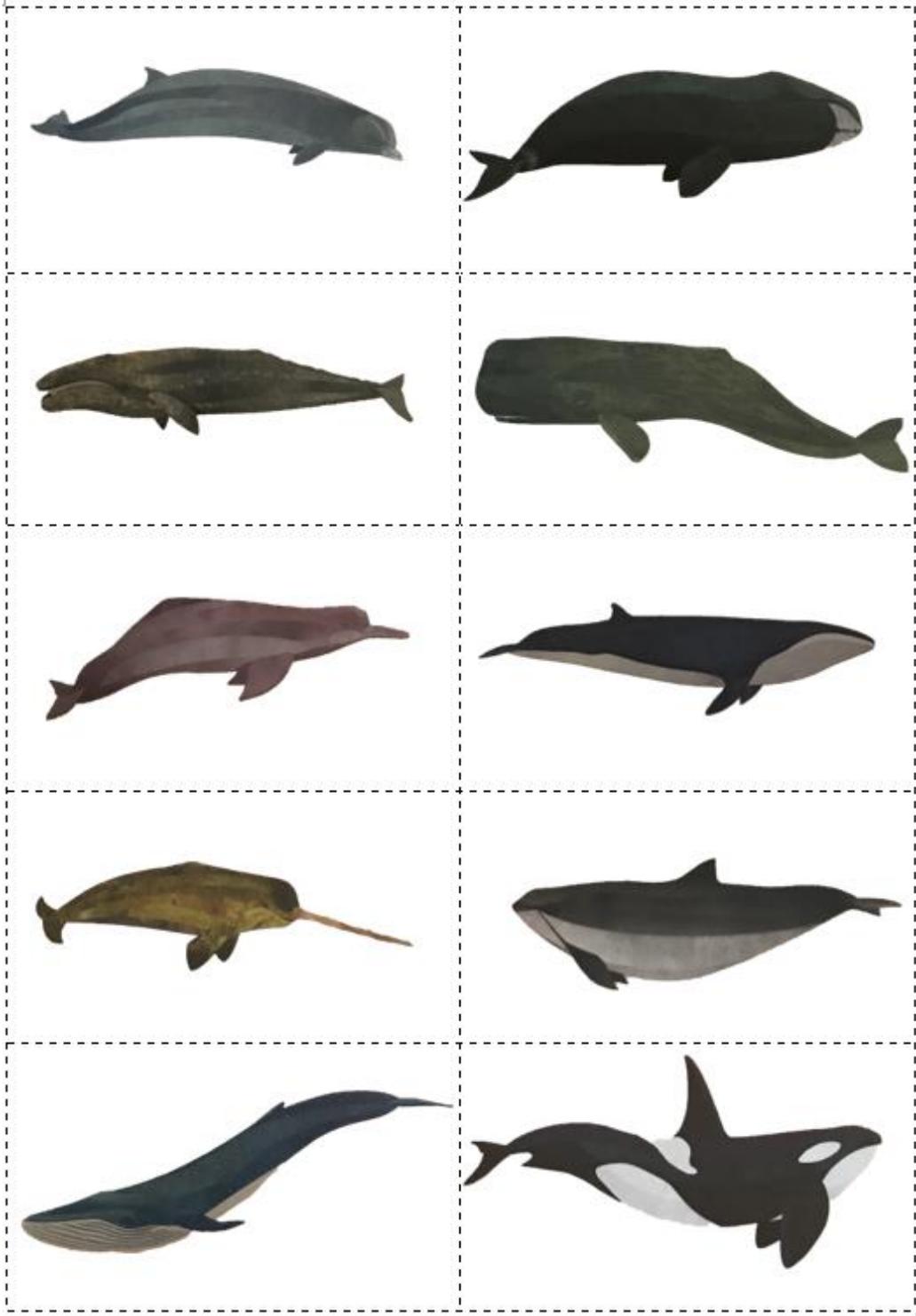
- Before reading the pages on Whale Families (pages 10-11), talk to the children about ways scientists group living things. Use the [Whale Families sheet](#) to allow children to discuss and experiment ways to organise the whales in different ways. Reading pages 8-9 together may give them some ideas for sorting criteria e.g. skin colour, size, fluke shape, flipper size. Encourage children to use the correct terminology. Children will be working scientifically: identifying similarities and differences and asking questions.
- Now, read and share together pages 32-33 and discover the two main groups of whales: baleen and toothed. Ask children to look at the way they have grouped the whales. Which ones do they think are baleen and toothed?
- Finally, look together at pages 10-11. Do the groupings match children's ideas?
- Following on, you may like to get children to select a whale to research and create a fact card or Top Trumps card for it. Children could design a new whale that matches the criteria of the group.

Nutrition and Food Chains:

- Start by discussing the diet of a whale. What do children think they eat? How much do they consume?
- Share together pages 32-33, 36-37, 44-45 and discover some answers.
- Try creating some visual food chains for various whales, noting producers, predators and prey.
- Encourage children to discuss and experiment what may happen if there was a change in any stage of the chain e.g. what if the number of whales declined? What if the fish that whales eat have eaten micro-plastics?



The World of the Whale – Whale Families



The Big Topic: Conservation – The World of the Whale

Literacy Outcomes

Whilst working through these cross-curricular book-based activities, your children will acquire a great deal of knowledge, and hopefully their own voice on the subject. The best writing comes when the purpose and knowledge are real.

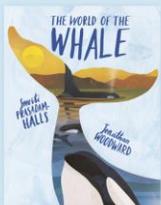
In this section, we'll look at some SPaG in context and some literacy-based outcomes for sharing this new knowledge.

Reading:

- Throughout your reading of the text, make a point of using the contents pages, the index, titles and subtitles.
- Discuss the structure and the purpose of the book.
- Compare to other books you have shared together.
- Ask children to discuss their favourite parts of the book and support them in sharing why.
- Many of the activities in previous sections will allow children to retrieve and record information.

SPaG:

- Use of conjunctions will be useful in a non-fiction piece of writing or speaking, allowing children to convey detailed facts with precision.
- Focus on the use of 'when'. Give children time to read chosen section e.g. page 6-7. Then give them sentences to complete:
 - Whales exhale into the air, when
 - Whales burst up to the surface, when....
- Repeat this activity with 'if' and 'because'. All the time, children are building a bank of sentences they can use or mimic the structure of. This is also a good way to build in vocabulary you want to children to learn and include.
- Check out the use of the possessive apostrophe on pages 8-9 – a whale's flippers, each whale's flukes.

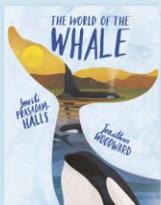


The Big Topic: Conservation – The World of the Whale

Literacy Outcomes

Composition:

- Encourage children to understand the idea of organising paragraphs around a theme, using the [What's the Title? sheet](#). Chop the sheet up and sort the sentences into groups. Children can then come up with a sub title for the paragraph. Some children may need a few clues – suggest the ideas of FOOD, SWIMMING and SOUNDS. Extra challenge can be given, by asking children to looking for the best order for the sentences. Encourage them to look for the NOUN used in the first (or topic) sentence, and PRONOUNS (to avoid repetition) used in the following (or detail sentences). This will help them build their own cohesion in their writing.
- Introduce the idea to children that they will write an information page/book with everything they have learnt about whales. Give children time to gather and group their own ideas. This can take the form that suits your children and class the best but get them to be clear about the theme of the paragraphs and be sure the notes match the theme. Peer feedback would be useful here, as children can spot when the notes don't fit.
- The final piece may take the form of a non-chronological report, or you could be a little more creative:
- World of the Whale presentations – these could be to the class, or maybe record them as a video or podcast and put them on the class blog.
- World of the Whale books – children will take great pride if books are published for families or your school library. Maybe you could include some DT skills and create a pop-up page.
- World of the Whale assembly – bring in the families to share all of the children's learning. You could even take donations for Whale and Dolphin Conservation.



What's the Title?

Can you sort the sentences into three groups? Try to look for sentences about the same idea or theme. What subtitle would you give each group of sentences?

Trawling the ocean, scouring the seas, whales are often on the hunt for food.

Their slender bodies easily glide through the sea.

A haunting, wistful song echoes through the ocean.

Whether capturing prey alone or gathering in groups, they are master feeders.

Regular patterns of notes resound, as the tune of the humpback whale rises and falls.

Whales are very skilful swimmers and well suited to life in the sea.

Building and repeating, over and over again, the soulful song can continue for several hours.

They have smooth, rubbery skin with an oily surface to help them move quickly under water.

A whale's flippers help it to change direction and balance, so that it can swim with skill and confidence.

