

Who are the swimmers of the sea?

NEKTON

1. Mammals

2. Cartilaginous fish

- sharks
- rays
- skates

3. Bony fish

- commercially harvested
- “all other fish”
- deep-sea species

4. Mollusks

- squid
- cuttlefish

5. Reptiles

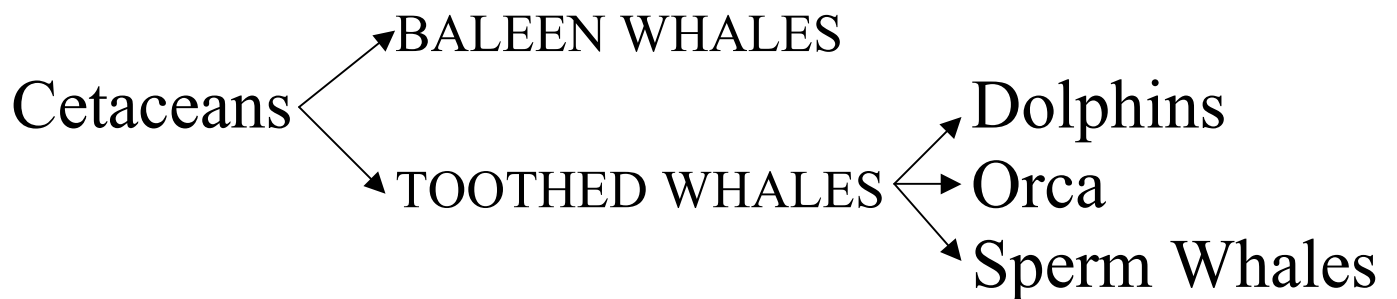
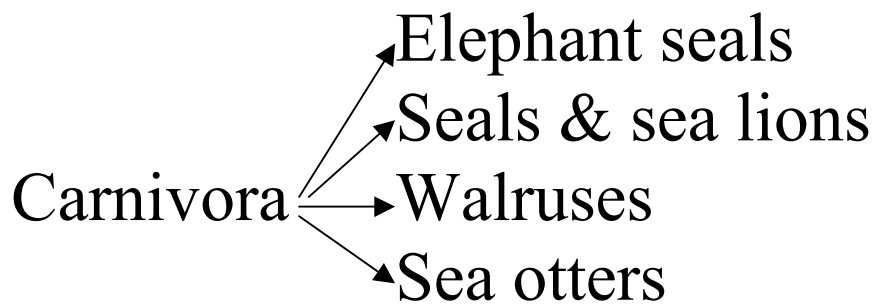
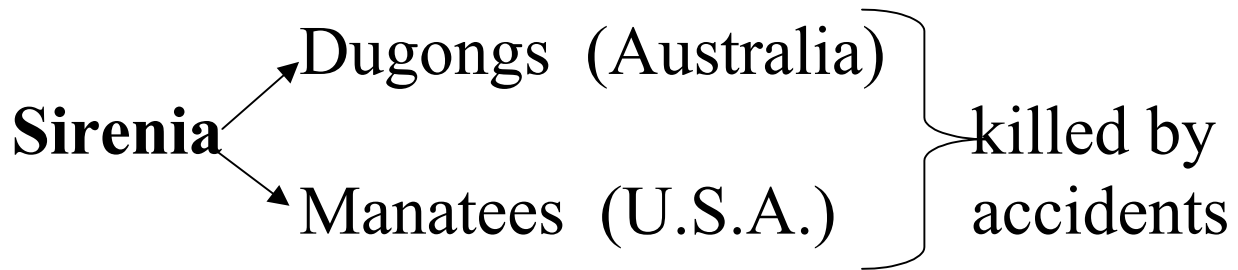
- turtles
- snakes
- iguanas
- crocodilian

6. Birds

- albatross
- penguins
- sea gulls
- ⋮
- ⋮

} ~ 250 species

What do marine mammals have in common?



Common features:

1. Stream lined body

- look like nuclear submarines
- very efficient swimmers

2. Thermoregulation

- heat radiating center in the body
- extremities lose heat
- if too cold – circulation to flippers, fins, tail, legs,... shuts down
- go through large temperature changes from bathing in tropical ocean to diving really deep into the ocean

3. High metabolism

- mammals eat more than cold blooded animals to keep their body temperature constant
- eat few months (during high productivity season) and then don't eat (lose 30% of the body weight)

4. Osmotic regulation

- skin impermeable
- baleen whales eat very salty food and have to get rid of extra salt
- toothed whales eat other mammals and fish that is less salty than plankton

5. Complex societies

- socially similar to elephants
- use sound to communicate (clicks, whistles, thumps..., low & high frequencies)
- echolocation
- can communicate over long distances
- live in families
- protect their calves and disabled members
- sometimes hunt in packs
- very curious
- travel long distances
(Alaska – Antarctica;
10,000 –20,000 miles per year)