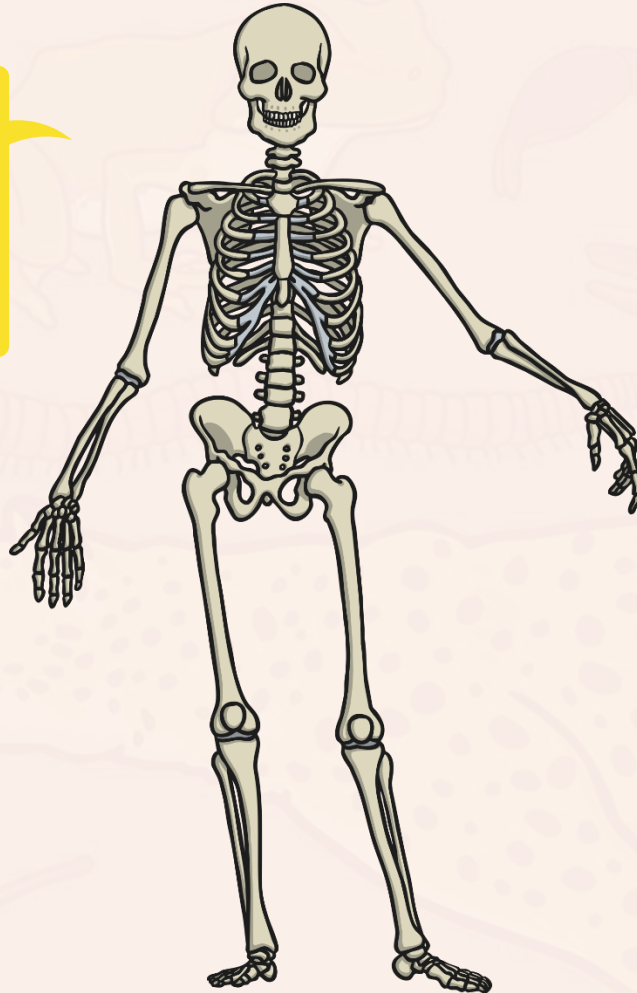


# Types of Skeletons

# Skeleton



What do you  
associate with  
the word  
**skeleton**?

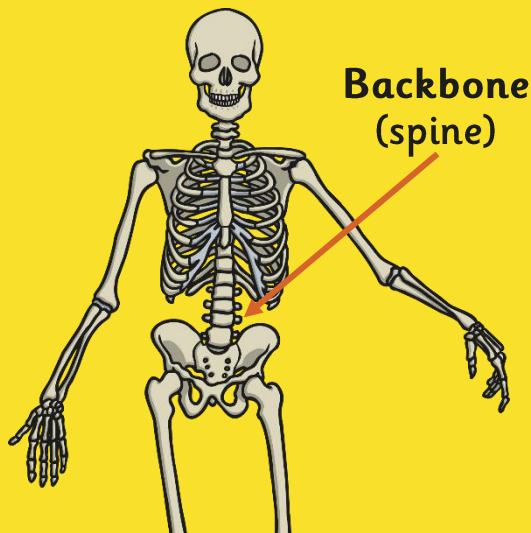




# Vertebrates and Invertebrates

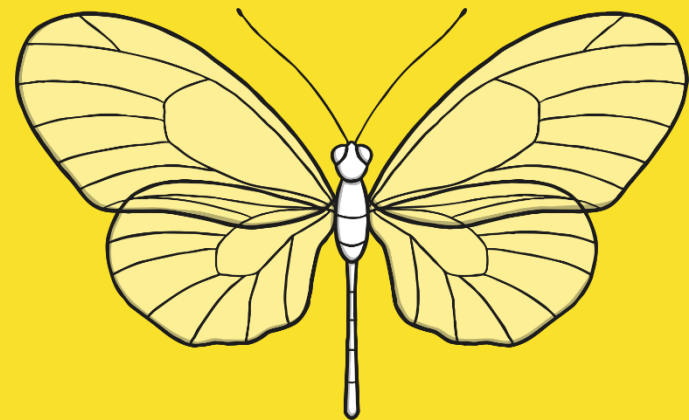
The difference between vertebrates and invertebrates is simple!

Vertebrates have a backbone (spine)...



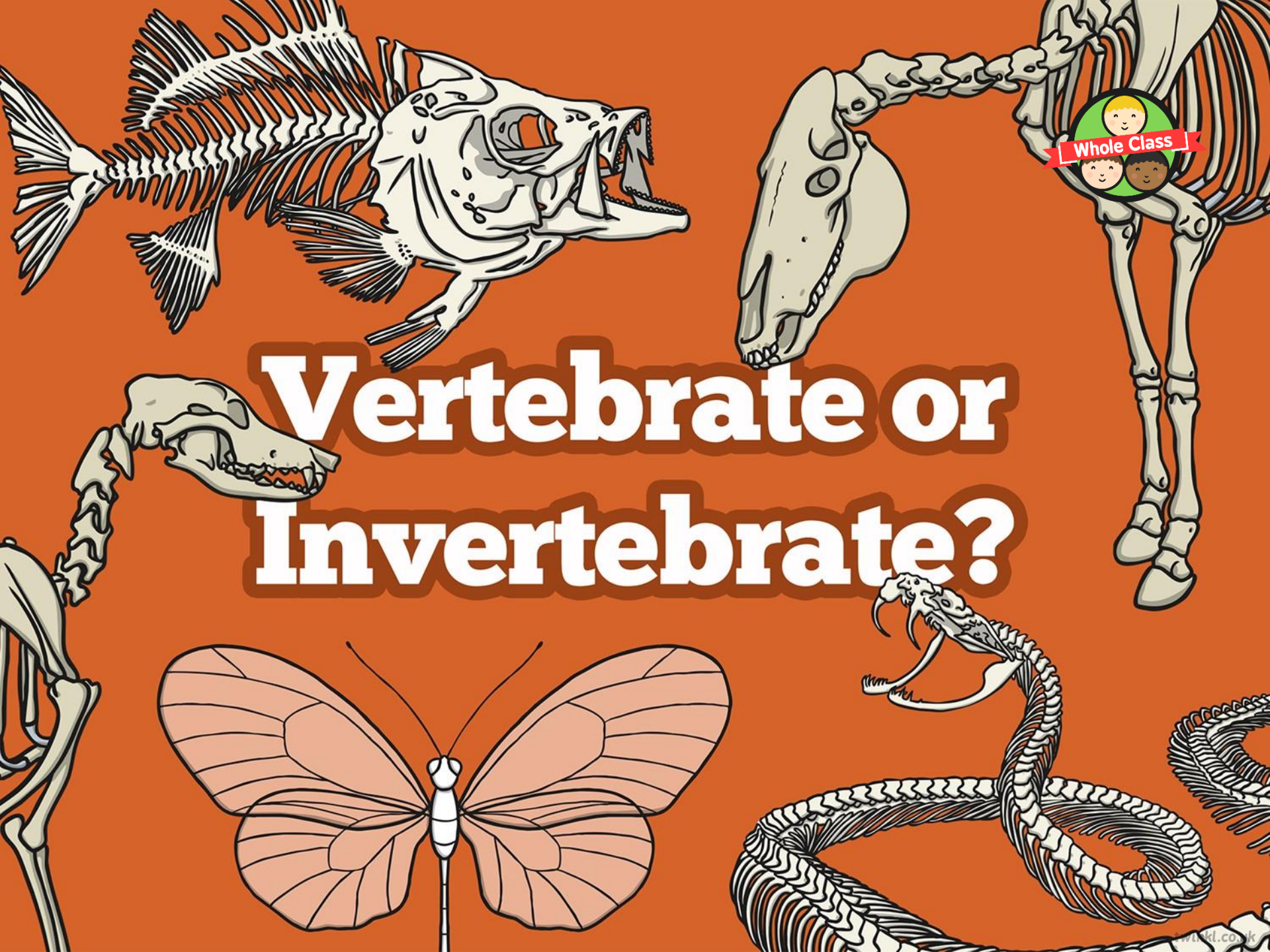
**vertebrate**

...and invertebrates don't



**invertebrate**

Now let's see if you can categorise animals as vertebrates or invertebrates.

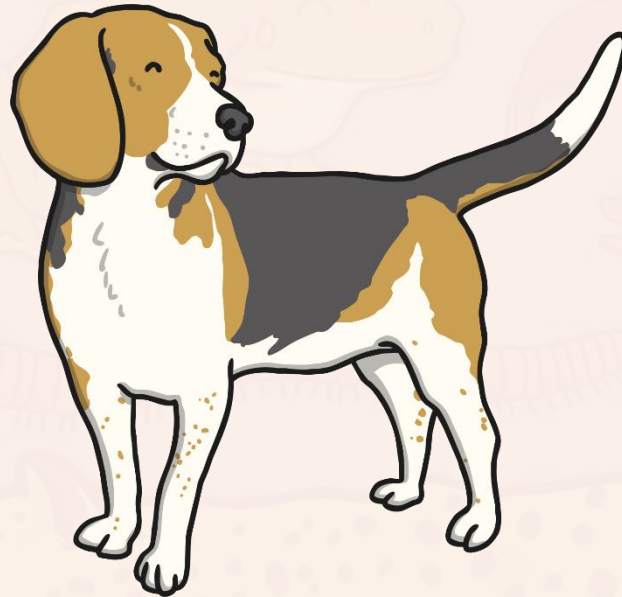


Whole Class

# Vertebrate or Invertebrate?



# Dog

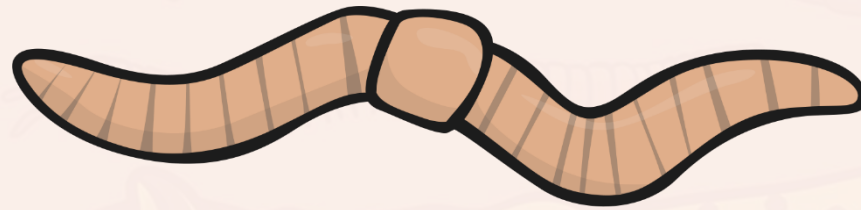


**Vertebrate**

or

**Invertebrate**

# Worm

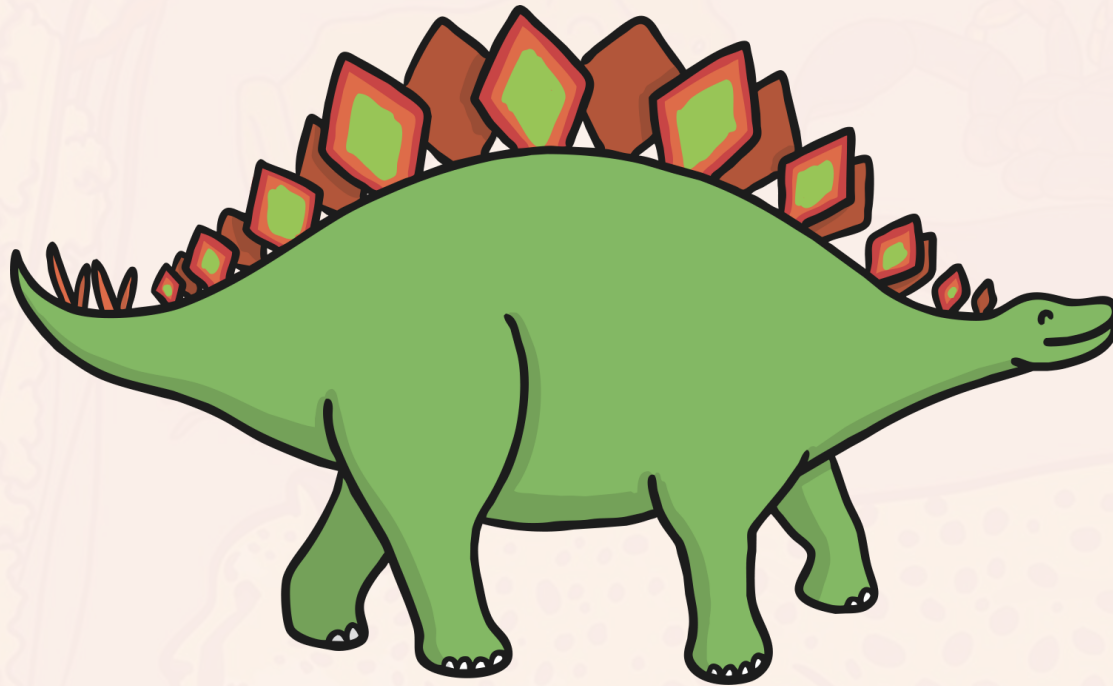


**Vertebrate**

**or**

**Invertebrate**

# Dinosaur



**Vertebrate**

or

**Invertebrate**

# Human



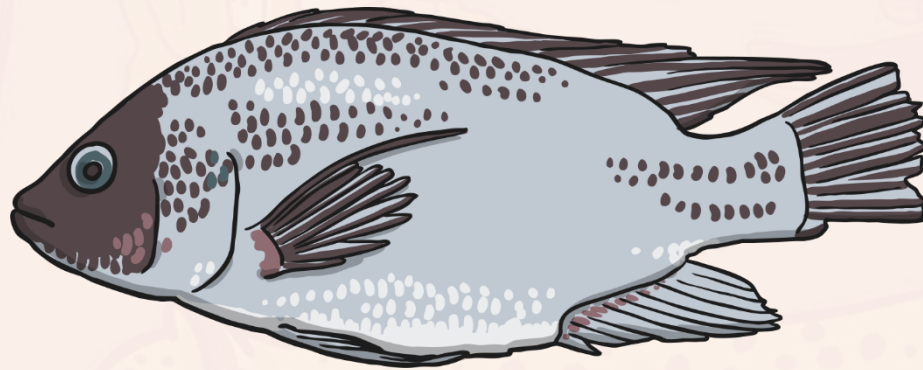
**Vertebrate**

**or**

**Invertebrate**



# Fish



**Vertebrate**

or

**Invertebrate**

# Jellyfish



Whole Class



**Vertebrate**

**or**

**Invertebrate**



# Butterfly



**Vertebrate**

or

**Invertebrate**

# Types of Skeletons



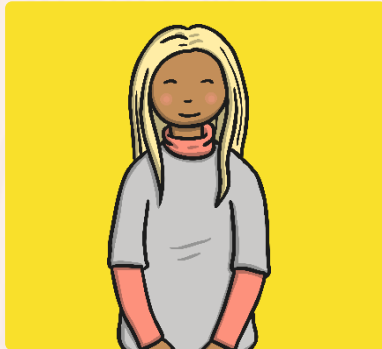
A further classification of skeletons comes from if an animal has a skeleton and where it is.

All vertebrates have an endoskeleton. However invertebrates can be divided again between those with an exoskeleton and those with a hydrostatic skeleton.

vertebrate



endoskeleton



invertebrate



exoskeleton



hydrostatic skeleton

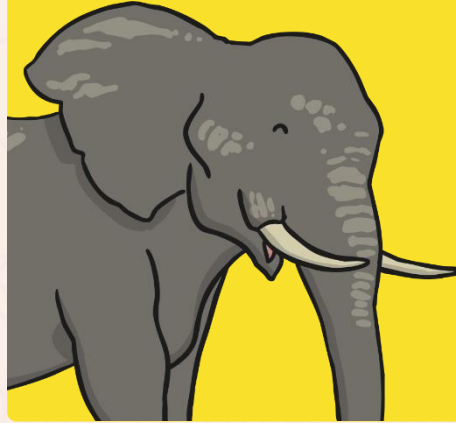


What do you think the words endoskeleton, exoskeleton and hydrostatic skeleton mean?



# Endoskeletons

Animals with endoskeletons have skeletons on the inside of their bodies.



Endoskeletons are lighter than exoskeletons.

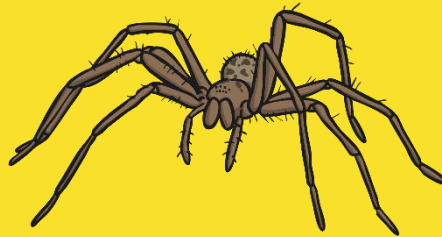


As the animal grows so does their skeleton.

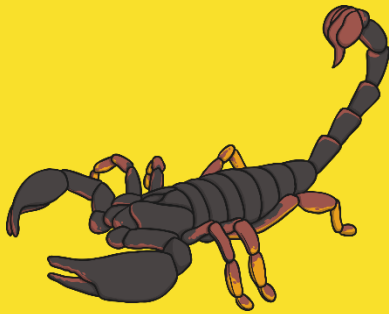


# Exoskeletons

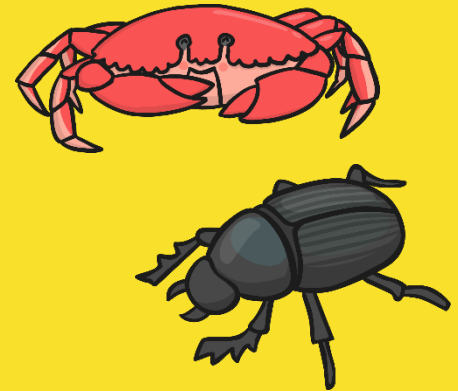
Animals with exoskeletons have their skeletons on the outside!



Watch the following video clips to see how they shed their skeletons (click the crab or the beetle below).



Exoskeletons do not grow with the animal. Therefore the animal has to shed its skeleton and produce a new one!





# Hydrostatic Skeletons

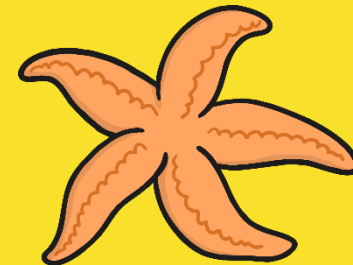
Animals with hydrostatic skeletons don't actually have any bones!



All animals with hydrostatic skeletons are invertebrates.

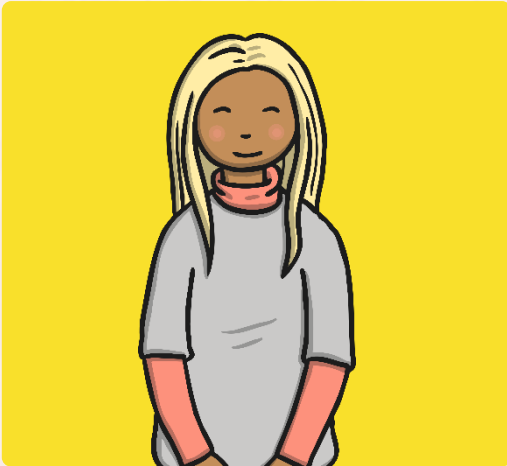


Instead these animals have fluid-filled compartment in their body called a coelom.



# Skeleton Types

endoskeleton



exoskeleton



hydrostatic skeleton



Can you think of an example of an animal with an exoskeleton, endoskeleton or hydrostatic skeleton?



# Sorting Skeleton Types



**Sorting Skeleton Types**

Cut out and stick the animals based on the type of skeleton they have.

| Endoskeleton | Exoskeleton | Hydrostatic Skeleton |
|--------------|-------------|----------------------|
|              |             |                      |

What other animals have endoskeletons? \_\_\_\_\_




What other animals have exoskeletons? \_\_\_\_\_

What other animals have hydrostatic skeletons? \_\_\_\_\_

twinkl planit twinkl.co.uk Science | Year 3 | Animals Including Humans | Types of Skeletons | Lesson 3

# Pros and Cons of Different Skeleton Types



| Type of Skeleton   | Pro | Con |
|--|-----|-----|
| Endoskeleton          |     |     |
| Exoskeleton           |     |     |
| Hydrostatic Skeleton  |     |     |

Grows with the body  
**More protection for the body**

**Does not grow with the body**  
Body is more flexible

Cannot lift objects  
**Muscles are less flexible**