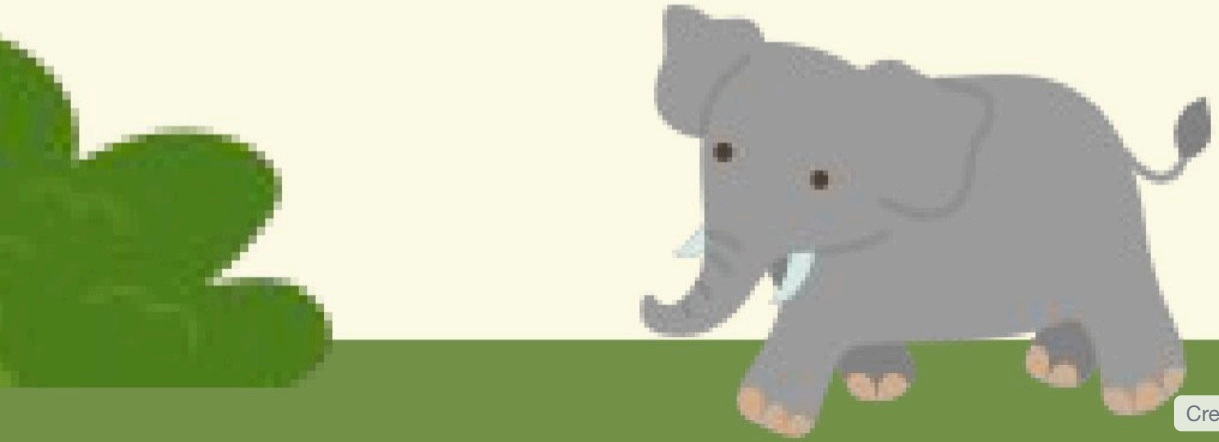
Strong, Safe, Moving!

Skeletons and muscles at work





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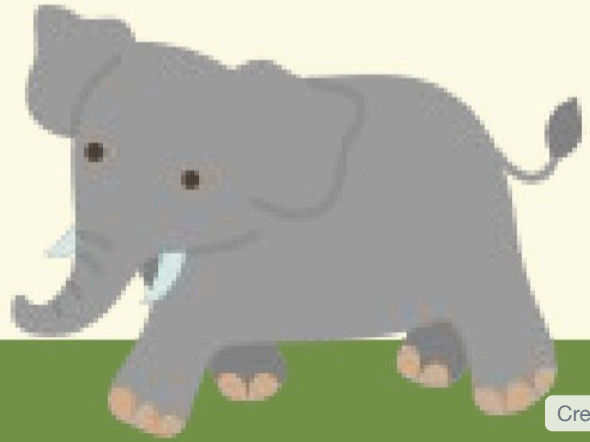
Today we will...

WE ARE LEARNING TO

- learn the 3 jobs of skeletons and muscles
- compare animals with and without skeletons

SUCCESS LOOKS LIKE

- ✓ I can name support, protection and movement
- ✓ I can sort animals by backbone or no backbone



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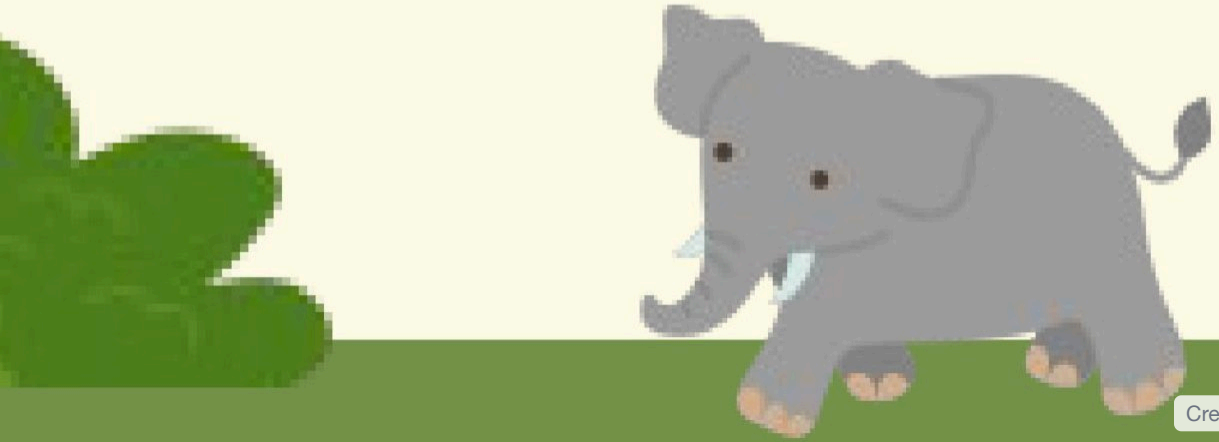
BIG IDEA

Bones hold you up and guard you, muscles pull bones to move you.





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COUNT YOUR BONES

206

bones in a grown-up skeleton

They are different shapes and sizes and grow as you grow.

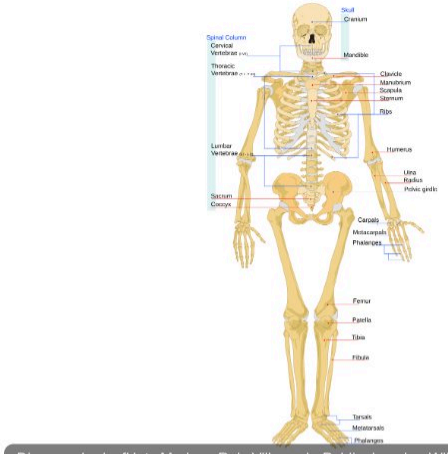
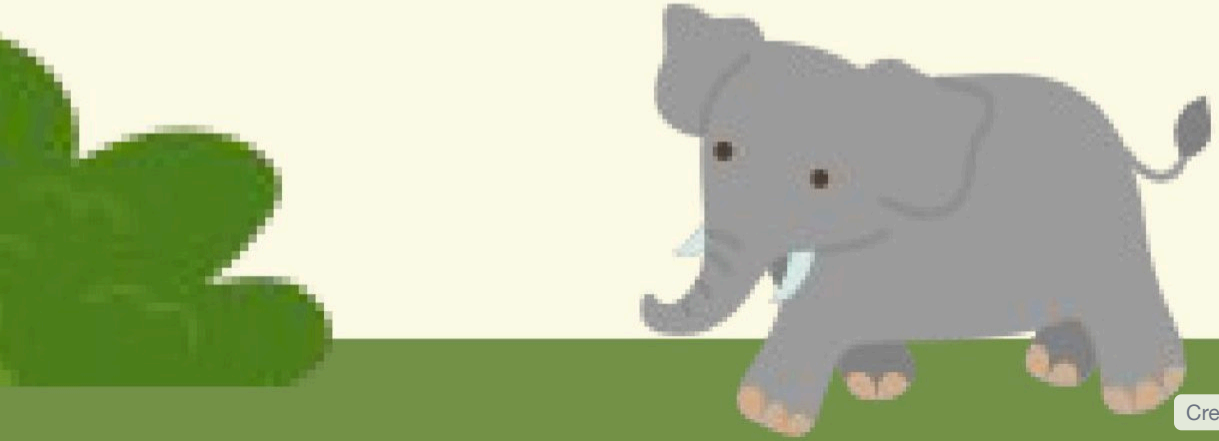


Diagram: LadyofHats Mariana Ruiz Villarreal · Public domain · Wikimedia Commons



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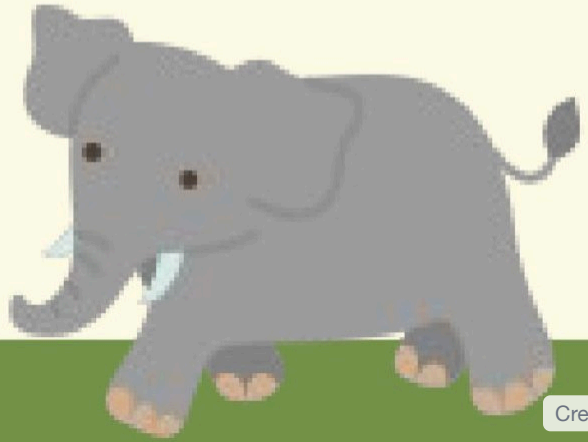
Think, pair, share

What would we look like without a skeleton?





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Bones and muscles together



▶ 0:00 – 3:27

- Watch for the 3 jobs
- See how muscles pull bones

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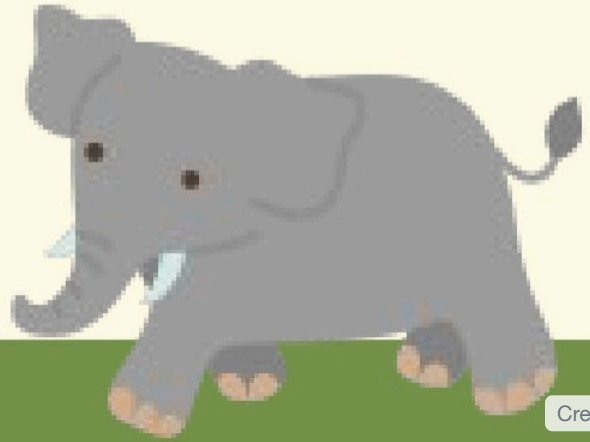
How a move happens

Brain sends a message → **Muscle shortens and pulls** → **Tendon cord tugs the bone** → **Bone moves at the bendy joint**



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Joints in action



▶ 0:00 – 4:30

- Watch elbows and knees bend
- Feel your own joints move

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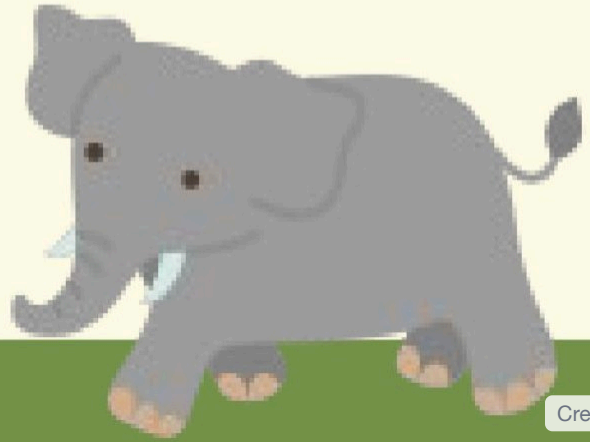
Your task

In pairs, find support, protection and movement on your own bodies.

1. Gently touch skull and ribs to feel protection.
2. Stand tall to feel support from your backbone.
3. Bend and straighten your elbow to feel muscles pull.

10 min

In pairs



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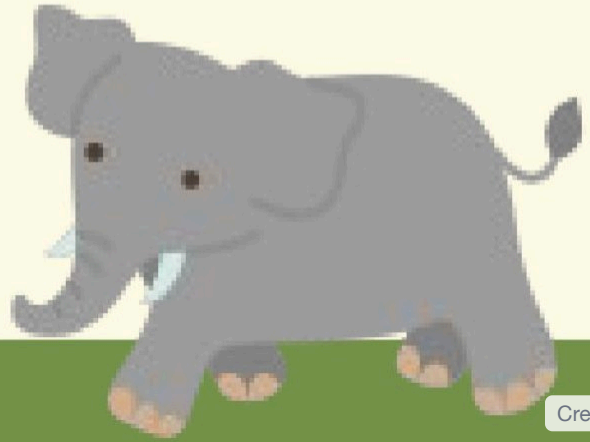
Muscles pull in pairs

1. Bend your elbow - front muscle shortens and pulls.
2. Feel the front get bumpy and hard.
3. Straighten your elbow - back muscle pulls instead.
4. One pulls while the other relaxes.



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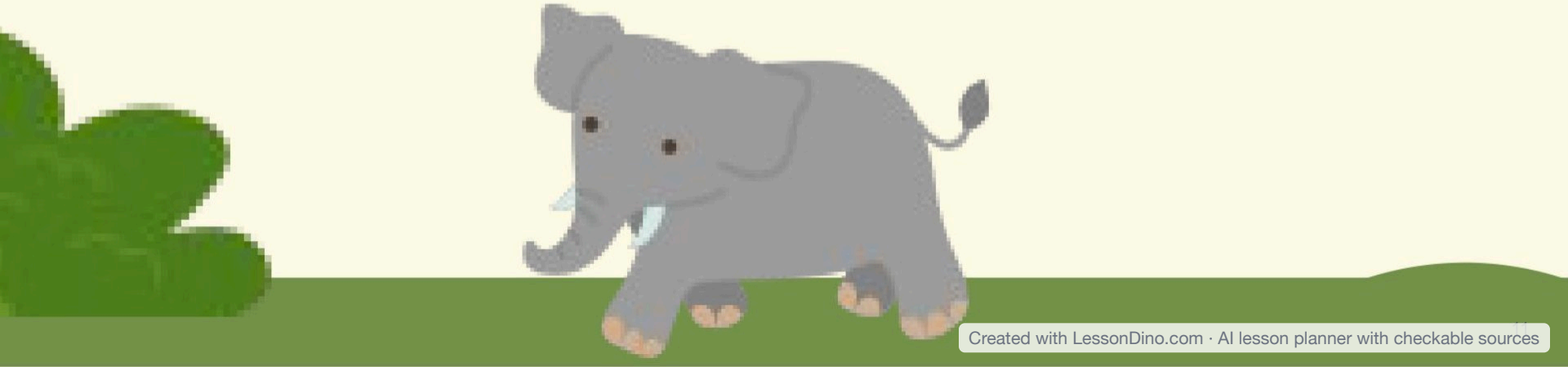
Vote: most useful job?

Which job of skeletons and muscles could you not do without?

- **A** Holding us up
- **B** Guarding soft parts
- **C** Helping us move

Vote with your hands, then explain why.



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Exit ticket

1

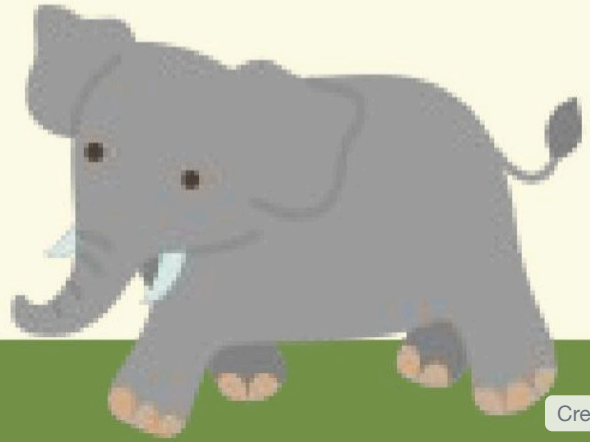
One job of my skeleton is...

2

One animal with muscles and a skeleton is...

3

One question I still have is...



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