



# LETS TALK ABOUT TISSUE

## DID YOU KNOW?

The skin is our largest organ, totaling 10 pounds. However, it is also considered a tissue because skin grafts can be recovered and used as transplants. For example, a skin graft can help save the life of a burn victim. One donor can save and heal up to 83 lives – eight lives through organ donation and 75 through tissue donation!

## MATERIALS:

1. Rubber bands.
2. A device with internet access.

## BACKGROUND INFORMATION:

Tissue is made up of groups of cells that work together to help us to do many things like run, jump and dance. We have tissue throughout our bodies, both internally and externally. Some tissue can be donated and used for transplantation including bone grafts, skin grafts, tendons, ligaments, veins and heart valves.

**Tissue helps our bodies in many ways. Here are just a few:**

1. Skin is a protective covering that helps keep dirt and germs out of our bodies.
2. Veins are hollow tubes that carry blood through the body and back to the heart.
3. Bones make up the skeleton and support and protect our bodies.
4. Tendons connect muscles to bones, and ligaments connect bone to bone. They give us the ability to move and hold everything together.
5. Heart valves open and close to allow blood to flow correctly through our hearts.

There are certain infections, accidents, diseases and birth defects that can cause tissue to need to be replaced. Some reasons a person could need a tissue transplant could be a tendon repair from a sports injury, veins for bypass surgery, heart valve replacements for pediatric patients, and bone grafts to help cancer patients or to replace badly broken bones.



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## ACTIVITY:

1. Stand up and bend one knee up and down. Then, straighten and curl your arms. Can you feel the tendons and ligaments helping to move your knee and arms?
2. Next, find a rubber band and gently pull it back. Tendons and ligaments are stretchy like rubber bands. What would happen if you stretched the rubber band (tendon) too far?
3. Do you know the names of tendons and ligaments in your body? Use a device with internet access to look up “ligaments or tendons” in a search engine.

## CHALLENGE:

1. There are 206 bones in the adult human body. Either alone or with another person, stand up and try to point to as many bones as you can.
2. Next, see if you can name any bones, such as the femur, one of the longest bones located within the thigh.
3. Do you know the names of other bones throughout your body? Search the internet for diagrams or videos to learn more.