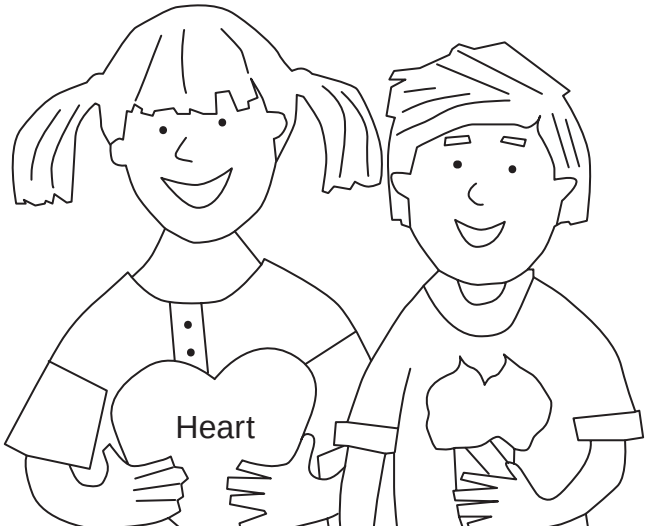
WHAT IS THE HEART?

by Dr. Alvin & Virginia B. Silverstein

What is the heart? Why is it so important? What does it do in the body?

You probably think you know what the heart looks like. But you probably are wrong. The heart does not look very much like the shapes people draw on Valentine's Day. And it certainly isn't flat, like a paper valentine. A real, live heart is shaped something like an ice-cream cone, with a pointed bottom and a rounded top, like two scoops of ice cream. It is hollow and can fill up with blood. A grown-up's heart is about the size of a fist. It weighs a little less than a pound.

When you pledge allegiance to the flag, you place your hand over the left side of your chest. Do you know why? That is supposed to be where the heart is. Actually, the heart is in the middle of the chest. It fits in snugly between the two lungs. But the heart is tipped over, so that there is a little more of it on the left side than on the right. The pointed tip at the bottom of the heart touches the front wall of the chest. Every time the heart beats, it goes *thump*



against the chest wall. You can feel the thumps if you press there with your hand. You can hear them with your ear.

The heart is a pump. Its walls are made of thick muscle. They can squeeze (contract) to send blood rushing out. The blood does not spill all over the place when it leaves the heart. It flows smoothly in tubes called blood vessels.

First the blood flows into tubes called arteries. The arteries that leave the heart are thick tubes. The biggest one, called the aorta, is an inch wide. But the arteries soon branch again and again, to form many smaller tubes. These blood vessels carry blood to all parts of the body. The farther from the heart, the more blood vessels there are, and the smaller they are. The tiniest blood vessels, called capillaries, are so small you would need a microscope to see them. Capillaries join to form larger blood vessels. These tubes carry blood back toward the heart. The bigger ones are called veins. The closer to the heart, the fewer the veins there are, and the larger they are. The largest veins empty blood into the heart.

So the blood vessels of the body carry blood in a circle: moving away from the heart in arteries, traveling to various parts of the body in capillaries, and going back to the heart in veins. Scientists call the heart and blood vessels the circulatory system. They say that blood circulates in the body. And the heart is the important pump that makes this happen.