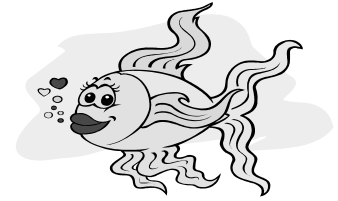


Name _____



Observing Circulation

Possibly the most important structures of the entire circulatory system are the **capillaries**. It is in these tiny vessels that most of the work of circulation is done. You cannot see capillaries with your naked eye. They are the tiniest vessels of all, so tiny that you need a microscope to see them.



Purpose:

1. Distinguish among the three types of blood vessels
2. Describe the path and rate of blood flow through the capillaries
3. Describe the structure and function of capillaries

Materials:

Goldfish	Petri dish	Cotton ball
Eye dropper	Water	Microscope

Procedure:

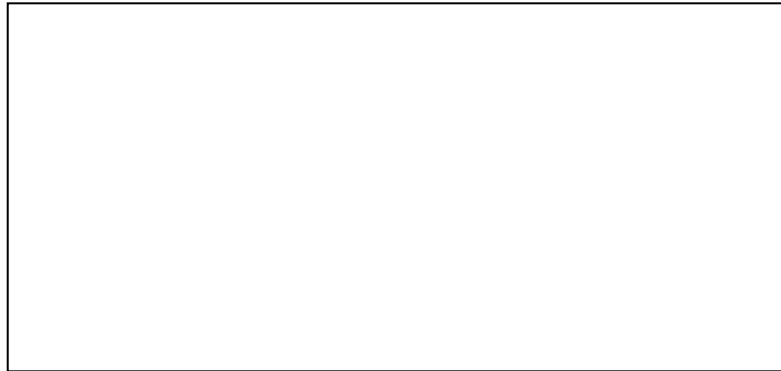
1. Unwrap the cotton ball so that it is one layer.
2. Wrap your goldfish in **very wet** cotton so the tail is exposed. Keep the cotton moist so you will not injure the fish.
3. Place the fish in a petri dish. There should be a small amount of water in the dish.
4. Place the petri dish on the microscope stage. Focus the microscope on the tail under low power.
5. Find a small blood vessel and observe closely. In the space provided, sketch what you observe. Use an arrow to indicate the

direction of blood flow.

6. Do not harm the fish. When you have observed the blood flowing, return the fish to the tank.
7. **The fish should be out of water no longer than 5 minutes.**

Data:

Draw a diagram what you observed and use arrows to show **direction** of blood flow.



Conclusions & Questions:

1. Did any of the blood vessels seem to pulsate? What would cause this to happen?
2. How can you tell an artery from a vein in the goldfish tail?
3. How can you tell which vessels are the capillaries?
4. Why did you wrap the goldfish in wet cotton?
5. Explain how circulation in a goldfish is similar to the circulation in

the human body.