

Bones and skeletons

The secrets about skeletons



Animals that have a hard skeleton inside their body are called vertebrates. This trail explores how bones and muscles support and protect animal bodies and help them move.

Gallery 1 Find the gorilla skeleton.

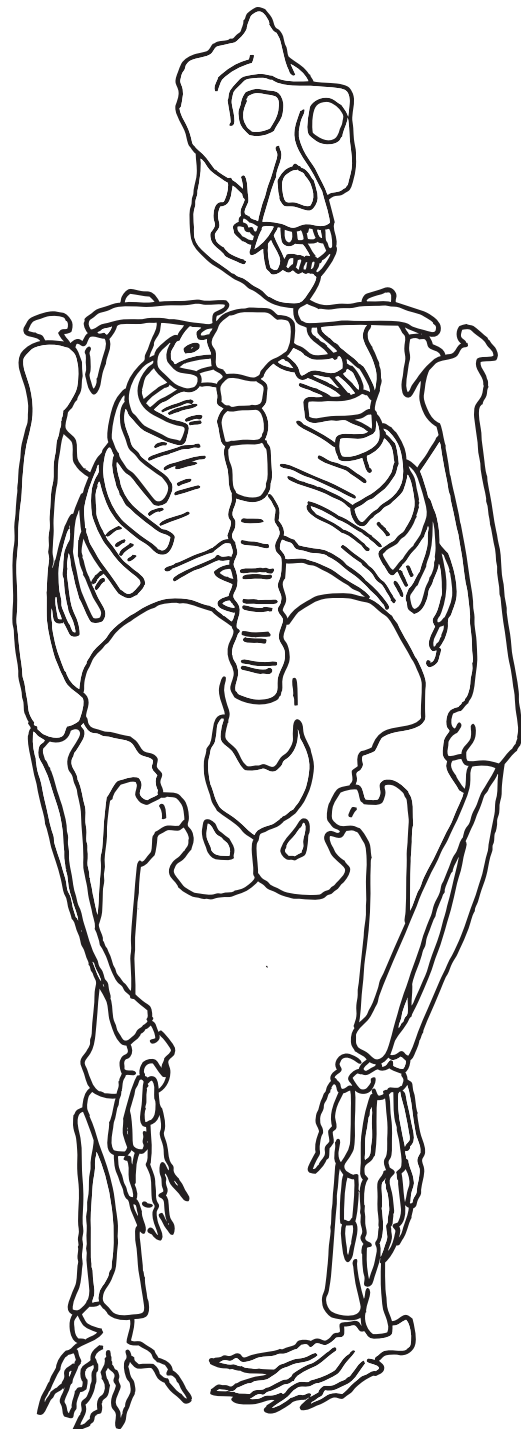
Draw a line between the words below and the part of the gorilla they describe best.

bones that protect the heart and lungs

strong bones that support muscles for walking

bony area that protects the soft brain

joint that allows the arm to bend



Look at the gorilla skeleton and the gorilla beside it. Can you see how the shape of the skeleton matches the shape of the animal?

Choose another animal in **Gallery 1** and draw what you think the skeleton would look like.

Explore some more

► Look at the front of the gorilla's ribcage. The ribs are connected to the breastbone by cartilage, a tough but flexible tissue.

Can you think why the ribcage needs to be flexible?

Gallery 3

The marine animals in **case 16** have a hard outer casing on their body called an exoskeleton. We call these animals invertebrates. There are many different types of invertebrate. They do not have a skeleton inside their bodies.

Circle the animals below that have an exoskeleton.



Gallery 6

Find the ostrich skeleton. We can work out how an animal lives by looking carefully at the features of its skeleton.

Draw a line from each feature below to match how the ostrich uses it.

Feature	How the feature is used
Strong leg bones	To look for danger?
Large eyes	Not much use, wings too small for flying
Joints in the legs	To feed from the ground and to see a long way
Long bendy neck	To support large muscles for running
Tiny wing bones	To bend and run

Explore some more

► Find two more skeletons in Gallery 6 and talk about how you think those animals would move around.

Gallery 6

Compare the gaboon viper skeleton in **case 65** with the Malayan giant frog skeleton in **case 75**.

Tick which bones you can see on each animal. Are they both the same?

Gaboon viper

- Skull
- Legs
- Knees
- Spine (vertebrae)
- Shoulder blades
- Ribs
- Feet

Malayan giant frog

- Skull
- Legs
- Knees
- Spine (vertebrae)
- Shoulder blades
- Ribs
- Feet

Which bones help the frog to jump?

Which bones help the snake to wriggle?

Which bones do both animals have to protect their brain and their heart and lungs?

For fun, draw the snake skeleton then add the frog legs.
What would you call this new animal?

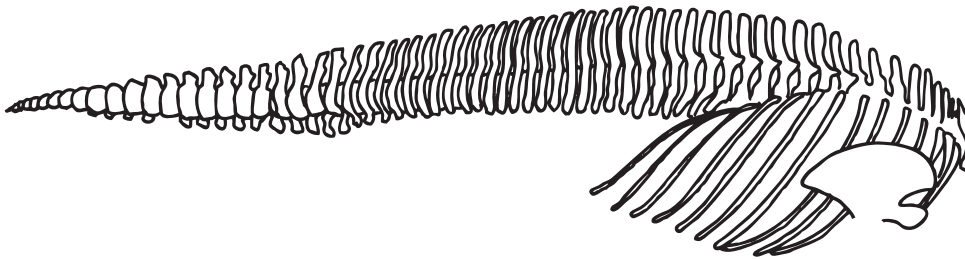
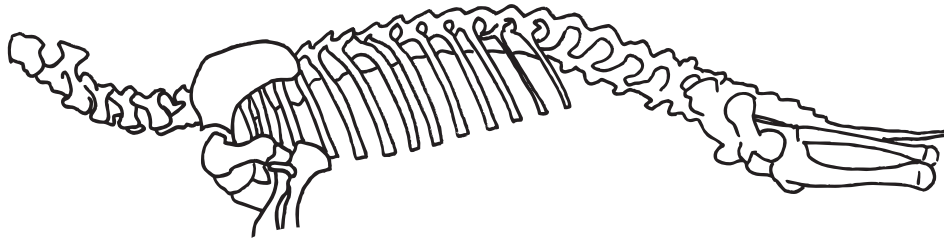
Explore some more

- ▶ Long, strong back legs help an animal to jump. A frog's legs bend in three places to help it leap. Look out for other leaping animals in the galleries.

Gallery 5

Look in **cases 22** and **27**. The common seal and the common dolphin often live in the same waters, but they have different skeletons.

Investigate the skeletons and fill in the gaps in the picture below.



Which one of these animals can move around on land as well as in the water?

How can you tell?

Explore some more

- ▶ Write or draw in the box below how you think you would look if you did not have a skeleton. How might you move?