

## Body Basics

Grade Level: Pre-K – Grade 3

Summary: Learn about the skeleton, compare humans to other living things and see the body from the inside out with Stuffee, the giant doll with removable organs.

Frameworks: (K-3): LS: 2.1.3;  
PEL: 2.K.1, 2.K.2, 2.K.7, 2.1.1, 2.1.2, 2.1.6, 2.2.1, 2.2.2, 2.2.6,  
2.3.1;  
HW: 5.1.1

### PRE-VISIT ACTIVITY #1

Terms:

|          |                    |                    |
|----------|--------------------|--------------------|
| Skeleton | Organ System       | Nervous System     |
| Bone     | Muscle             | Respiratory System |
| Joint    | Digestive System   | Vertebrate         |
| Organ    | Circulatory System | Invertebrate       |

### PRE-VISIT ACTIVITY #2

#### SKELETON PUZZLE

Objectives: Students will identify the main bones of the human body and assemble them into a skeleton.

Materials: Skeleton Puzzle Pieces:  
Skull/Head  
Torso  
Upper Arm (Humerus)  
Lower Arm (Radius/Ulna)  
Hand/Wrist  
Pelvis  
Femur  
Tibia/Fibula  
Foot/Ankle

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Procedure:

1. Students will identify each part of the skeleton.
2. Students will assemble the skeleton puzzle.

Questions:

1. What does your skeleton do?
2. What would happen if you didn't have a skeleton?
3. How are your bones connected to each other?
4. List the 4 other vertebrate groups.

**POST-VISIT ACTIVITY #1**

**HEART RATE**

Objectives: Students will investigate how a person's heart rate changes with a person's activity level.

Materials: Rubbing Alcohol Pads (single use)  
Stethoscope  
Pencil  
Clock with minute and second hand  
Book: Hear Your Heart by P. Showers

Procedure:

1. Students will work in pairs, with one student acting as a timer for the other student.
2. The teacher reads the book aloud.
3. The students clean the stethoscope's earplugs with alcohol pad.
4. The students put on the stethoscope and listen to own heart and partner's heart.
5. Students will start counting heartbeats when the second hand is on the "12" and count for 60 seconds. Student stops counting when the second hand reaches "12" again.



6. The students write down the number of beats for the resting heart rate.
7. Count and record the heart rate after walking for 1 minute and running for 1 minute.
8. Record the number of heart beats on the chart.
9. Students will prepare a graph of the heart rate at rest, after walking and after running.
10. Students will determine the difference between the rest heart rate and the walking heart rate.
11. Students will determine the difference between the resting heart rate and the running heart rate.

Questions:

1. What happens to our heart rate when we begin to rest after we walk? run?
  
  
  
  
  
  
  
  
  
  
2. What would happen to our heart rate if we walked or ran longer?

**POST-VISIT ACTIVITY #2**

**RUBBER PUMP**

Objectives: Students will explore ways to show how the heart functions.

Materials:

- 1 transparent rubber glove
- 2 plastic drinking straws
- 3 small rubber bands
- 2 transparent plastic cups
  - 1 with colored water
  - 1 with clear water

Procedure:

1. Students should work in pairs.
2. Cut a small hole in the ends of the thumb and one of the fingers of the rubber glove. The hole should be just big enough for the straw to fit.
3. Insert one of the drinking straws into the cut on the thumb and seal it with one of the small rubber bands. Make sure no air can leak through the seal.
4. Repeat the procedure for the other finger of the glove.
5. Pour enough water into the glove to make it bulge. With a small rubber band, seal the top of the glove so no air or water can escape.



6. As the water begins to flow out of the fingers of the glove, one person seals the end of the straws with their fingers to keep water from flowing out.
7. Insert the thumb of the glove with the drinking straw attached to it into the plastic cup with clear water and the finger into the colored water.
8. Squeeze the rubber glove gently and release the end of the thumb with the straw attached to it into the tumbler with the clear water.
9. Remove your finger from the finger in the colored water and have your partner pull on the rubber glove to expand it.
10. Repeat the process several times.

Questions:

1. What happened when you released your finger from the straw in the cup with the clear water?      *Clear water flowed into the cup.*
  
2. What happened when you released your finger from the straw in the cup with the colored water?      *Colored water flowed into the rubber glove.*
  
3. What happens to the water in the glove and the cups?  
    *The clear water in the glove and the cup begins to turn red.*
  
4. Explain how the pump works.

