**Skeletal System Information**

**How many bones do humans have?**
When you were born you had over 300 bones and your skeleton was mostly cartilage. **Cartilage** is a soft, flexible material found in your outer ears and the tip of your nose. It also covers the ends of your bones at your joints. As you grew, your bones began to fuse together. An adult has only 206 bones!

**How do my bones move?**
You need muscles to pull on bones so that you can move. Along with muscles and joints, bones are responsible for you being able to move. Your muscles are attached to bones by **tendons**. When muscles contract, the bones to which they are attached act as levers and cause various body parts to move.

You also need joints which provide flexible connections between these bones. Your body has five different kinds of joints. Some, such as those in your knees, work like door hinges (**hinge joint**), enabling you to move back and forth. Those in your neck enable bones to pivot (**pivot joint**) so you can turn your head. Still other joints like the shoulder enable you to move your arms 360 degrees like a shower head (**ball-and-socket joints**). **Gliding joints** are found in your wrist and between your vertebrae. **Ligaments** are strong tissues that hold your bones together at your joints. Your cranium is made of different bones with **immovable joints** in between them. You have over 230 moveable and semi-moveable joints in your body.

**Are your bones alive?**
Absolutely. Bones are made of a mix of hard stuff that gives them strength and tons of living cells which help them grow and repair themselves. Like other cells in your body, the bone cells rely on blood to keep them alive. Blood brings them food and oxygen and takes away waste.

If bones weren't made of living cells, things like broken toes or arms would never mend. But don't worry, they do. That's because your bone cells are busy growing and multiplying to repair the break! How? When you break your toe, blood clots form to close up the space between the broken segments. Then your body mobilizes bone cells to deposit more of the hard stuff to bridge the break.

**What's bone marrow?**
Many bones are hollow. Their hollowness makes bones strong and light. It's in the center of many bones that **bone marrow** makes new red and white blood cells. Red blood cells ensure that oxygen is distributed to all parts of your body and white blood cells ensure you are able to fight germs and disease. Who would have thought that bones make blood!?!

**Diseases and Disorders**

* **Osteoporosis** is a disease resulting in the loss of bone tissue. In osteoporosis, the bone loses calcium and becomes more brittle.
* **Scoliosis** is a side-to-side curve of the spine. This condition becomes apparent during adolescence. It is unknown why Scoliosis affects more girls than boys.
* There are more than 100 diseases of the joints referred to as **arthritis**. Victims of arthritis suffer pain, stiffness, and swelling in their joints.
* The cause of most human **leukemia** is unknown. It is a kind of cancer in which abnormal white blood cells multiply in an uncontrolled manner. They interfere with the production of normal white blood cells. Leukemia affects the production of red blood cells.

**Factoids**

* The human hand has 27 bones; your face has 14!
* The longest bone in your body? Your thigh bone, the femur -- it's about 1/4 of your height. The smallest is the stirrup bone in the ear which can measure 1/10 of an inch.
* Did you know that humans and giraffes have the same number of bones in their necks? Giraffe neck vertebrae are just much, much longer!