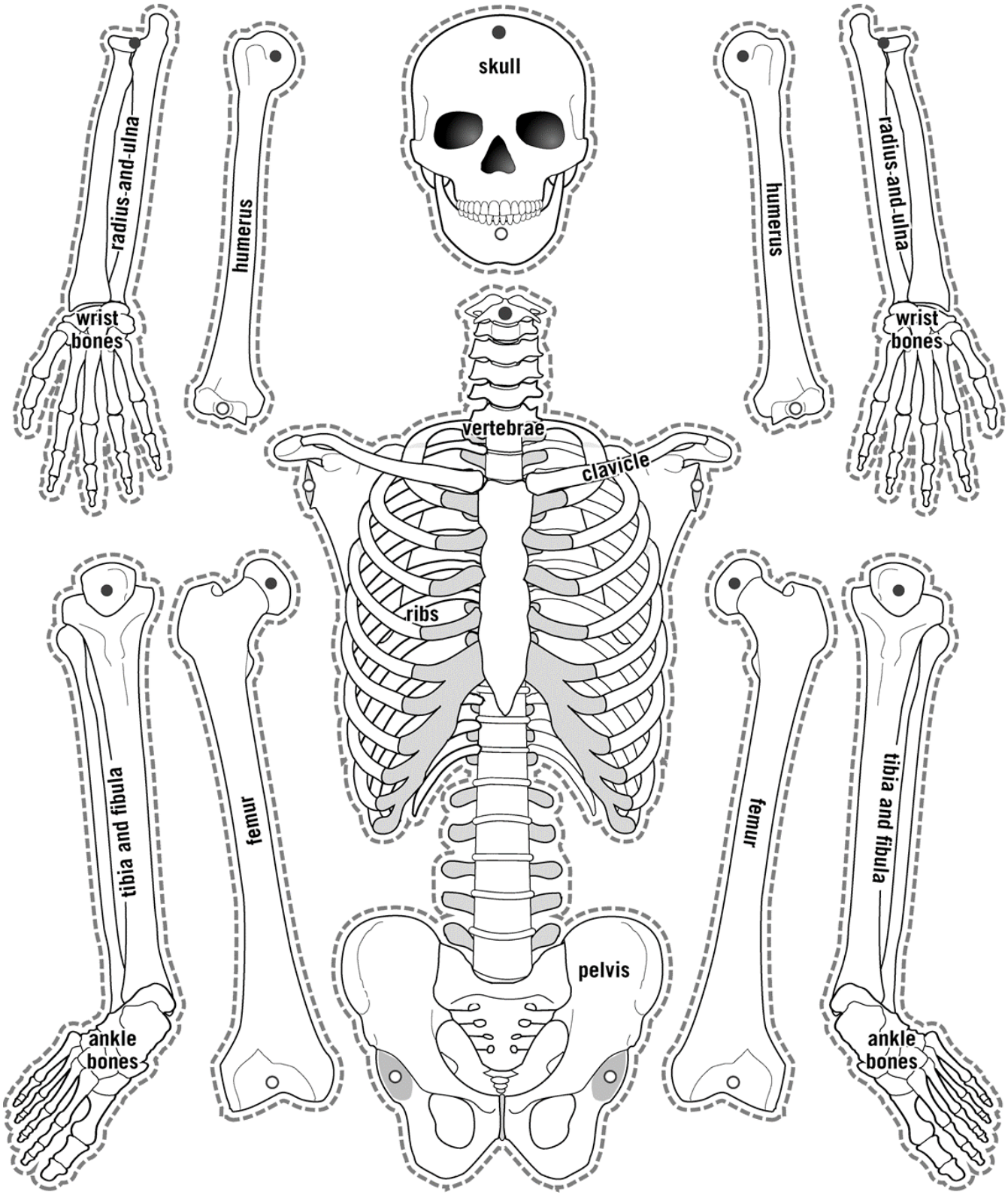
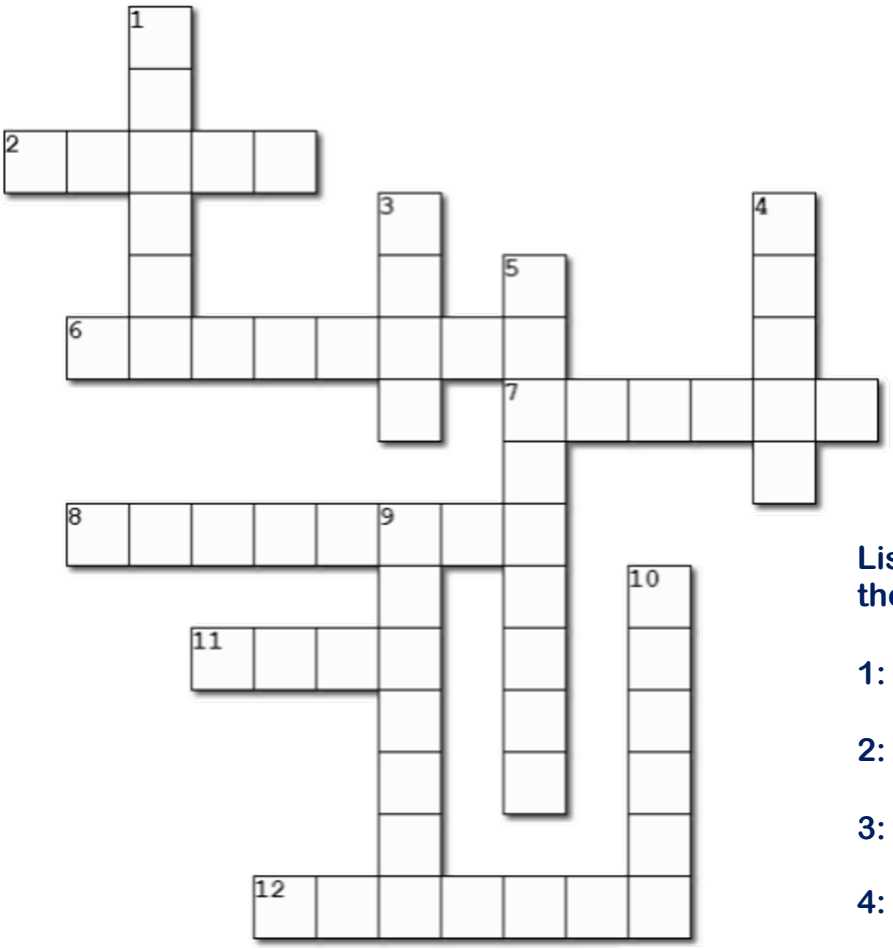
Mission Assignment: Describe the structure and function of the skeleton

KS3-05-01



The skeleton



List the four functions of the skeleton.

1: _____

2: _____

3: _____

4: _____

Across		Down	
2	the shinbone (5)	1	A little lie found in this leg bone (6)
6	the bone you chew with (8)	3	these bones protect the heart and lungs (4)
7	this bone is the distance from the centre to the edge of a circle (6)	4	the longest bone (5)
8	the bone on which you hang a tie (8)	5	these bones work together to bend the back (9)
11	Luna rearranged gives a forearm bone (4)	9	a bone to protect your thoughts (7)
12	the funny bone (7)	10	the hip bones contain the king of rock and roll (6)

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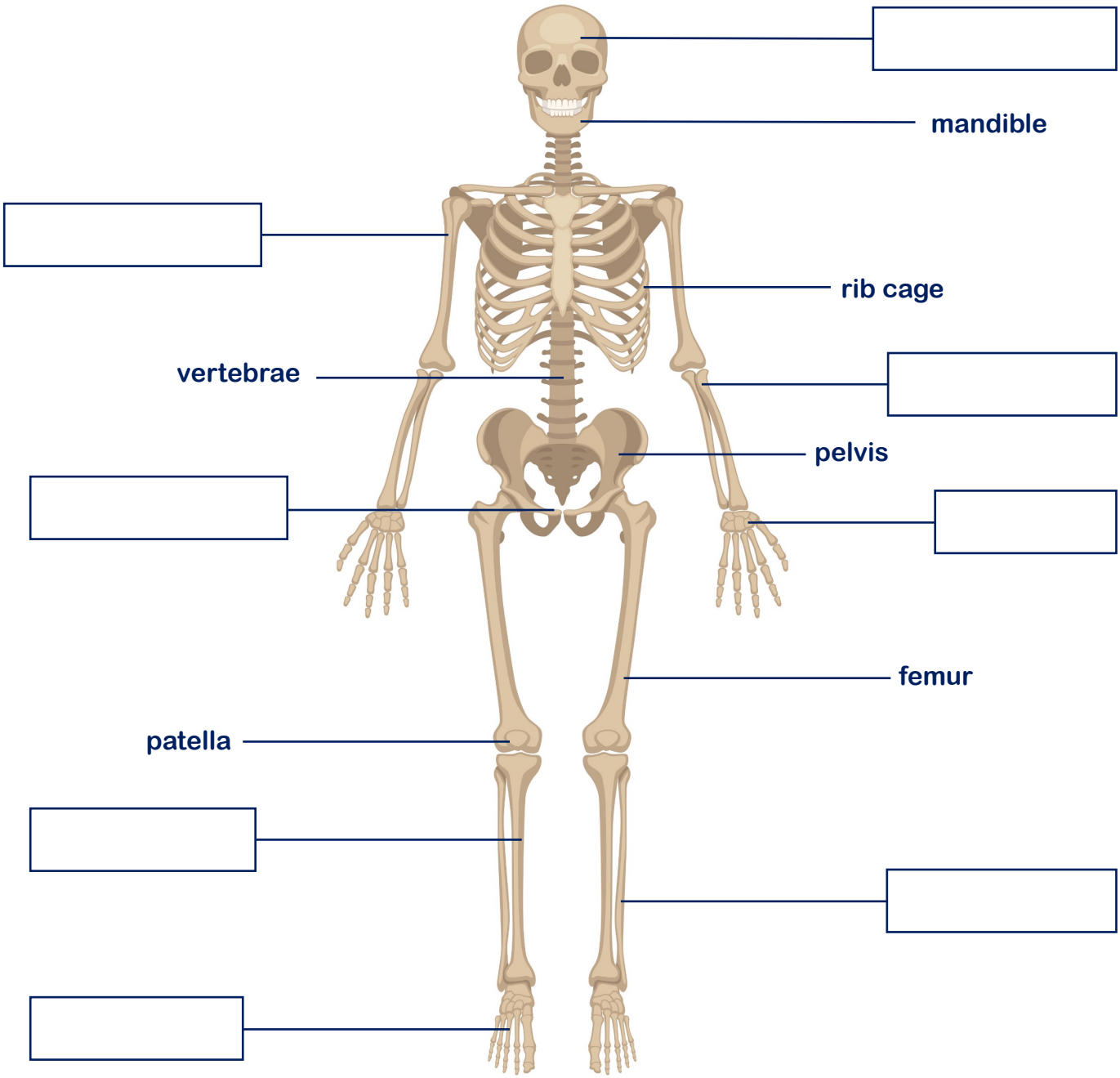
Label the skeleton



Word bank

cranium	humerus	tibia	coccyx
metatarsals	fibula	radius	carpals

The axial skeleton

1. Name 3 main parts of the axial skeleton. Which main organ or organs do you think these bones help protect?

Bone	Organs

2. Explain why you think these organs need protecting.

3. The rib cage is made with flexible bones. The skull is made of more rigid bone. Explain why these different types of bones are suited to the organs they protect.

4. Challenge: Some bones are made of softer tissues called cartilage. Explain why the skeleton needs some parts to made from cartilage.

The skeleton

Across		Down	
2	the shinbone (5) tibia	1	A little lie found in this leg bone (6) fibula
6	the bone you chew with (8) mandible	3	these bones protect the heart and lungs (4) ribs
7	this bone is the distance from the centre to the edge of a circle (6) radius	4	the longest bone (5) femur
8	the bone on which you hang a tie (8) clavicle	5	these bones work together to bend the back (9) vertebrae
11	Luna rearranged gives a forearm bone (4) ulna	9	a bone to protect your thoughts (7) cranium
12	the funny bone (7) humerus	10	the hip bones contain the king of rock and roll (6) pelvis

List the four functions of the skeleton.

1: Protection

2: Support

3: Movement

4: Blood production

The axial skeleton

1. Name 3 main parts of the axial skeleton. Which main organ or organs do you think these bones help protect?

Bone	Organs
Skull or cranium	Brain
Vertebrae or backbone	Spinal column
Rib cage	Heart, lungs, kidneys, spleen, stomach

2. Explain why you think these organs need protecting.

The brain, spinal column, heart, lungs, stomach and other organs need protection because they are vital for maintaining life-sustaining functions. Shielding them from external trauma ensures their proper functioning and reduces the risk of severe damage or dysfunction that could have potentially life-threatening consequences.

3. The rib cage is made with flexible bones. The skull is made of more rigid bone. Explain why these different types of bones are suited to the organs they protect.

The rib cage's flexibility allows for the expansion and movement required for efficient breathing, while the skull's rigidity provides optimal protection for the brain against potential trauma and injury.

4. Challenge: Some bones are made of softer tissues called cartilage. Explain why the skeleton needs some parts to made from cartilage.

Cartilage is a softer and more flexible tissue compared to bone. It allows for smooth joint movement and acts as a cushion between bones, reducing friction and impact during movement. This flexibility is especially crucial in areas such as the joints, where it allows for a wide range of motion and helps absorb shocks, protecting the bones from damage.