

WELCOME TO SCIENCE LITERACY WEEK AT OCEAN WISE

Live-streaming from the Vancouver Aquarium.

We will start in just a moment.

**Science
Literacy
Week**


ocean wise®

Citizen Science – Cetacean Sightings Network Mapping Activity AND They're Tiny, They're Everywhere – Microplastics!

Our third live-stream to celebrate Science Literacy Week

**Join us tomorrow 10:00 – 11 for the continuation of our
microplastics activity AND Dive into Howe Sound**

**Science
Literacy
Week**



ocean wise®

**Science
Literacy
Week**

**Whale Location Mapping Activity –
what can this data tell us?**



Whale Observations – Where it began...

- For years, research scientists at Ocean Wise have been studying the cetaceans in our coastal waters.
- One of the biggest barriers is that scientists can only be in one place at a time.
- Scientists suspected that the resident killer whale populations of British Columbia were in trouble – but needed to build a more accurate picture
- Citizen Science to the rescue! Empowering the recreational and commercial boaters - the British Columbia Cetacean Sightings Network created a place for all sightings to be catalogued and stored!

<https://wildwhales.org/app/>



Counting Whales – Where it began...

- For years, research scientists at Ocean Wise have been studying the cetaceans in our coastal waters.
- One of the biggest barriers is that scientists can only be in one place at a time.
- Scientists suspected that the resident killer whale populations of British Columbia were in trouble – but needed to build a more accurate picture
- Citizen Science to the rescue! Empowering the recreational and commercial boaters - the British Columbia Cetacean Sightings Network created a place for all sightings to be catalogued and stored!

<https://wildwhales.org/app/>

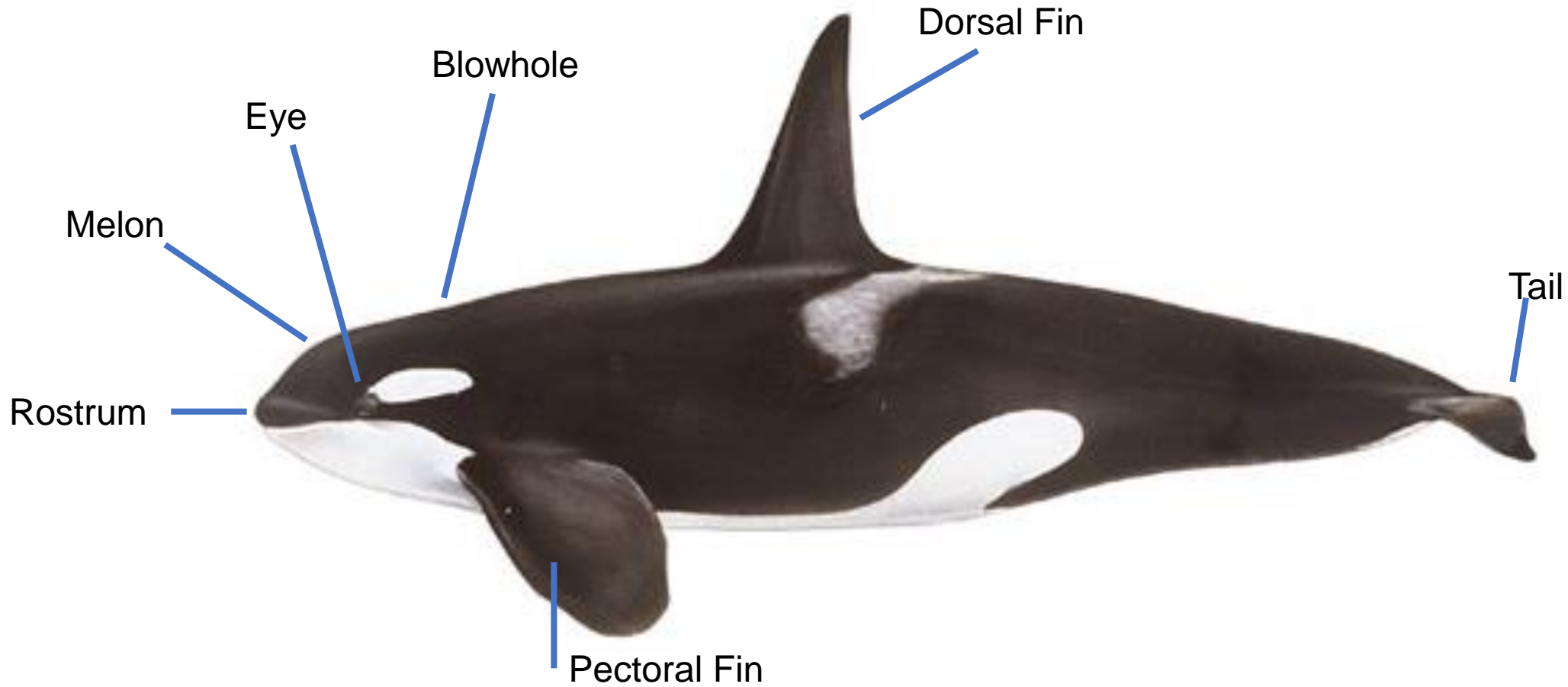


Why report your sightings?

- Scientists need your help!
- By collecting the information from every person out on the water – sailors, fishermen, ferries, pleasure boats – scientists and researchers can learn more about whales.
- How do researchers use the information?
- Information is used to better understand how many whales there are, where the whales are and importantly – to better understand habitat use of BC's threatened and endangered cetaceans



Parts of a Killer Whale



Humpback Whale (Baleen Whale)

Megaptera novaangliae

Size: 16m; thick, round body shape

Colour: black, varying amounts of white on undersides, throat and pectoral fins

Dorsal Fin: 2/3 of the way along body, variable shape, resting on “hump”

Blow: 2 – 3 m high, bushy

Surface Behaviour: acrobatic

Group size: often alone, may be seen in groups of up to 10-15 when feeding or socializing



Killer Whale (Toothed Whale)

Orcinus orca

Size: max 9m

Colour: black back, white belly, grey saddlepatch, white eyepatch

Dorsal Fin: up to 1.8m tall, centre of back

Blow: low and bushy

Surface Behaviour: often surface in groups or in unison, aerial behaviours common (breaching, spy-hopping, tail-lobbing, pectoral fin slapping)

Group size: 2-5 (transients), 5-30 (residents) 30-80 (offshore)



Harbour Porpoise (Toothed Whale)

Phocoena phocoena

Size: max 1.8 m (smallest cetacean in BC)

Colour: dark brown to grey, lighter on belly, distinct line from mouth to top of pectoral fin

Dorsal Fin: triangular

Blow:

Surface Behaviour: avoids boats, does not surface completely out of the water

Group size: alone or in small groups of 2-5, large feeding groups in spring



Pacific White-sided Dolphin

(Toothed Whale)

Lagenorhynchus obliquidens

Size: max 2.3 m

Colour: backside black, sides striped light and dark grey, belly is white)

Dorsal Fin: curved towards back, middle of back, bi-coloured

Surface Behaviour: very active, leap right out of the water, will approach boats to bow-ride

Group size: from 1 to 1000 (mean group size 62)



How to tell one type of Killer Whale from Another



Resident Killer Whale

Resident killer whales eat fish, specifically Chinook salmon

Rely on echolocation when hunting

Travel in groups of 5 – 30 animals

Southern Residents – range from Desolation Sound to California

Northern Residents – range from Northern Vancouver Island to south eastern Alaska



Transient or Bigg's Killer Whale

Transient Killer Whales eat mammals like – seals, sea lions, and other whales

Travel in smaller groups (2 -5 animals)

Vocal during and after a kill, otherwise quiet

Range California to Alaska



Offshore Killer Whale

Offshore Killer Whales eat fish, mostly sharks (especially sleeper sharks).

Travel in groups of 30 – 80

Range Typically seen along the Continental Shelf, usually about 15Km from shore

- **Vessel Disturbance & Noise** – when vessels are close to whales, it can make them change their behaviours eg travel instead of forage
 - Killer whales use echolocation for socializing and to hunt for food. Vessel noise can also completely mask echolocation and communication
- **Collisions** – between whales and boats which can be fatal for whales and can cause significant damage to boats
- **Entanglement** – debris such as fishing nets is a hazard to whales and dolphins who can become entangled in the debris and ultimately drown.
- **Contamination** – bioaccumulation – pollution and toxins that build up in whale's bodies faster than they can eliminate them

Let's Get to Work!

- Now it is your turn – help us map the sightings data!



Science Literacy Week

With Ocean Wise


Bring Ocean Wise Research into your Classroom

- **Sept 24**
 - Howe Sound Research Team – Dive Observations
- **Sept 24**
 - Plastics Lab – Microfibers
- **Sept 25** – Biodiversity and Stewardship Links with Ocean Wise and Musqueam author and artist Melaney Gleeson Lyall

THANK YOU FOR YOUR PATIENCE WE ARE STILL LIVE

We will resume the program as soon as we have resolved the technical challenge.

**Science
Literacy
Week**


ocean wise®