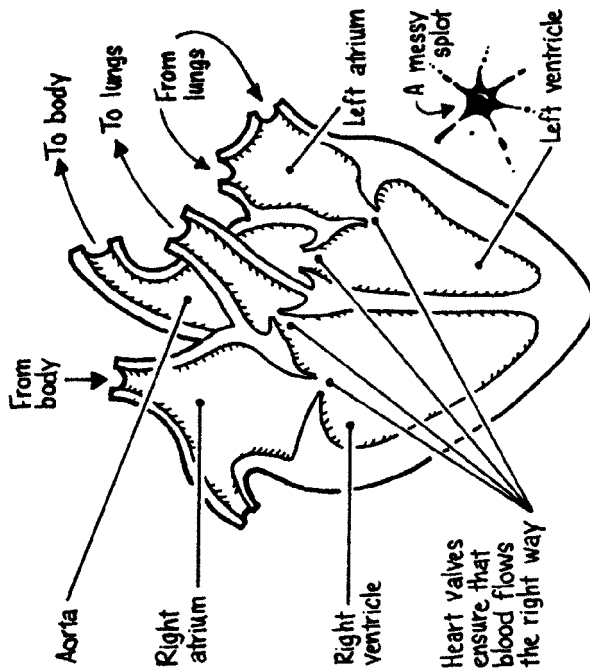


NAME _____

DATE _____

THE HEART

The horribly hard-working heart



Your heart is strong enough to pump blood around your whole body in one minute.

Its speed is controlled by the brain and influenced by your feelings – this is why your heart beats faster before a science test. But the heart itself is powered by a built-in pacemaker that triggers the heartbeat with tiny electric shocks. So it's got to keep going!

In just one day your heart pumps enough blood to fill a 10,000 litre (2,200 gallon) tanker.

In an average lifetime it beats 3,000,000,000 times. And pumps over 300 million litres of blood. That's enough to fill 5,500 large swimming pools!

And in all that time your heart doesn't stop once, not even when you're asleep.

Dare you find out for yourself ... how your heart beats?

- You will need yourself, a good pair of ears and a close friend. (If you don't want to get too close to your close friend you might want to get a plastic funnel too.) Just put your ear or funnel against your friend's heart. You should hear a sound that goes lup-dub, lup-dub, lup-dub, and so on. The "lup" should be louder and slightly longer than the "dub".

- Look at the heart diagram. Each of the four chambers pumps blood in the direction shown. The "lup" sound is the valves at the opening of the ventricles slamming shut. Then the ventricles squeeze the blood out and the "dub" sound you can hear is the closing of the heart valves to prevent blood squirting backwards.

- Your heart isn't the only part of your body that beats. You can feel the blood pulsing in places such as the side of your wrist, just under your thumb and on the sides of your neck.

What causes these pulses?

- The arteries pumping blood forward.
- The arteries bulging out as a surge of blood from the heart passes by.
- A bulge in the veins caused by the blood stopping for a moment.

