

Recapping Skeletons

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YOU WILL NEED

- Pencil or pen
- Paper





Today we will be recapping the three different types of skeleton that exist in the natural world. You may remember some of this from earlier in the year!

1. Watch this video and look at the slide below about vertebrates and invertebrates:

<https://www.youtube.com/watch?v=KjpGfqvQ3E>

Vertebrates and Invertebrates

The difference between vertebrates and invertebrates is simple!

| | |
|---|---|
| <p>Vertebrates have a backbone (spine)...</p>  <p>Backbone (spine)</p> <p>vertebrate</p> | <p>...and invertebrates don't</p>  <p>invertebrate</p> |
|---|---|

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

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2. Can you sort these 10 animals into the correct columns?

| | | | | |
|----------|-------------|-----------|--------|--------|
| Tiger | Caterpillar | Dolphin | Turtle | Slug |
| Ladybird | Fox | Jellyfish | Crab | Rabbit |

| Vertebrate (spine) | Invertebrate (no spine) |
|--------------------|-------------------------|
| | |




3. Read these slides about the three different types of skeletons.

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.

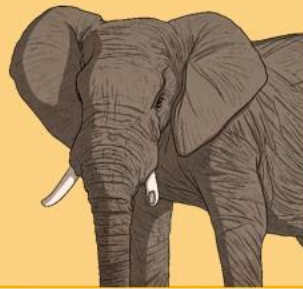
| | | |
|---|---|---|
| <p>vertebrate</p> <p>↓</p> <p>endoskeleton</p> | <p>invertebrate</p> <p>↙</p> <p>exoskeleton</p> | <p>↘</p> <p>hydrostatic skeleton</p> |
|  |  |  |

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

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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 clip to see how they shed their skeletons (clip the crab 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 a 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?

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4. Think about the different skeleton types you have learned about. Can you put the **pros** (good things) and **cons** (bad things) into the correct places in the table? You can just list them on paper if you like!

| 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

5. Answer this probing question.

What would happen if you didn't have any bones?

