

Bones, Joints & Support

Skeleton Hall with Pulseling

Learning target

Connect skeletal structures to support and protection.



Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

Skeleton; support; protection; joints

Open Skeleton Hall - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.



Bones, Joints & Support - key ideas

1. The first clues

The skeleton supports the body and protects some organs. The skull protects the brain, and the rib cage helps protect the heart and lungs.

2. How the clues connect

Joints are places where bones meet. Different joints permit different movements; not all joints move the same way.

3. Our evidence record

Our arm model bends at an elbow-like joint while rigid pieces represent bones. It demonstrates a movement relationship, not a complete living arm.

Keep the science accurate

Detailed organ mechanisms, disease diagnosis and reproductive-health content are not in this six-part outline. Keep models at broad function level.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: <https://www.nextgenscience.org/dci-arrangement/4-Is1-molecules-organisms-structures-and-processes>

Talk through the evidence

1. Which structure helps protect the brain?

Expected answer: Skull

Reasoning: The skeleton supports the body and protects some organs. The skull protects the brain, and the rib cage helps protect the heart and lungs.

2. Where do bones meet?

Expected answer: At joints

Reasoning: Joints are places where bones meet. Different joints permit different movements; not all joints move the same way.

3. Do all joints move identically?

Expected answer: No

Reasoning: Joints are places where bones meet. Different joints permit different movements; not all joints move the same way.

4. What do the rigid pieces model?

Expected answer: Supporting bones

Reasoning: Our arm model bends at an elbow-like joint while rigid pieces represent bones. It demonstrates a movement relationship, not a complete living arm.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.