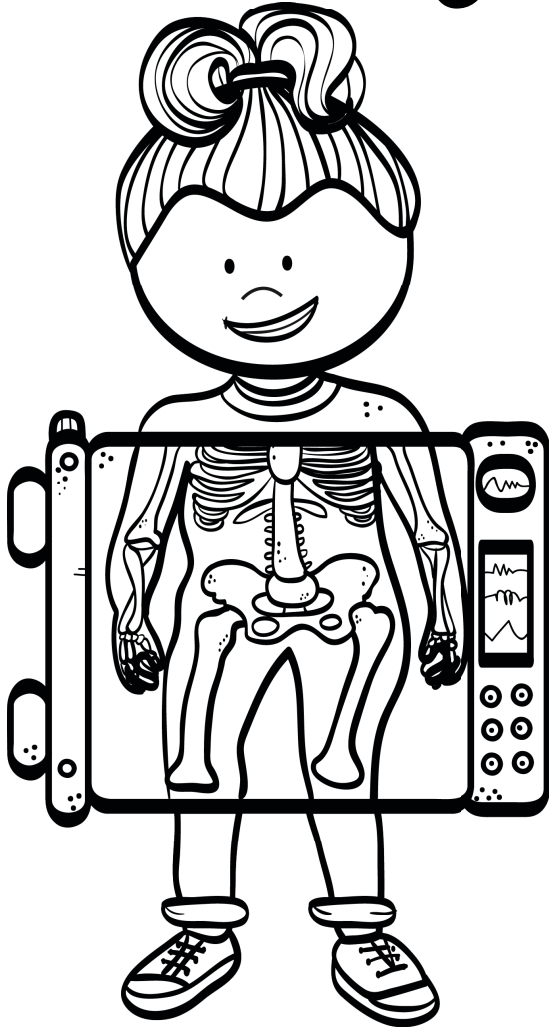
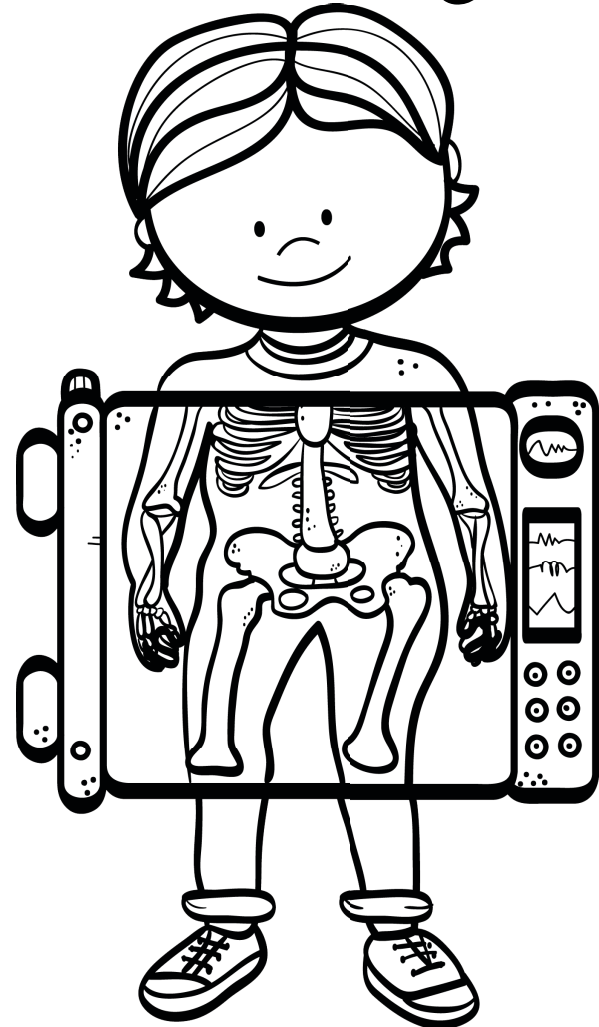


the Skeletal System



Name _____

the Skeletal System



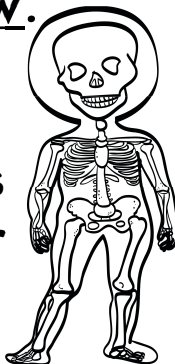
Name _____

The Skeletal System

All the bones in the human body are called the skeleton. The skeleton gives the body shape and form so we don't flop around like a jellyfish! Bones and all the connective tissue like joints, cartilage, ligaments, and tendons make up the skeletal system.

The skeletal system has many jobs or functions. In addition to giving the body shape, it protects the organs. For example, the skull protects the brain. Our joints, muscles, and connective tissues work together to allow us to bend and move. Inside the center of bones, is a soft tissue called bone marrow.

It is here that white blood cells, red blood cells, and platelets are produced. Bones store minerals like calcium for our body.



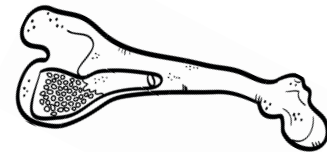
Bones

2

Bones are living tissue made mostly of the protein collagen. They are the main part of the skeletal system. Bones are thick and strong on the outside and spongy on the inside. This makes them difficult to break but not too heavy to keep you from moving. Bones form the frame of our body called the skeleton.

Newborn babies have about 300 bones in their bodies. As babies grow, their bones fuse together. When bones fuse together they grow together to become one large bone. By the time you are an adult, you have a total of 206 bones.

Bones continue to grow in length from birth until around age 25. If bones are broken, they will regrow and repair themselves. Each bone has its own function.



Bones are Alive!

3

Bones in our body are alive, growing, changing, and working. Old bones are broken down and new bones are formed. Actually bones are completely new every seven years. Because bones are alive, they can heal themselves when broken. Fractured, or broken, bones will grow new cells in repair. The process can take months

Bones are typically made of four layers. Periosteum is the thin outer layer that holds nerves and blood vessels. Next comes the hard, smooth compact bone. Inside the compact bone layer is cancellous bone. Cancellous bone looks like a sponge, but is very hard. The innermost layer in many bones is the bone marrow. In this thick jelly is where blood cells are made.



Types of Bones

4

The human skeleton is made of mainly four types of bones. The bones are characterized by their shape not size. Long bones are bones that are longer than they are wide. These are found in your arms, legs, fingers, and toes. Short bones are about as wide as they are long. They are about equal length, width, and thickness. Short bones are found in your wrists and ankles. Flat bones are large, strong, flat bones that protect the organs. Many are often slightly curved and thin. Flat bones are found in the skull, shoulder blades, and breastbone. They also provide a place for muscles to attach. Irregular bones are bones that do not fit into any other shape category of bone. They are complex in shape like vertebrae and facial bones.



Joints and Connective Tissue

5

The skeletal system is not just made of bones. It also includes joints and the three types of connective tissues. The area where our bones meet is called a joint. Some joints allow for movement and others do not.

Cartilage, ligaments, and tendons are connective tissues that connect bones to each other or other parts of the body. Bones are held together at a joint by tissues called ligaments. Another type of hard tissue, called cartilage, is flexible and keeps bones from rubbing together. Cartilage is found in babies before bones grow. Tendons connect muscles to bones and are found throughout the body.



Bone Health

6

Because bones are alive and working, they need to be kept healthy. Bones need calcium to grow, harden, and become strong. Milk and other dairy products are a great source of calcium. Vitamin D is important because it helps the body use calcium in the body. Eating a healthy diet is also important.

Bones can be kept strong by exercising. Since bones can break, it is important to protect your bones. Helmets, wrist supports, elbow and knee pads protect bones from fractures while playing sports.

As people get older, bones become thinner and do not regrow as quickly. Keeping bones healthy is especially important as people get older.

