

Our third lesson on our new animals and humans topic is all about the **different types of skeleton**.

Read through the PowerPoint and work through the activities 😊  
Look at the BBC Bitesize links on the website for some more information and videos about this lesson 😊

Enjoy!

*Love* Miss Robertson xxx

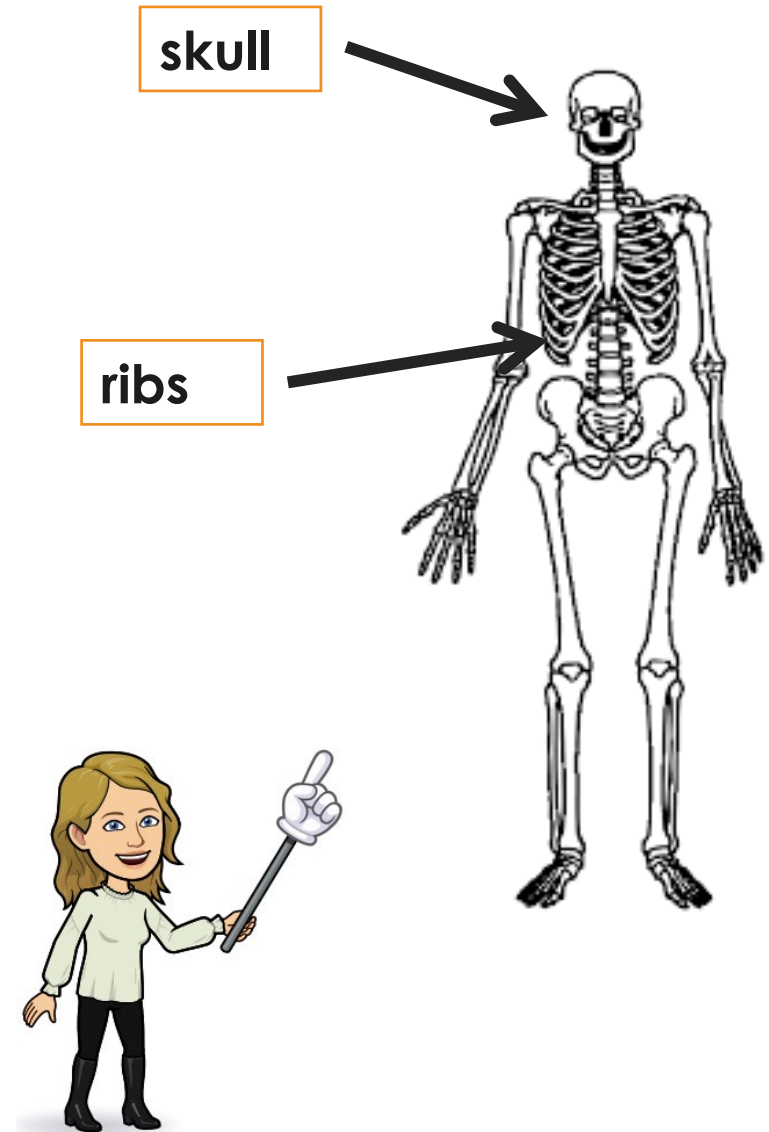
# What is a skeleton?

Many animals have **skeletons** to **support** and **protect their body** and to **help it move**.

The human skeleton is **made of bones** and **grows as we grow**.

Our skull protects our brain and our ribs protect our heart and lungs.

The skeleton bends at joints such as knees and ankles. Joints are where two or more bones join together.



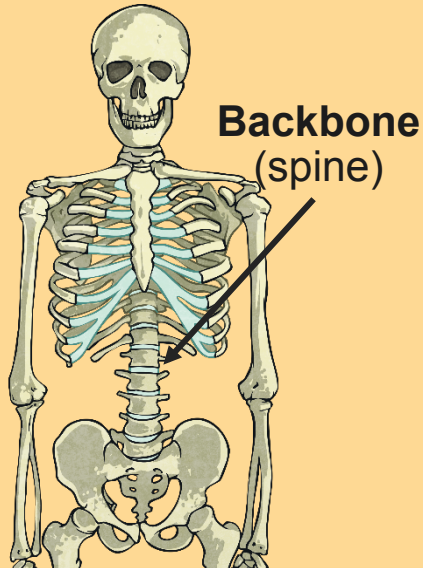


The difference between vertebrates and invertebrates is simple!

# Vertebrates and Invertebrates

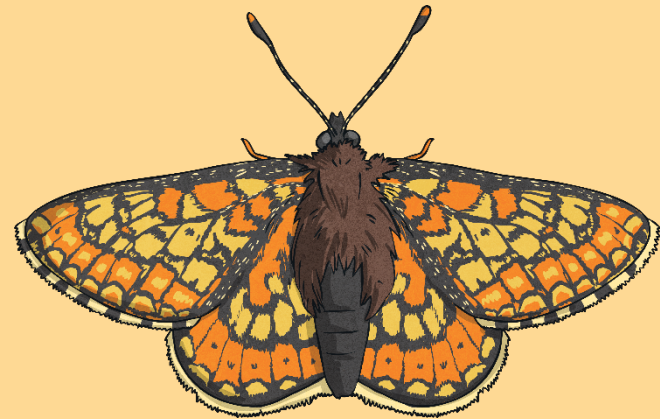
Fish, amphibians, reptiles, birds and mammals are all examples of vertebrates.

Vertebrates have a backbone (spine)...



**vertebrate**

...and invertebrates don't



**invertebrate**

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



Has it got a spine (backbone) or not?

# Dog



Vertebrate

or

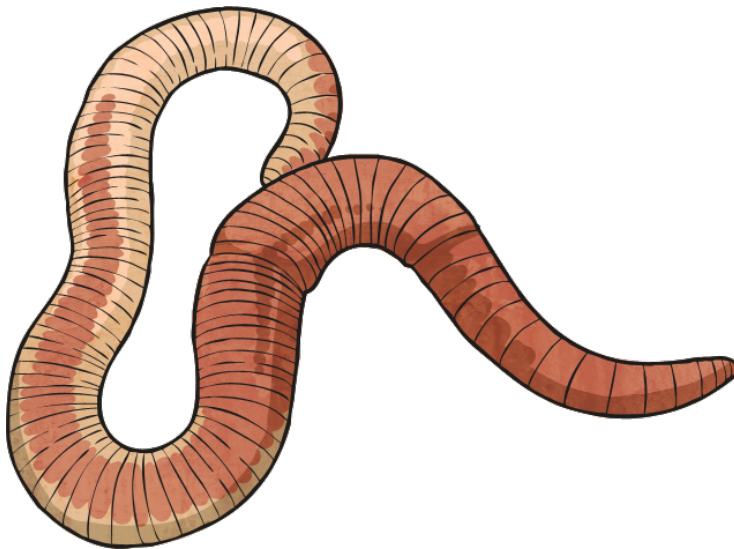


Invertebrate



Has it got a spine (backbone) or not?

# Worm



Vertebrate

or



Invertebrate



Has it got a spine (backbone) or not?

# Dinosaur



Vertebrate

or



Invertebrate



Has it got a spine (backbone) or not?

# Human



Vertebrate

or

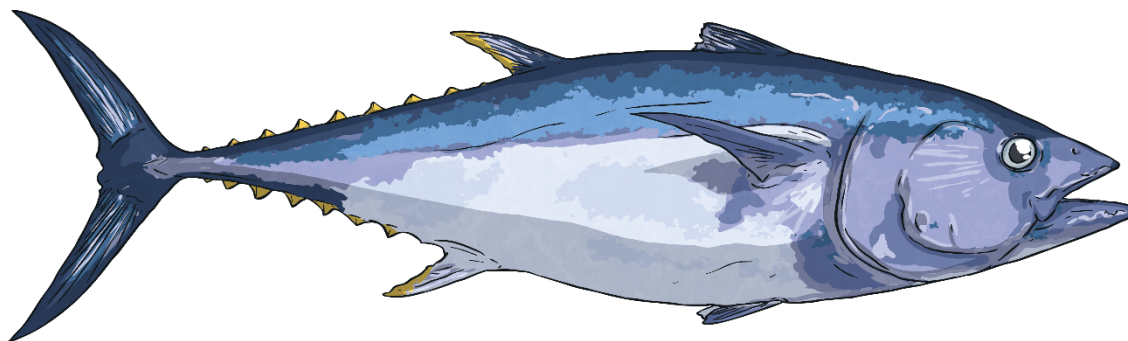


Invertebrate



Has it got a spine (backbone) or not?

# Fish



Vertebrate

or



Invertebrate



Has it got a spine (backbone) or not?

# Jellyfish



Vertebrate

or

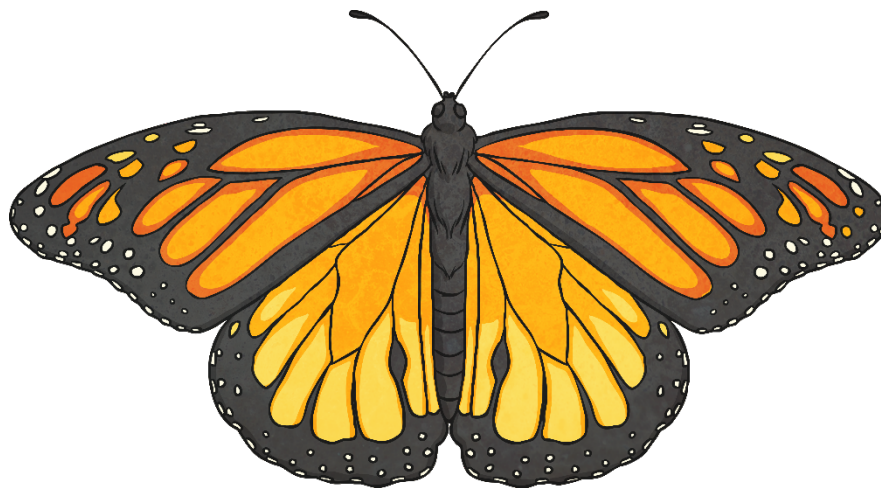


Invertebrate



Has it got a spine (backbone) or not?

# Butterfly



Vertebrate

or

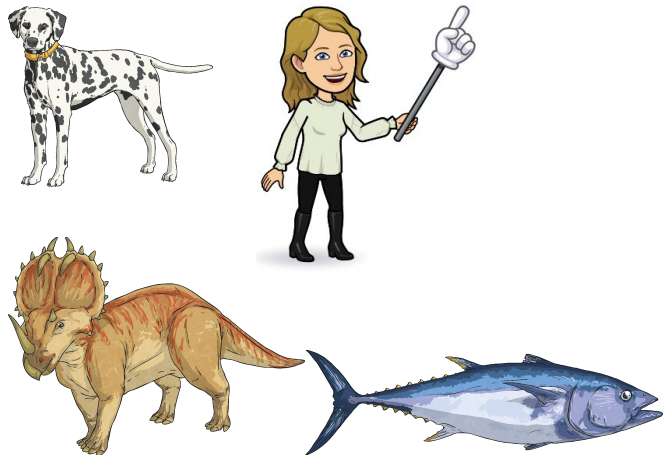



Invertebrate



How did you do?

**I NEED**  
**ANSWERS**

Vertebrates:	Invertebrates:
	

Did you know that about 96% of all animals are vertebrates?



# Types of Skeletons

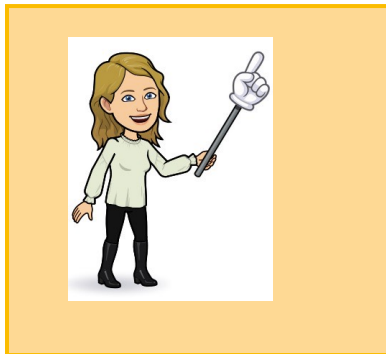
A further classification of skeletons comes from if an animal has a skeleton and where it is.

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

**vertebrate**



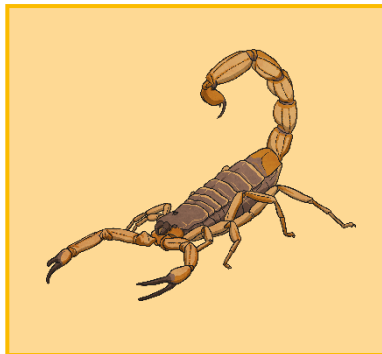
**endoskeleton**



**invertebrate**



**exoskeleton**



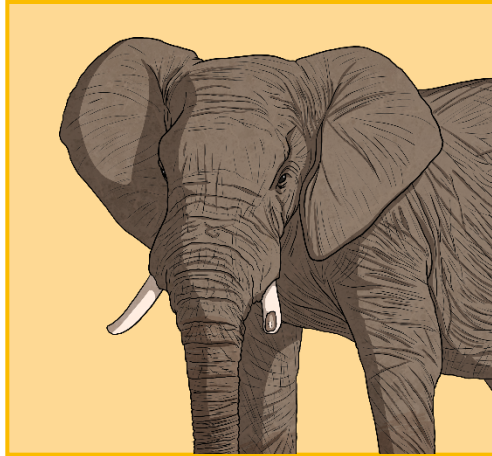
**hydrostatic skeleton**



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

# What is an **endoskeleton**?

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



Endoskeletons are lighter than exoskeletons.



As the animal or human grows so does their skeleton.



Remember, all vertebrates have an endoskeleton (a skeleton inside of their bodies).

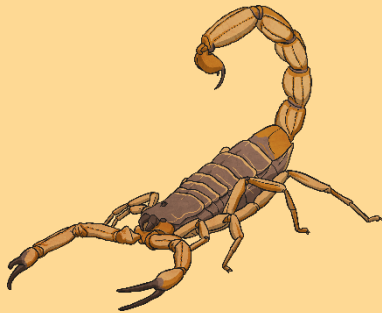


# What is an **exoskeleton**?

Animals with exoskeletons have **their skeletons on the outside!**



Insects have exoskeletons as well as creatures like crabs and lobsters.



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



All animals with exoskeletons are invertebrates.

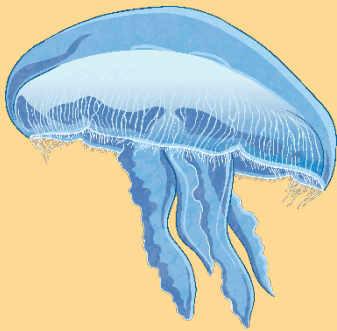


# What is a **hydrostatic skeleton**?

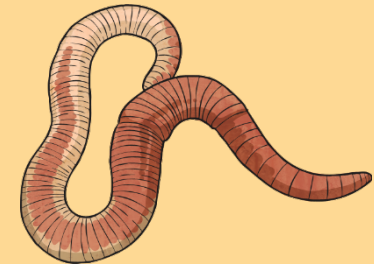
Animals with hydrostatic skeletons don't actually have any bones!



All animals with hydro-static skeletons are invertebrates.



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



Animals like worms, slugs and jellyfish have a hydrostatic skeleton.

**Your task:** Look closely at these pictures. Decide whether the animals have an endoskeleton, an exoskeleton or a hydrostatic skeleton. Then, complete the table on the next page.

No need to print anything, just copy it out into your book 😊. *Remember, look back at the PowerPoint to help you 😊*



elephant



tortoise



slug



butterfly



human



jellyfish



mouse



worm



goldfish



lobster



ant



prawn



beetle



killer whale

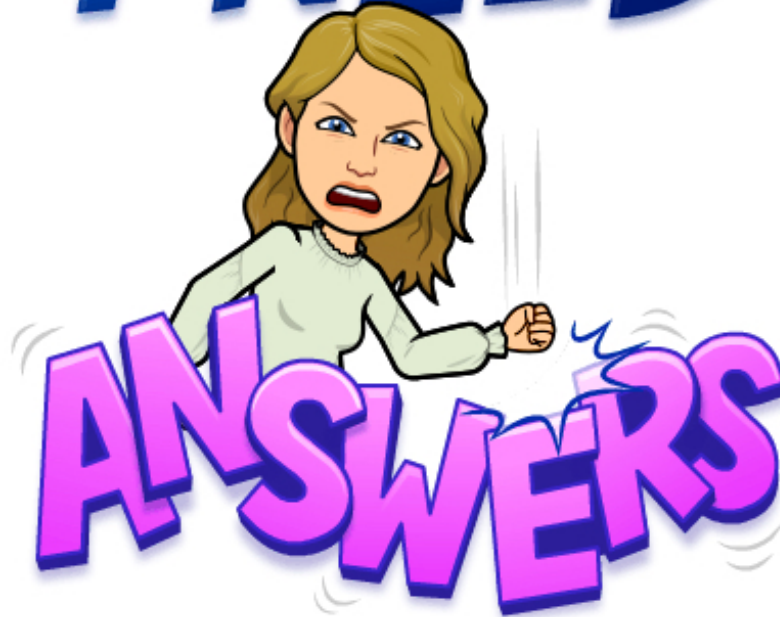


fox

**Challenge:** Can you add another animal into each column?
















Endoskeleton	Exoskeleton	Hydrostatic skeleton
<div><b>TOP TIPS</b></div> <div><p><b>Remember:</b></p><ul style="list-style-type: none"><li>• Endoskeleton means the skeleton is on the inside.</li><li>• Exoskeleton means the skeleton is on the outside.</li><li>• Hydrostatic skeleton means the animal has no bones.</li></ul></div> <div data-kind="ghost"></div> <div data-kind="ghost"></div>		

# I NEED



Answers are on the next slide 😊  
No peeking 😊

# I NEED ANSWERS

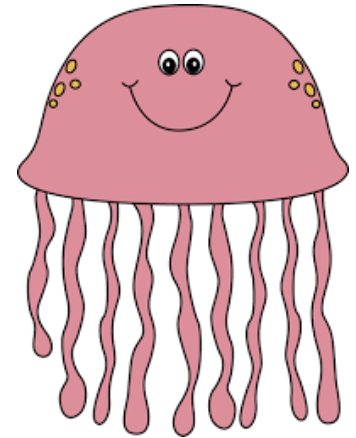
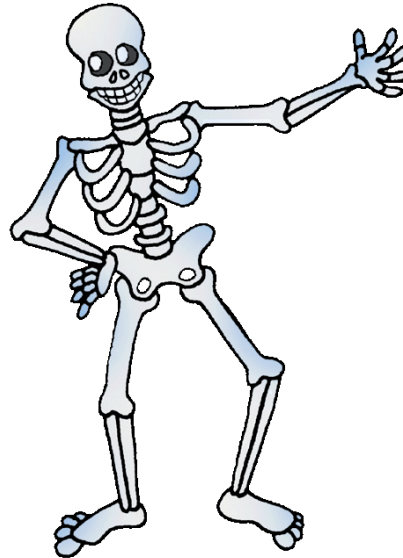
Endoskeleton			Exoskeleton		Hydrostatic Skeleton	
 elephant	 human		 lobster	 prawn	 jellyfish	 worm
 mouse	 killer whale	 tortoise	 ant	 beetle	 slug	
 goldfish	 fox		 butterfly			

A tortoise has an endoskeleton in it's internal bones and an exoskeleton in it's shell.

**Optional activity:** Create an information poster about the different types of skeleton.  
Make your poster colourful and eye catching. Remember to include lots of facts.

**Can you include the key words from today's lesson?**

- Endoskeleton
- Exoskeleton
- Hydrostatic skeleton
- Animal
- Human
- Vertebrate
- Invertebrate





Thank you for working so hard.  
You are all superstars 😊  
Please send you work into  
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