The Human Body: 4th Grade- Unit 1, Lesson 2

Science concept: More about the Heart

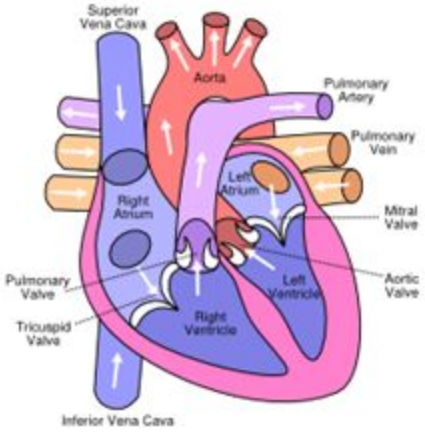
Is this what our heart looks like?

Let's read together!

We see and hear about hearts everywhere. A long time ago, people even thought that their emotions came from their hearts, maybe because the heart beats faster when a person is scared or excited. Now we know that emotions come from the brain, and in this case, the brain tells the heart to speed up. So what's the heart up to, then? How does it keep busy? What does it look like? Let's find out.

Taken from

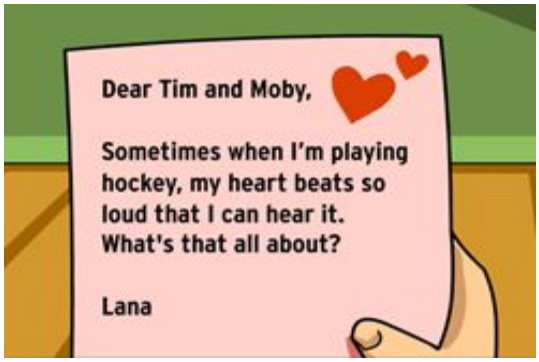
Your Heart & Circulatory System (for Kids) - Nemours KidsHealth



Hmmmm…. Actually it looks more like this

Supplementary teaching video link

Here's a video about the heart: https://www.brainpop.com/health/bodysystems/heart/



Oh, my bleeding heart! In this BrainPOP movie, Tim and Moby discuss the human heart and how it works!

Concept reinforcement questions

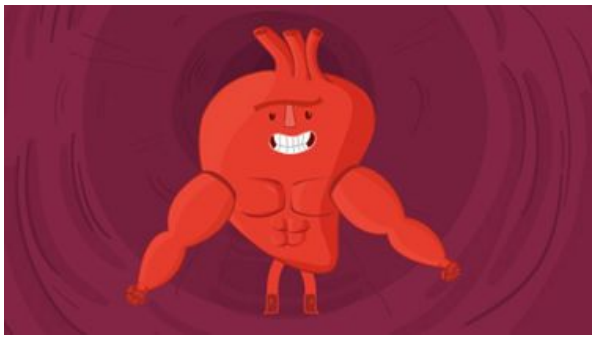
1. Which body part is the same size as your heart?
2. Where is the heart located?
3. How many chambers does your heart have?
4. Where can we feel our pulse most easily?
5. What does our pulse tell us?
6. Why does your heart beat faster during exercise?

Answers

1. *The fist*
2. *In the centre of our chest, slightly to the left*
3. *4*
4. *At the side of the neck or near the wrist*
5. *How fast or how slow or heart is beating*
6. *To provide the muscles with more blood*

Additional reading

Do you think we have muscles on the inside of our body? Well of course we do! The heart is the strongest and most important muscle, located slightly left of the centre of your chest. It is made of four chambers, two upper chambers and two lower chambers. Our hearts keep all the blood in our circulatory system flowing.



- The heart first pumps blood to your lungs. Here, the blood picks up oxygen from the air that you have breathed in.
- The blood (carrying oxygen) then travels back to your heart.
- The heart gives the blood a second push. This time, it's sent all around the body to the different organs and tissues.
- The blood travels back to the heart and it all begins again.

Have you ever felt a throbbing motion in your neck or near your wrist? This is our pulse. The pulse tells us how fast our heart is beating. Our heart may beat faster or slower depending on our activities. During exercise, our hearts beat faster so more blood can be transported around the body. Our heartbeat is involuntary. What does that mean? It means that we don't have to think about making our hearts beat. The brain does all that hard work for us and passes on the message.

TIME TO HAVE SOME FUN

Try at home: measure your pulse for about one minute by placing two fingers at the side of your neck or wrist. Now do 10 jumping jacks. Measure your pulse again. What do you notice?

UNBELIEVABLE FACTS ABOUT THE HUMAN HEART!!

- The heart is about the size of your fist and beats about 80 times every minute.
- The average adult heart beats about 100,000 times a day and around 35 MILLION times a year.
- This amazing organ pumps about 100 gallons of blood through your body, every single hour, which is about 2,400 gallons per day.

Supplementary concept reinforcement exercise

- Read about the artificial heart!! How cool is that? Maybe you can share this knowledge with your parents or siblings.

  Prior to the mid-20th century, having a weak heart was a prescription for death. Since then, however, doctors and scientists have developed a number of new technologies to keep people with heart disease alive. But none is more remarkable than the **artificial heart**. The first one was patented in the United States in 1963. Early artificial hearts were used as "bridges"—doctors would install them temporarily as patients waited for transplants, and then replace them when a human heart became available. A major turning point came in 1982, when Dr. Robert Jarvik permanently implanted the Jarvik-7 artificial heart into a patient. Unfortunately, though, patients were unable to survive more than 6 months with a Jarvik-7, and the use of permanent artificial hearts was quickly banned by the American Medical Association. A decade later, a new model called the Abiocor Implantable Replacement Heart was developed. One patient managed to live 17 months with one of these in his thorax, and the device was approved for permanent use in 2006.

- Want to know some fun facts about the heart? Click the link below!!

  https://youtu.be/bJVcgROEJAo

Scratch software

I hope you enjoyed today's lesson. Here's a fun activity to work on! Create a scratch animation explaining how the heart works. Be sure to include how blood flows in the body.

Here are some tips and tricks that might be useful!

https://youtu.be/LQ7pgAr11sc