SBI3U	**Circulatory System Lab**
Animals: Structure & Function	Name:

Introduction: The cardiovascular system is, in the simplest form, a system that consists of a pump, pipes, and a fluid system. The system is a closed circuit, which is elastic, thereby allowing movement and stresses to occur without damaging it. The pump in this system, or the heart, simply allows the blood to flow in. As a consequence of the passive filling of the heart, the network of arteries, capillaries, and veins throughout the body regulates the rate of circulation of the blood. While this flow to the heart is constant, the actually pumping of the blood is intermittent allowing a small fraction of time for the heart to stop and rest between pumps.Today you will explore how exercise effects this pump.

Purpose: Examine the effect of exercise on heart rate and blood pressure

Procedure:
In partners, get a stethoscope and blood pressure cuff. Assign a measurer and an exerciser.
The measurer should take the heart rate and blood pressure of the exerciser. Record.
The exerciser will have to run down to the first floor and back up.
Immediately, the measurer should take the heart rate and blood pressure of the exerciser. Record.
Repeat two more times!

Results:

	Heart Rate (/min)	**Blood Pressure (mmHg)**
Resting		
First climb		
Second climb		
Third climb		

Questions:
1. What effect did the exercise have on the heart rate and blood pressure?
2. What procedure is a better indicator of physical fitness, heart rate or blood pressure? Why?
3. Did the systolic or diastolic pressure increase faster? Why is this?
4. When listening to the heart, what does the “lub-dub” you hear represent? Be specific!
5. Why must athletes work harder to achieve a maximum heart rate?
6. Endurance training and strength training can have different effects on the heart. Explain how each effects the heart.
7. How would your results differ if the exerciser rested in between running up the stairs?
8. What were some difficulties you found with the lab?
9. Suggest three ways to improve the lab.