



**Instructions: Please write down your notes in your science notebook. Study the diagram of the skeleton.**

Lesson 6

## The Skeletal System

The skeleton is made up of all the bones in the body. There are about 206 bones in the body of an adult human. The **skeleton** has three functions. It supports the weight of the body, enables it to move and protects vital organs.

Bones are made of different kinds of **tissues**. Some bones are hollow. These are light and strong. The outer part of bones is made of hard bone tissue. The hardness is crystals of **calcium**.

The **skull** protects the brain and forms the shape of the face. Your skull has special holes for your eyes, ears, nose, and mouth. Put your fingers at the outside corner of your eyes. Feel the bone? You have 14 different bones in your face! Let's see... 14 bones in the face, plus eight bones in the **cranium**...that's 22 bones. Some people also count the three tiny bones in each ear as part of the skull. Then there's the mandible or jawbone... that makes a grand total of 29 bones in the skull.

**Neck bones.** On the back of your neck, you can feel the neck bones. They are called the **cervical vertebrae** (plural; say: VER-tuh-bray). Each vertebra (singular; say: VER-tuh-bruh) has a hole in the middle of it. They are shaped like rings. Your spinal cord passes through each vertebra.

The **spine** is made up of **vertebrae** that support and protect the spinal cord. The **ribs** protect the heart, lungs and other organs in the chest cavity such as the heart, and the lungs.

Your **hip bones** or pelvis are six bones joined together. The rounded hard points that poke out on each side are the anterior superior iliac crest.

Your **thigh bones** are the biggest, strongest, and heaviest bones you have. It's hard to feel your thigh bones. Big muscles cover them. You need big muscles there to help you walk, jump, and run. The thigh bones are big because they have to hold up all your body's weight when you stand and move about. The thigh bone's fancy name is the **femur**.

**Knee bone.** When you are sitting down, you can feel your kneecaps. The fancy name is the **patella**. There's no muscle over the patella. When you kneel on a hard floor, it hurts your kneecaps. That's because they are only covered with skin. There's no padding on them. This is why it is important to wear kneepads when you roller skate or bicycle. If you fall on your knees, it hurts! The patella's job is to protect the knee joint. This is a hinge joint. It works just like the hinge on a door. It can only move one way.

**Leg bones.** Below the knees, the lower leg has two bones in it. Their fancy names are the **tibia** and the **fibula**. The tibia is called the shin bone. It doesn't have much padding on it, either. If you walk into something and hit your shin bone, it hurts! The fibula is on the little toe side of your leg. It is much smaller than the tibia.



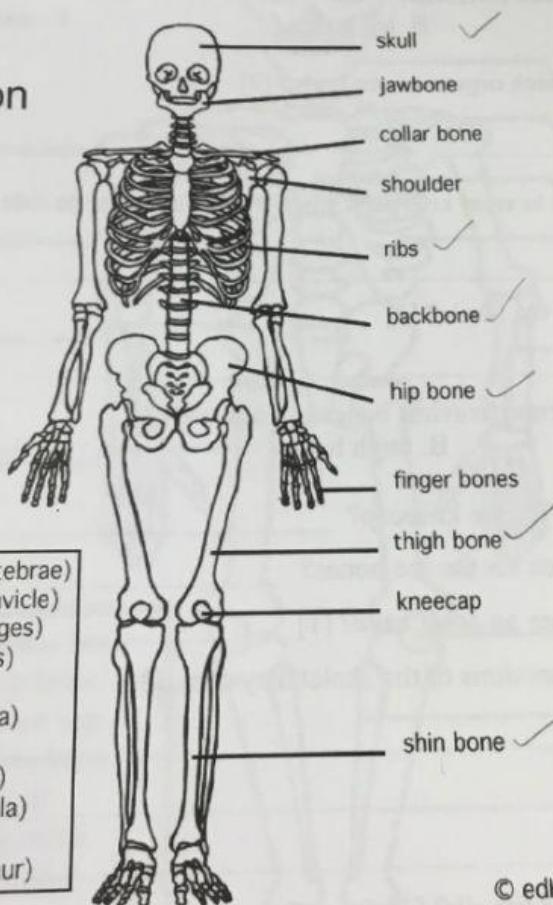
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**Ankle bone.** The big bump you feel at your ankle is really just a part of the tibia. The ankle bones are hidden away, and you can't feel them.

**Foot bones.** Each foot has **26** bones in it. You can feel the metatarsals on the flat top part of your foot. You have five metatarsals. There's one for each toe. In the toes, the bones are called **phalanges**. You can feel many bones in your foot because there isn't much padding there, either.

Your bones are made of living cells. Bones can grow and repair themselves. If you break a bone, your body will begin making new bone cells. The two broken pieces of bone will grow back together. You will have to wear a cast. The cast will hold the two broken pieces together in the same place so that they can mend.

## Human Skeleton



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