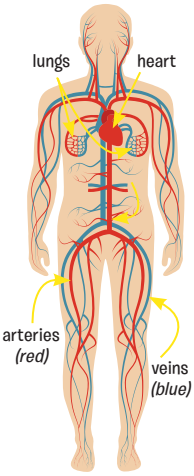
HEART TO HEART

Getting nutrients to where they are needed

Imagine your body has a railway system and your heart is the main station. All day long, every day, trains full of passengers leave one part of the station and come back to another part of the station with different passengers on board. In your body's railway system, the trains are your blood, and the passengers are nutrients and oxygen, and waste. The train tracks are your veins, arteries, and capillaries.



Your heart is the amazing muscle that pumps your blood around your body. Over your lifetime, your heart will beat about 3 billion times! As your blood travels through your arteries, it carries oxygen and nutrients to your cells. Each one of the trillions of cells in your body needs oxygen and nutrients to stay alive and healthy. This is a job for your capillaries, which are tiny tubes as fine as a hair. They help deliver blood to every cell.

Your blood comes back to your heart through your veins. On the way it passes through your kidneys to drop off waste. You get rid of this when you pee. Your blood also passes through your lungs, to collect oxygen and get rid of carbon dioxide gas, which you breathe out.

CONNECT & REVEAL!

Show What You Know!

Now it's time to make your own version of your body's railway system. You will need:

- a large sheet of paper
- crayons or felt pens
- a classmate

1. You need one classmate to lie down on the paper. Use a crayon or felt pen to draw the outline of his or her body.
2. Now draw the railway station (your heart) in the middle of the outline's chest.
3. Draw in railway tracks: red for blood travelling from the heart in the arteries, and blue for the blood travelling back to the heart through the kidneys and lungs. These need to travel around the whole body. You can use the diagram on page 1 as a guide, but you will need to do some research to work out where the kidneys go.
4. Now add a caption to each part of your railway system to explain what the heart, kidneys, lungs, veins, arteries, and capillaries are for.

Nutrient Journey

Your blood transports nutrients around your body, but what are these nutrients, and how do nutrients get into your blood in the first place? Do some research to identify the key nutrients we need to live and grow and to find the missing part of this journey: from when the food or drink enters your mouth, to when the nutrients in what you eat and drink are taken into your bloodstream.

CHECK THIS OUT!

You can find great information for your research here:
http://healthyharold.org.nz/uploads/resource/file/342/Circulatory_System_doc.pdf