

# Sea Watch Investigator Task

## Measuring sizes of Cetaceans - How big are the Cetaceans in our seas?



**Objective** - To investigate sizes and scales of cetaceans that can be observed in British waters.



**Resources** - Measuring tapes or wheel, name and size cards (laminated), How big am I worksheet, information for scale drawings, extension activity: Whale and Dolphin Breath Chart.



### National Curriculum Targets and Key Skills

#### Science KS1

##### **Scientific enquiry - investigative skills**

2b use simple information sources to answer questions

2h make simple comparisons and identify simple patterns or associations

#### Science KS2

##### **Scientific enquiry - investigative skills**

2h - use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner

#### Numeracy KS1

##### **Measuring**

Year 1 - measure and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments

Year 2 - compare and measure lengths, choosing and using standard units (m, cm) and suitable measuring instruments

#### Numeracy KS2

##### **Handling data**

Year 3 - answer a question by collecting, organising and interpreting data

Year 4 - answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables and diagrams

Year 5 - answer a set of related questions by collecting, selecting and organising relevant data

Year 6 - solve problems by collecting, selecting, processing, presenting and interpreting data

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### What to do -

1. Discuss with children how big they think cetaceans can be. For a great introduction and example, watch the footage of the Blue Whale on The Blue Planet DVD Disc 1 0:30 - 2:44. As well as beautiful photography, it also gives you some amazing facts, for example, its tongue is the same weight as an elephant, its heart the same size as a car and some of its blood vessels are so big you could swim down them!
2. Explain that with the exception of the Blue Whale, all the cetaceans we are going to study today can be observed (if at times, rarely!) around the coast of Britain. Divide the children into 8 groups, each with a name card of a cetacean.
3. Ask children to arrange themselves in order from the smallest to the largest cetacean. **(N.B. sizes are based on average size of the male for most species.)** You can find information and photographs about the individual cetaceans on the Sea Watch website - <http://www.seawatchfoundation.org.uk/speciesid.php>
4. Go outside and, using a measuring tape or wheel, ask the children to measure and mark the size of their cetacean. Choose a member from each group to stand holding the card for the rest of the class to see. The Blue Whale group will be in the distance!! Cards could be attached onto a wall or pieces of dowling in the ground and left as markers for all to see.
5. Either outside or in the classroom, ask questions relating to the size. For example, how much bigger is the Bottlenose Dolphin than the Harbour Porpoise, the Fin Whale than the Orca, etc.

### Extension activities -

1. Complete the How Big am I worksheet, marking on the sizes of different marine species and humans...! For information on names and sizes of species, see information sheet.  
*Suitable for Lower KS2.*
2. Using the sizes of cetaceans from the activity, children can make scale drawings of the species investigated. See scale drawing activity sheet.  
*Suitable for Upper KS2.*
3. **Numeracy investigation.**  
Using the information provided on the Whale and Dolphin Breath Chart (i.e. the maximum amount of time for which cetaceans can hold their breath), children can investigate the following question by producing a graph, either by hand or using ICT-  
***Is there a direct relationship between the size of a cetacean and the time between breaths?***