The components of the circulatory system are the **heart**, **blood**, and **blood vessels**. These three components work together to transport substances such as nutrients and waste through the body. The heart is a muscular organ that contracts to pump blood through the organism. Blood vessels are tubes that transport blood to all parts of the body. Blood is a liquid tissue transported through blood vessels that carries substances such as nutrients, oxygen, and waste.

Blood looks like a red liquid to the naked eye, but it is actually a liquid tissue consisting of cells. Remember that cells are very small and cannot be seen without a microscope. The liquid that forms blood is called plasma, and the group of cells and cell fragments are called formed elements. This group consists of **red blood cells**, **white blood cells,** and **platelets**. Red blood cells are the most abundant. They give blood its color and transport oxygen. White blood cells are less abundant than the red ones. They defend the organism against illnesses. Platelets are pieces of cells that form a plug or clot. A clot is what stops bleeding when you cut yourself, through a process called coagulation.

Personal Skills

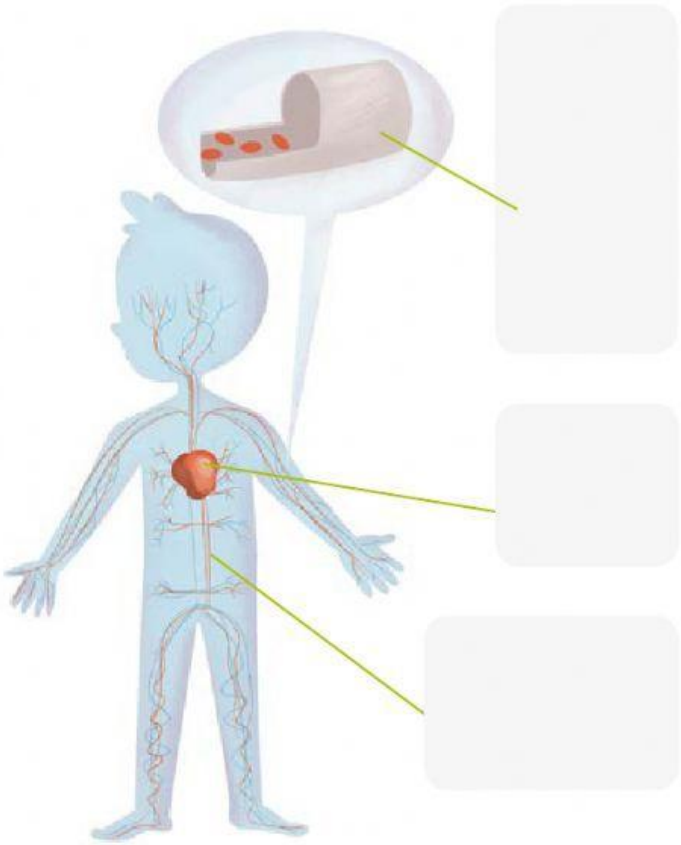
SELF-AWARENESS

Blood is often used to carry out medical tests on people. Has anyone ever taken a sample of your blood to run tests on it? How was the experience?

WORK IT OUT!

*Do the activity **Match the Parts** using what you've learned.*

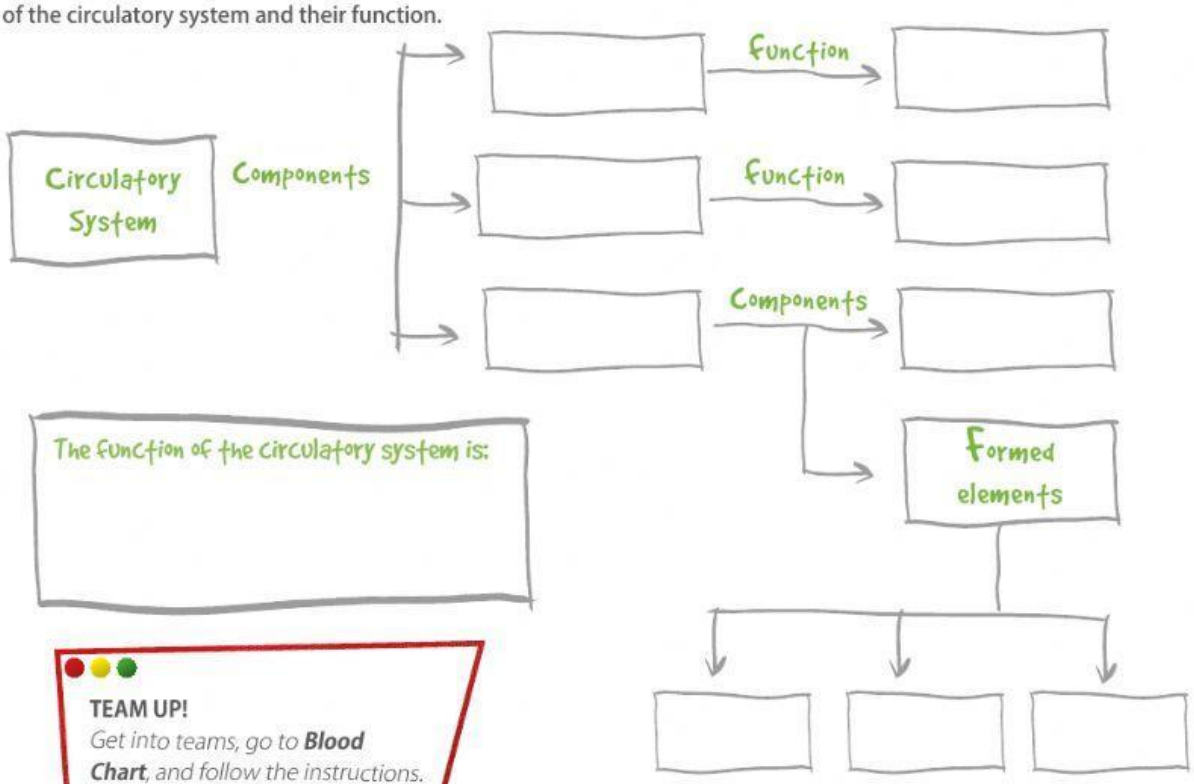
2 Read about the circulatory system. Then, label the parts on the diagram and explain their function.



3 What is the importance of each of the formed elements?

1. red blood cells: _____
   _____
2. white blood cells: _____
   _____
3. platelets: _____
   _____
   _____

4 Summarize the concepts you have learned to explain the parts of the circulatory system and their function.



TEAM UP!
*Get into teams, go to **Blood Chart**, and follow the instructions.*

5 Form teams of four people and choose two of the following questions to discuss.

- Why is the circulatory system important? What could happen to you if you had a problem with it?
- Why is blood so important in our culture? Why do you think there are legends about creatures that eat blood and myths about people with blue blood?
- Why do nutrients need to reach every cell in the organism? How do you get nutrients?
- Which are the cells that protect you from getting ill? How can you know if you have low levels of them?
- Does blood get to every part of your body? How do you know?

Key

Lines Of Research
Have you ever heard that the royals have blue blood? Do you know of any being that has blue blood running through their circulatory system?

Research blood and its components.

#KeyConcepts
blood / elements / blue blood

Explain how the circulatory system works and which organs are involved.