

The Skeleton: Your Body's Frame

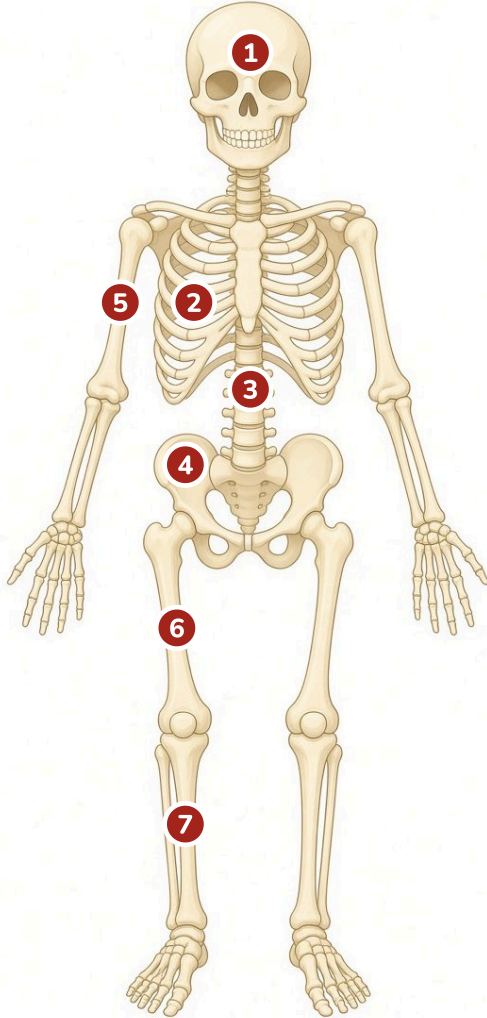


Name: _____

Date: _____

Instructions: No word bank: name the numbered parts from memory or from the module. Number the discoveries in order and write each date. Analyse the source, explain significance, then write full-sentence answers and plan the essay.

1. Name the parts (no word bank)



1 _____ 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____

Did you know?

- Bone is, weight for weight, stronger than some steel, yet much lighter.
- Over half your bones are in your hands and feet.
- Bone marrow makes several million new red blood cells every second.
- Galen mostly dissected animals, so some of his descriptions of human bones were wrong.

Background

Your skeleton is the frame of bones inside your body. An adult has 206 bones. A newborn baby has around 300, but some join together as the child grows.

2. Timeline: order and date

Number the events 1 to 7 (1 = earliest) and write the date of each.

#	Event	Date
1	Ibn Sina's Canon of Medicine describes bones	
2	X-rays first used to find broken bones	
3	Vesalius publishes his great anatomy book	
4	Charnley's modern hip replacement	
5	Galen writes about bones and muscles in Rome	
6	Röntgen discovers X-rays	
7	CT scanners show bones in 3D	

4. Significance

Scientist or term	Who or what? Why does it matter?
Andreas Vesalius	
Wilhelm Röntgen	
Galen	
John Charnley	
Skeleton	

6. Longer answers (full sentences)

1. Describe the structure of a long bone from the outside in.

2. Explain why bones need to be both hard and slightly bendy.

3. Explain how the skeleton and muscles work together to make movement.

4. Why was Vesalius's book so important?

5. Explain in your own words: Compare a hinge joint and a ball-and-socket joint, with an example of each.

3. Source analysis

The bones are the framework of the whole body. Some protect, like walls; some support, like pillars; some are like levers that the muscles move.

Andreas Vesalius, On the Fabric of the Human Body (1543), (paraphrased)

1. What three jobs of bones does Vesalius describe?

2. Why are comparisons to walls, pillars and levers helpful?

3. Why might Vesalius be more reliable than Galen on human bones?

5. Cause and consequence

1. Explain why a child's broken bone usually heals faster than an adult's.

2. Explain one consequence of X-rays for treating injuries.

7. Essay question

Essay: 'Vesalius was the most important person in the history of anatomy.' How far do you agree? Plan an essay.

Plan: introduction · point for (evidence) · point against (evidence) · conclusion with your judgement.
