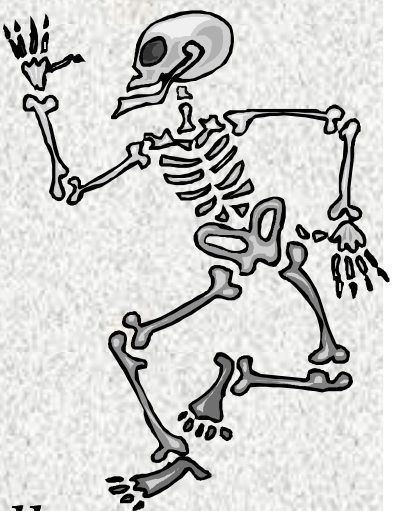
The Magic School Bus

A Science Chapter Book #2

The Search for the Missing Bones

Lapbook



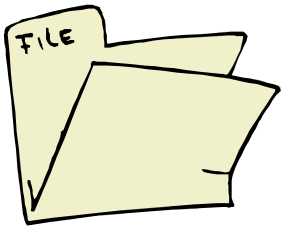
by
Amy Yee

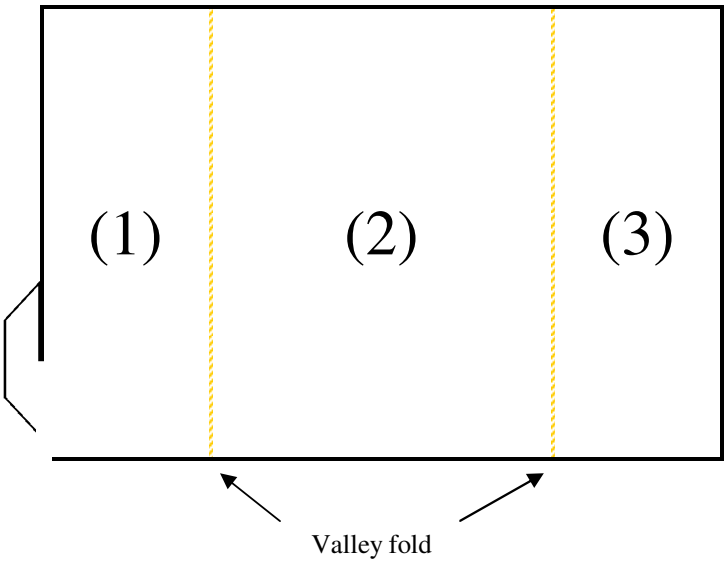
Yee Shall Know
http:///www.yeeshallknow.com

Lapbook Basics

Follow the instructions in the following page(s) to complete all the individual pieces that will go into your lapbook. And then assemble as follows:

Open a file folder and fold in the two sides.





Glue the booklets inside. Close the shutters and decorate the cover.

If more space is needed to complete your project, there are several methods to extend your file folder. You can fold another folder in the similar fashion and glue the back of section 3 of your first folder to the back of section 1 of your second folder. You can also lay an additional piece of paper (card stock) just above or below the middle section (2) of the folder. Use packing tape or other strong tape, secure the paper to the folder creating a flap that can be opened to display your student's work. You can also staple the crease between sections two and three of the first folder to the crease between sections one and two of the second folder using a long stapler. This method will give you two additional surfaces to add your student's completed work.

Some students prefer to assemble the lapbook after they have completed all the activities so they can arrange their booklets, while others prefer to affix each booklet to the lapbook after each activity. Either way will work.

A note on cutting and folding. In the following templates, please cut on the solid lines. The black dotted lines are folding lines for mountain folds (when you are done folding, the black dotted lines should be on the outside of the fold). The yellow dotted lines are for valley folds (when you are done folding, the line is tucked on the inside of your fold). Do make sure that you use firm pressure to make your creases as sometimes these creases will help the final booklet to fall into their proper positions.

For some younger students you may wish to have them dictate their answers to you or you may write down the answers for them to copy.

Lapbooks not only are fun for kids to do and help with their information retention, they also serve as a permanent record of their learning. The students can refer to it when looking for information, or they can use it in presentations to friends and relatives thus further reinforcing their learning.

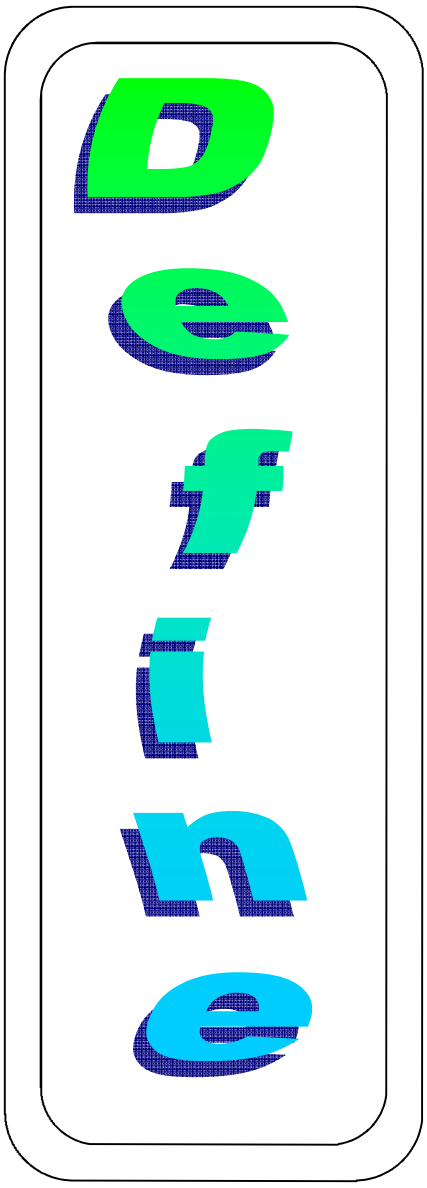
I hope your student(s) will enjoy this lapbook and the information learned will remain with them.

Activities

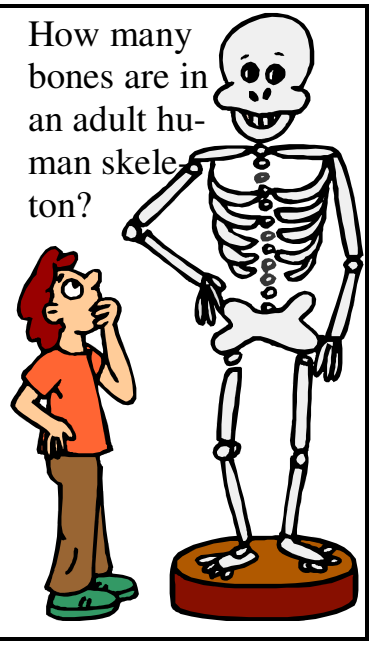
1. Define: ligaments, tendon, vertebrae
2. How many bones are in an adult human skeleton?
3. The skeleton is less than what fraction of a person's weight?
4. How many bones are in the feet?
5. How do muscles help the bones move?
6. Describe each type of joints, what type of motion do they allow, and give an example for each. Hinge, ball and socket, gliding, pivot, condyloid, saddle
7. What does "double-jointed" mean? How can some people bend themselves into strange positions?
8. What is the bone in front of your lower leg called? What is the thinner bone to the outside of the lower leg called?
9. What does cartilage do?
10. What do bone marrow do?
11. What is the benefit of having a honeycomb design inside our bones?
12. The femur is connected to which two bones? What are special about each of these joints? (knee, hip)
13. What is the purpose of the kneecap? How is it connected to the front of the joint?
14. What do the hip bones protect?
15. What is special about the s-shaped curve in our spine?
16. How many bones are in your spine?
17. What do bones constantly lose? How can we replace them? What are good sources of calcium? What do we need to help our bodies absorb calcium?
18. How many pairs of ribs do most people have? How many pairs are joined to the sternum? How are "false ribs" joined to the rest of the ribs? Which pairs of ribs are called "floating ribs?" What do the rib cage protect?
19. What is the common names for clavicle, scapula, and humerus bones?
20. What is the name of the bone on the same side of the forearm as the thumb? What is the name of the bone on the opposite side of the forearm as the thumb?
21. How long does it take for broken bones to heal by themselves? What methods do doctors use to help hold the bones in positions?
22. What happens to the blood around the fractures? What begins to grow from the broken ends? What happens to the callus over time?
23. How many bones are in each hand?
24. Where are many of the muscles for the hand located?
25. What is the only moveable bone in the skull?
26. What is the smallest bone? How big is it? Where is it located?
27. What is the first bones developed inside a baby called? What do they feel like? What happens to the cartilage as the child grows older? Small pads of remaining cartilage in a growing child are called what? What do these pads allow a person to do until the bones reach their full length?

Instructions

1. **Definition.** Cut along the solid lines. Fold the three flaps and then fold the cover. Open up the booklet and write in the definitions for each word.
2. **Number of Bones.** Cut out the card and fold in half. Write your answer on the inside of the card.
3. **Weight.** Cut out the card and fold in half. Write your answer on the inside of the card.
4. **Feet.** Cut out the card and fold the sides towards the center. Write your answer on the inside of the card.
5. **Muscles.** Cut out the card and fold in half. Write your answer on the inside of the card.
6. **Joints.** Cut out the pocket, fold along the dotted lines, and glue or tape the flaps to the back of the pocket. Cut out each card and write the description of each type of joint on the appropriate card.
7. **Double-jointed.** Cut along the solid lines and fold along the dotted lines. Write your answer under each flap.
8. **Lower leg.** Cut out the card and label the bones.
9. **Cartilage.** Cut out the card and fold in half. Write your answer on the inside of the card.
10. **Bone marrow.** Cut out the card and fold in half. Write your answer on the inside of the card.
11. **Honeycomb.** Cut out the card and fold in half. Write your answer on the inside of the card.
12. **Femur.** Cut along the outer lines and fold the sides towards the middle. Write your answer under each flap.
13. **Knee cap.** Cut out the card, fold the right side over and then the left. Write your answer in the card.
14. **Hip bones.** Cut out the card and fold in half. Write your answer on the inside of the card.
15. **S-shape.** Cut out the card and fold in half. Write your answer on the inside of the card.
16. **Spine.** Cut out the shape and fold into a matchbook. Write your answer on the inside.
17. **Healthy bones.** Cut out all the bone shapes and punch out the holes. Write the answer for each question on the bones and fasten them together with a paper fastener.
18. **Ribs.** Cut out the pocket, fold along the dotted lines, and glue or tape the flaps to the back of the pocket. Cut out each card and answer each question on the cards.
19. **Common names.** Cut along the solid lines. Fold into a connected matchbook. Write your answer on the inside.
20. **Forearm.** Cut out the card and label the bones.
21. **Broken bones.** Cut along the outer lines and fold the sides towards the middle. Write your answer under each flap.
22. **Fracture.** Cut out all the bones. Write your answer on each bone and staple the booklet together on the left.
23. **Hand.** Cut out the shape and fold into a matchbook. Write your answer on the inside.
24. **Hand muscle.** Cut out the shape and fold into a matchbook. Write your answer on the inside.
25. **Skull.** Cut out the card and fold in half. Write your answer on the inside of the card.
26. **Smallest bone.** Cut out the cover and the tabbed pages. Answer each question on the appropriate page. Staple the booklet together on the bottom.
27. **Growing bones.** Cut along all solid lines on the pocket including the lines to open up the window for the questions and the flap for the answers. Fold and glue or tape the flaps to the back of the pocket. Cut out the Q & A card. Fill in the answers in the box next to each question and slide the card into the envelope

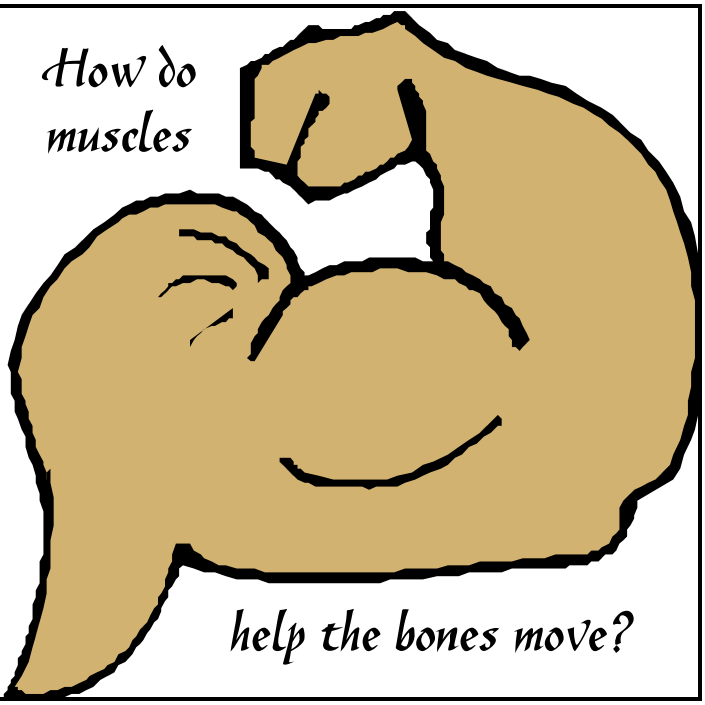
ligaments		
tendon		
vertebrae		

How many bones are in an adult human skeleton?

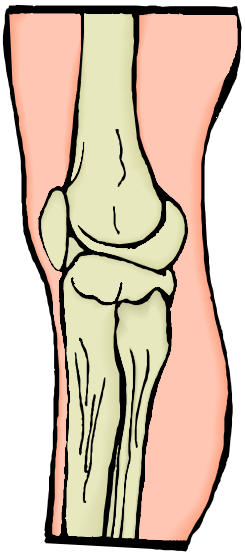


The skeleton is less than what fraction of a person's weight?

How do muscles



help the bones move?



JOINTS

hinge

ball and socket

gliding

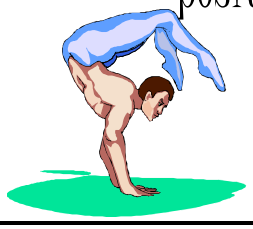
pivot

condyloid

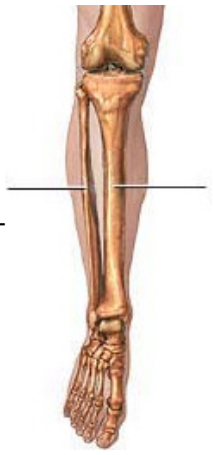
saddle

What does "double-jointed" mean?

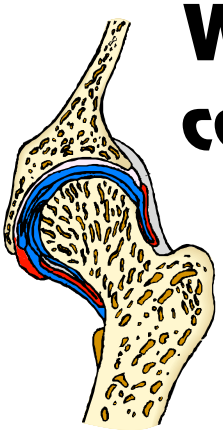
How can some people bend themselves into strange positions?



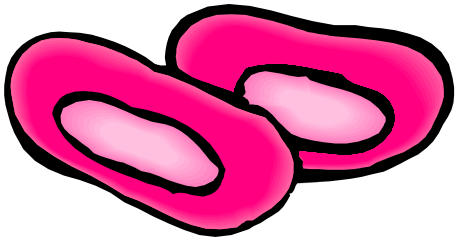
_____ is the thinner bone to the outside of the leg.



_____ is the bone in front of the lower leg.



What do cartilage do?

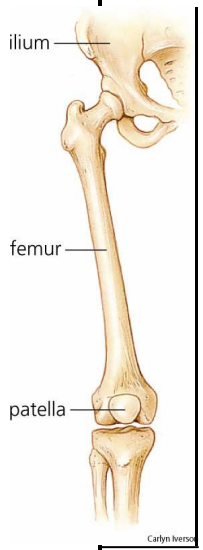


What do bone marrows do?

What is the benefit of having a honeycomb design inside our bones?

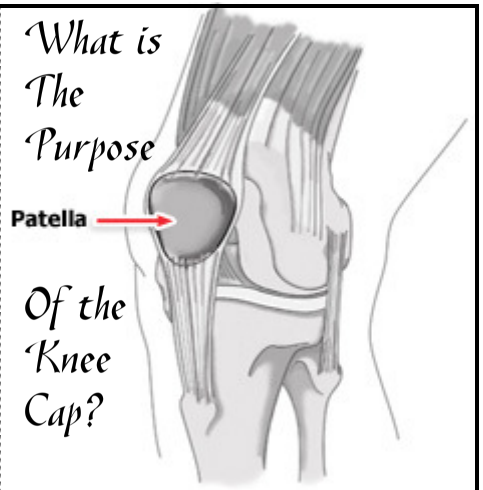
What is special about each of these Joints?

The femur is connected to which two bones?



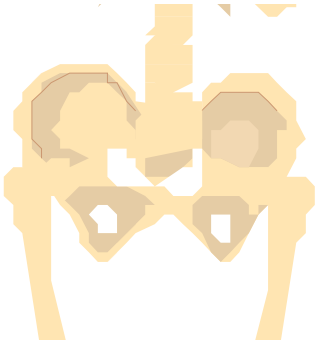
How is it connected to the front of the joint?

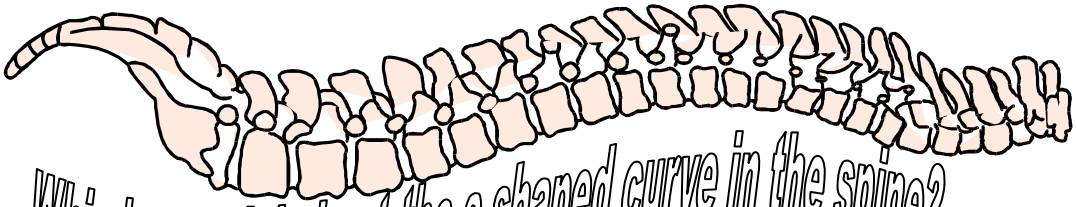
What is The Purpose



Of the Knee Cap?

What do the hip bones protect?





Whis is special about the s-shaped curve in the spine?

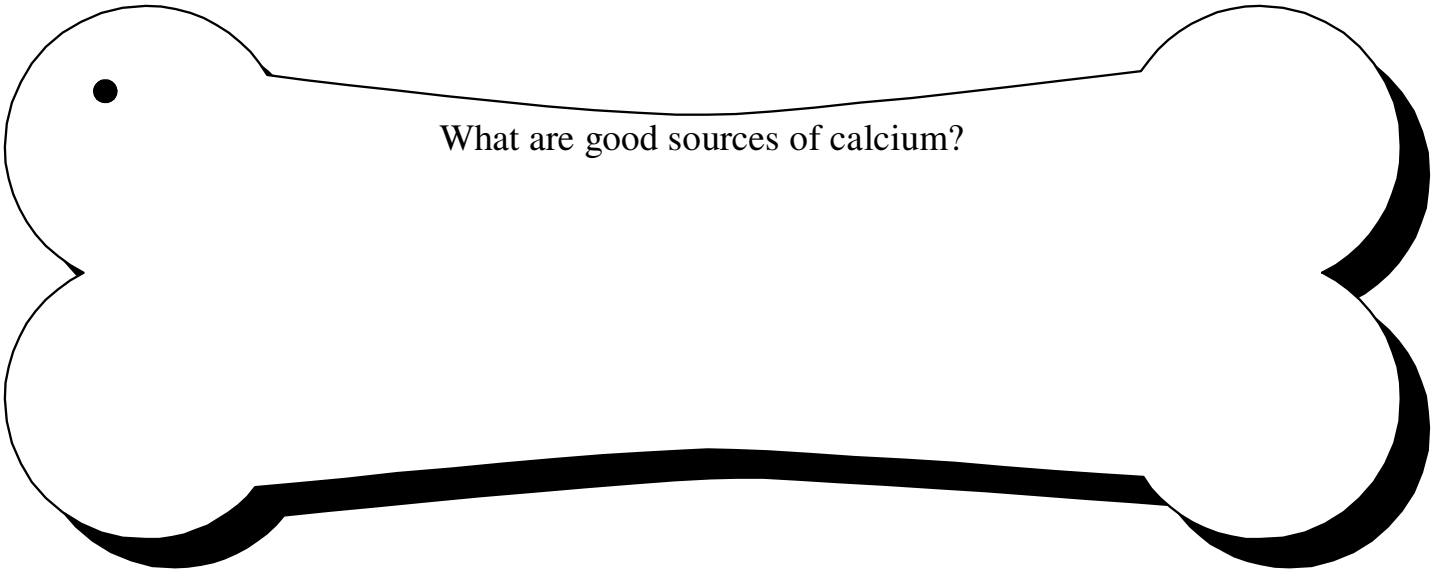
How many bones are

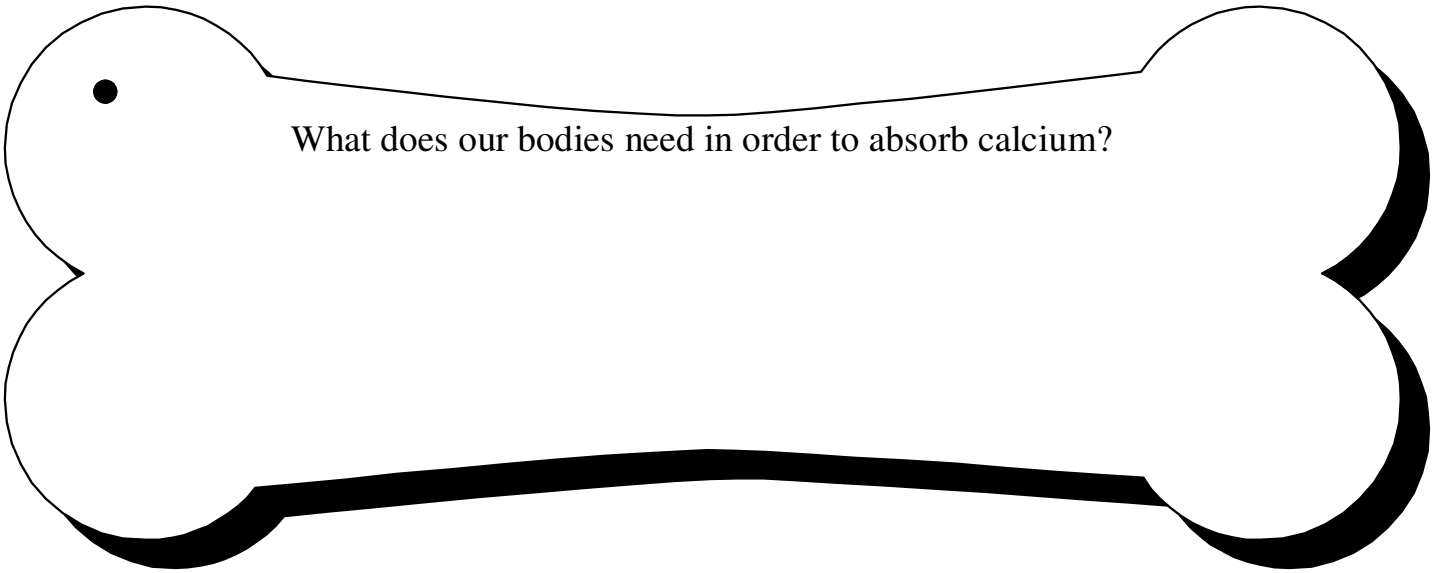
in the spine?

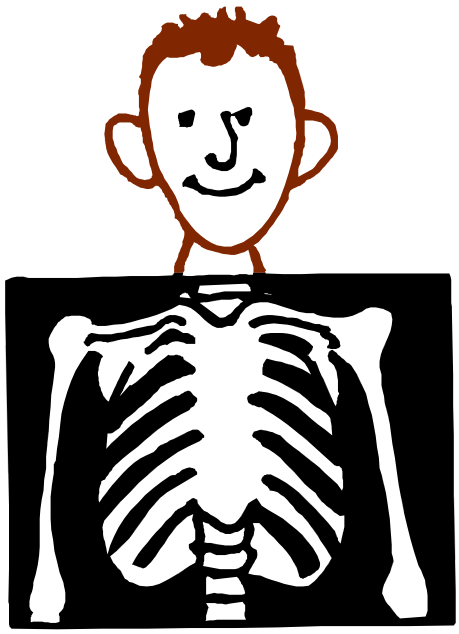
Healthy Bones

What do bones constantly lose?

How can we replace what the bone loses?


What are good sources of calcium?


What does our bodies need in order to absorb calcium?



RIBS

How many pairs of ribs
do most people have?

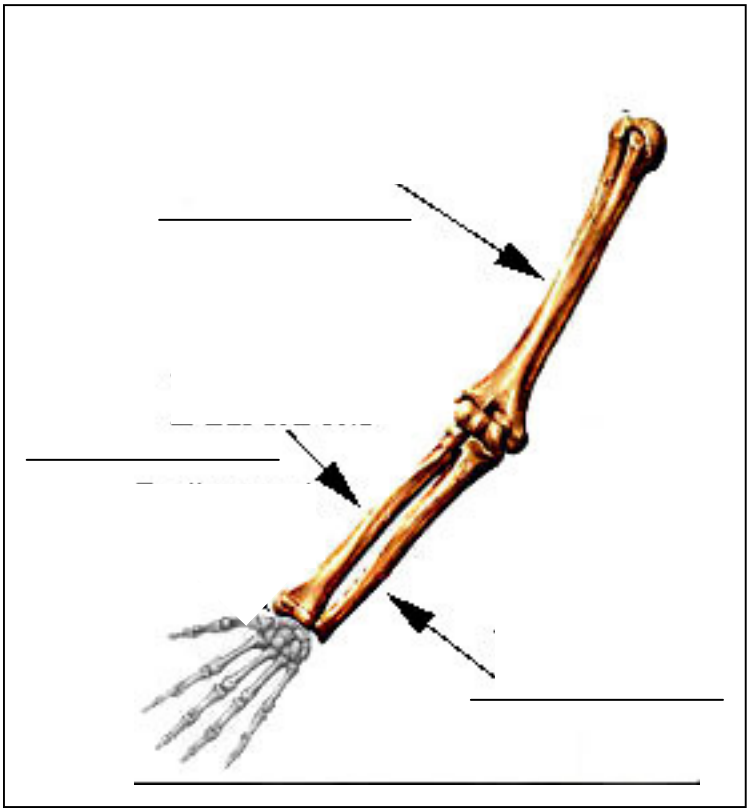
How many pairs are joined to the sternum?

How are "false ribs" joined to the rest of the ribs?

Which pairs of ribs are called "floating ribs?"

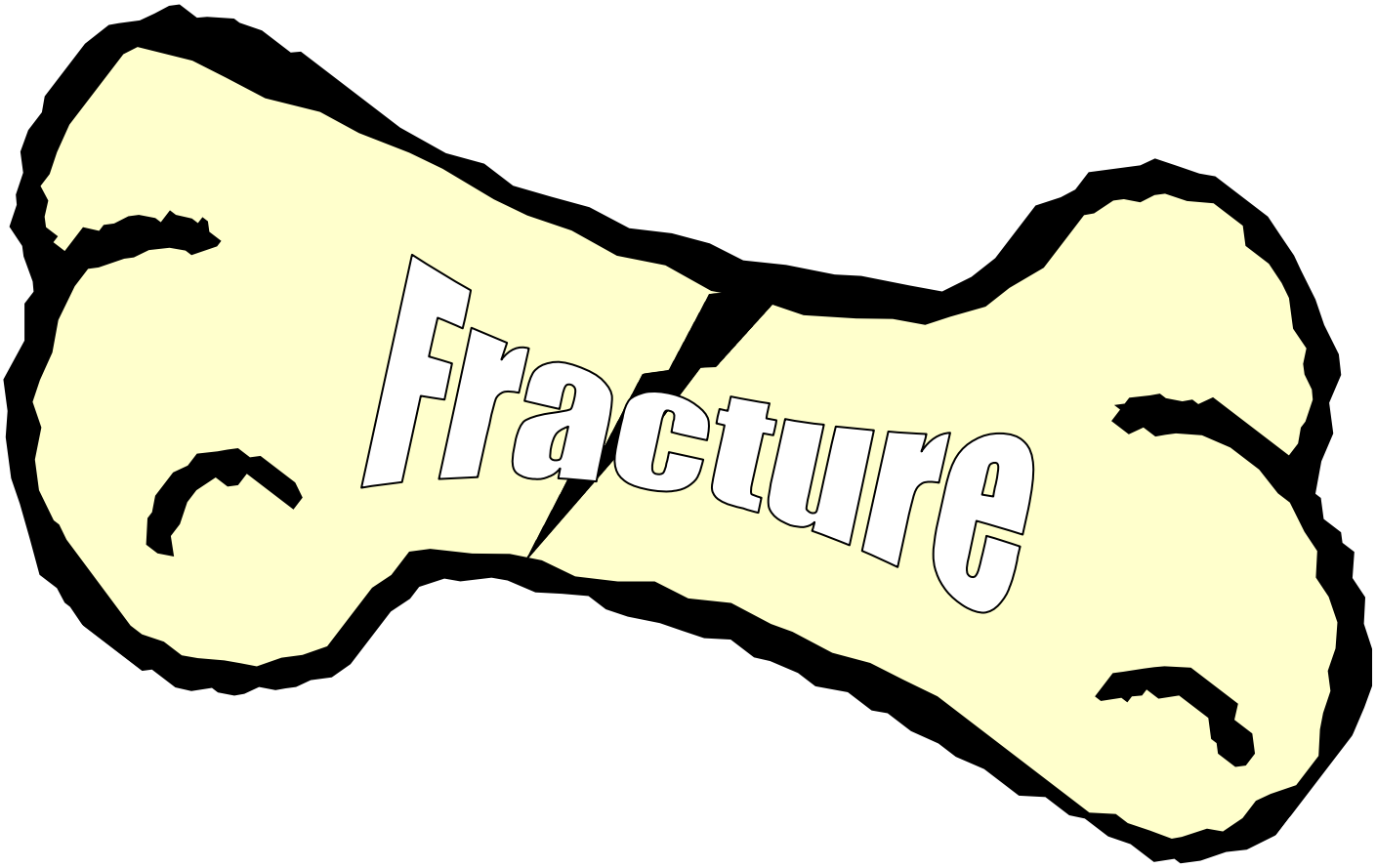
What do the rib cage protect?

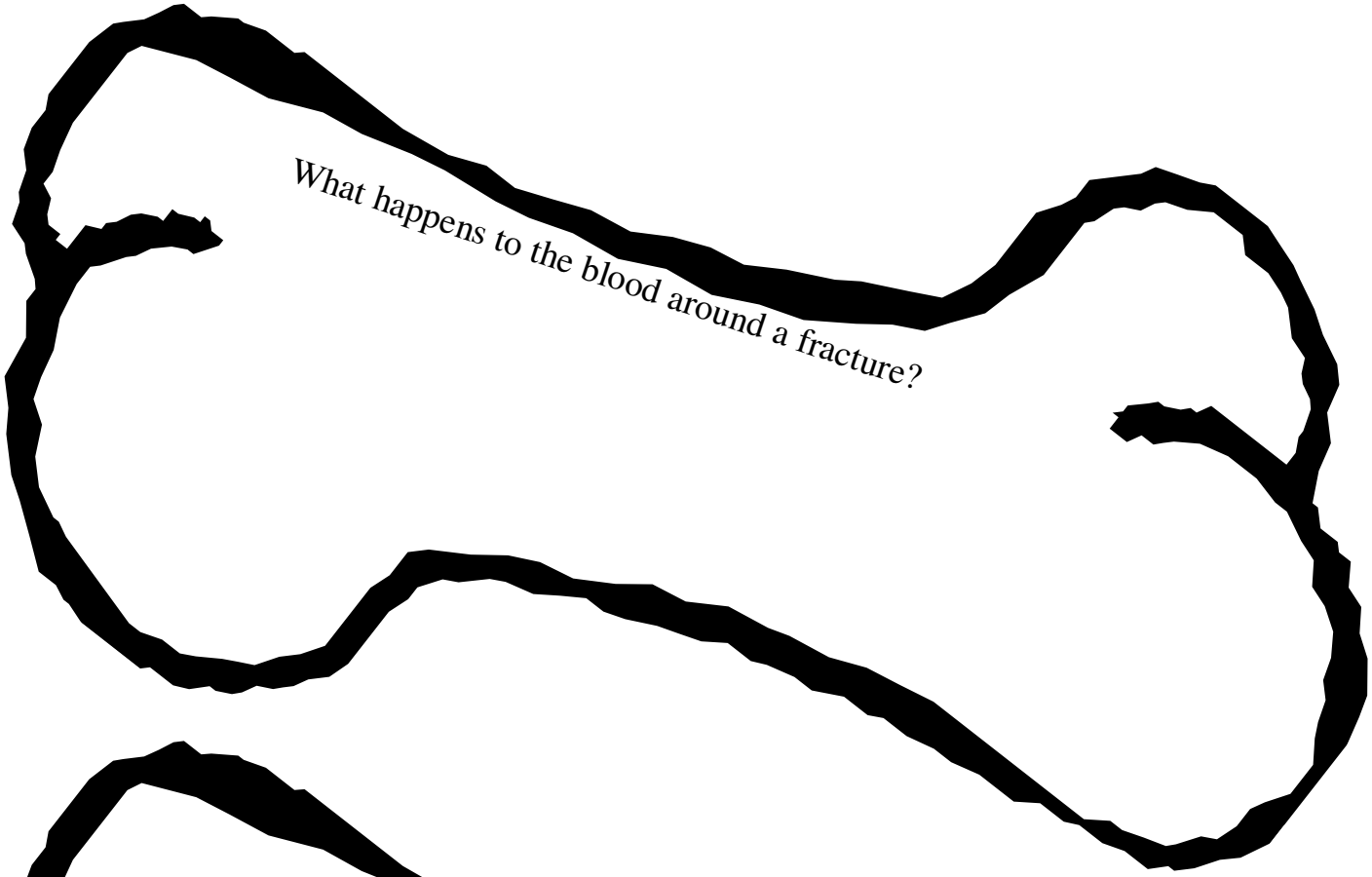
clavicle	*scapula*	*humerus*
What are the common names for		

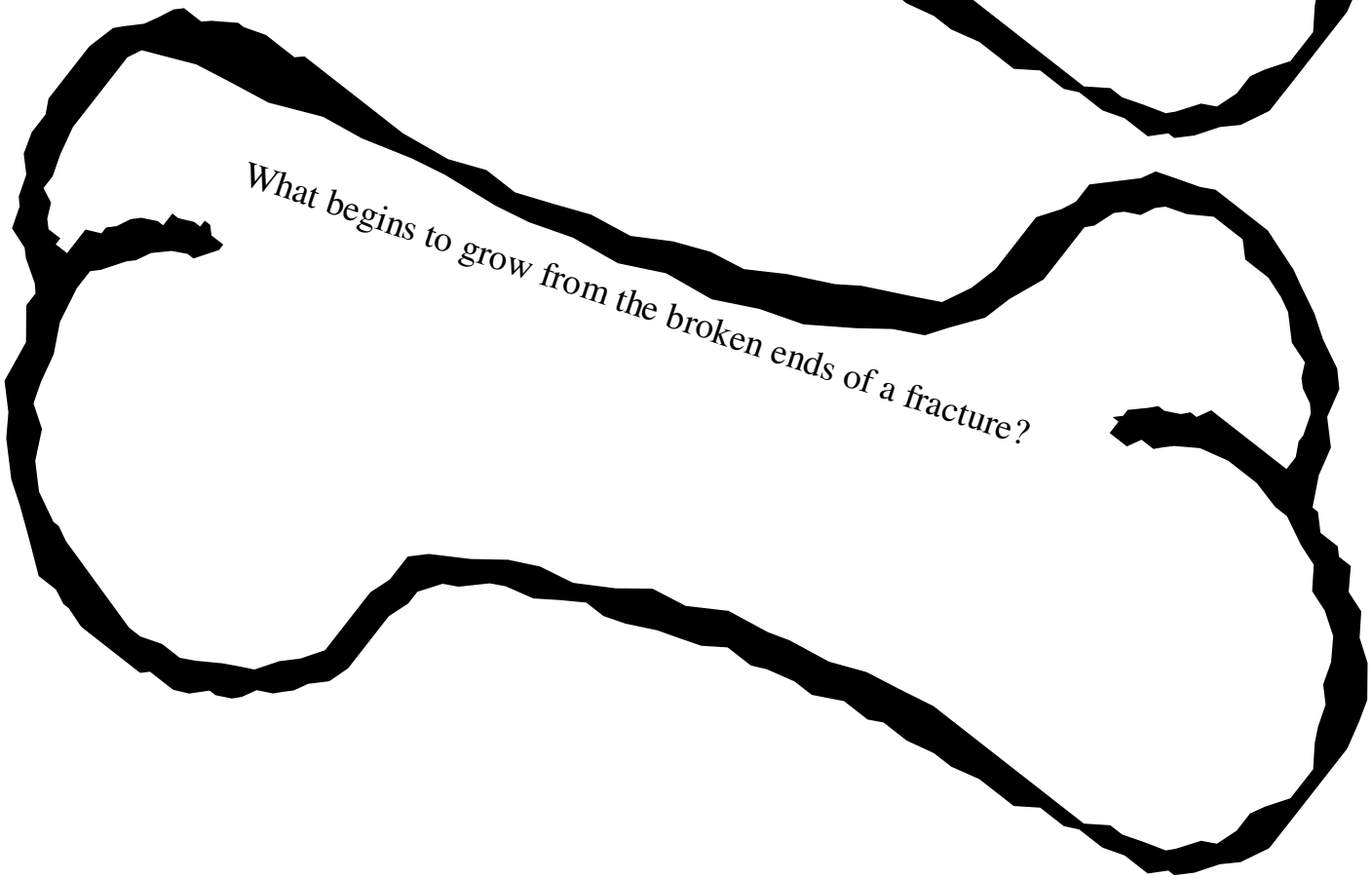


What can doctors do to help hold the bones in position		How long before broken bones can heal by them- 

Fracture

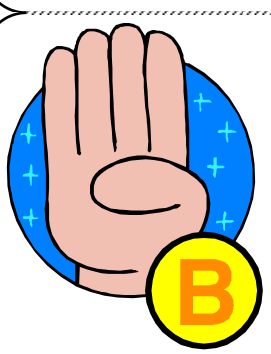



What happens to the blood around a fracture?


What begins to grow from the broken ends of a fracture?

What happens to the callus over time?

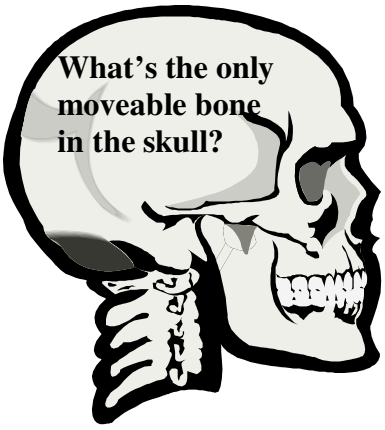
are in each hand?



How many bones

Where are many of the muscles for the hand located?

What's the only moveable bone in the skull?

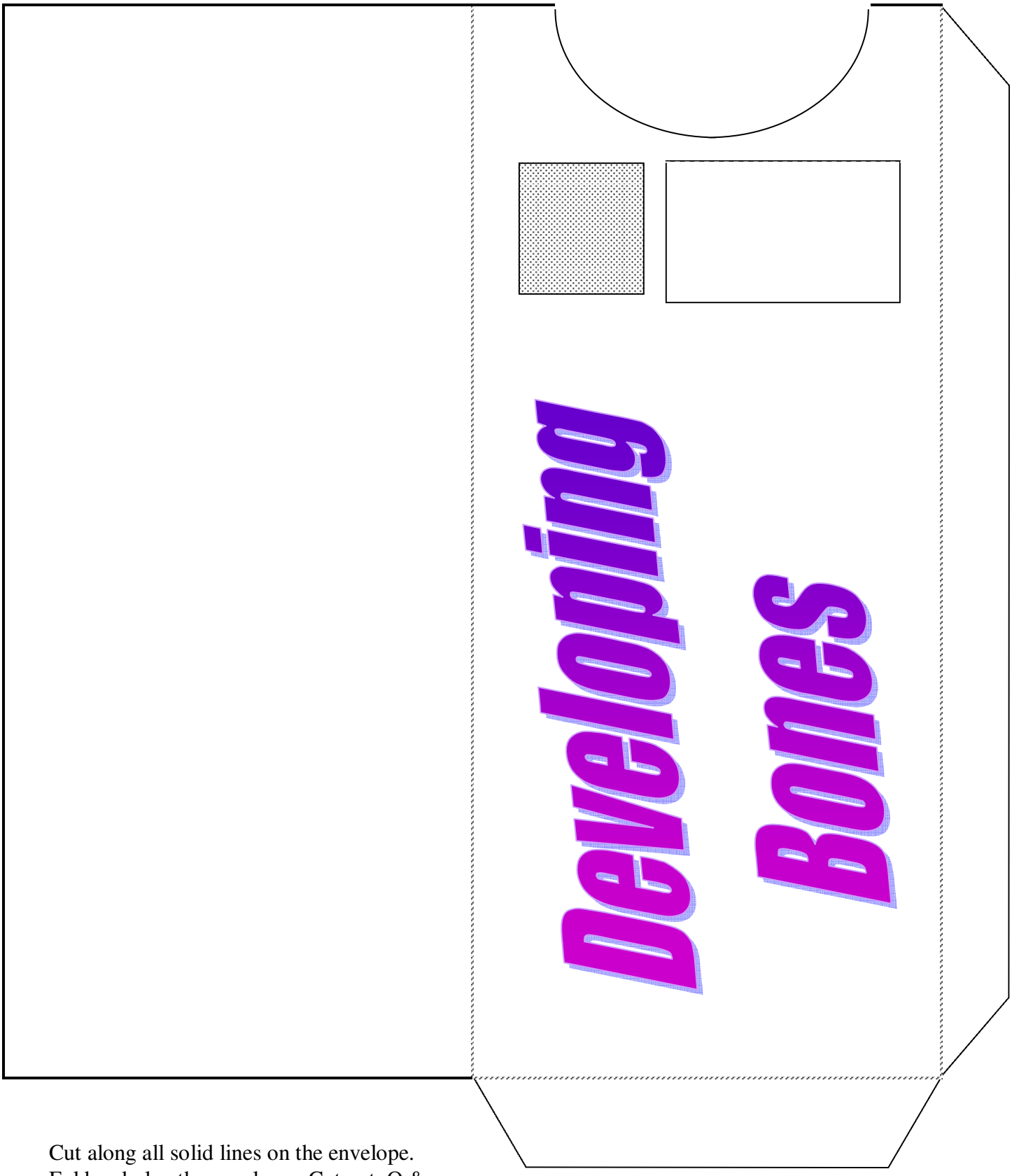


Smallest bone

Name

Size

Location



Cut along all solid lines on the envelope. Fold and glue the envelope. Cut out Q & A card. Fill in the answers in the boxes and slide into the envelope

What is the name of the first bones developed inside a baby?	
What does cartilage feel like?	
What happens to the cartilage as the child grows older?	
Small pads of remaining cartilage in a growing child are called what?	
What do these pad allow a person to do before the bones reach their full length?	

Extra Pictures