Overview

To complete this worksheet, select:

Module: Distribution
Activity: Anatomy Overviews
Title: Cardiovascular System: Overview

1. Click Heart Structures and Conduction System, and locate each of the following.

<table>
<thead>
<tr>
<th>Tricuspid Valve</th>
<th>Aortic Semilunar Valve</th>
<th>Bicuspid (Mitral) Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulmonary Semilunar Valve</td>
<td>Myocardium (heart muscle)</td>
<td>Aorta</td>
</tr>
<tr>
<td>Left Common Carotid Artery</td>
<td>Superior Vena Cava</td>
<td>Pulmonary Trunk</td>
</tr>
<tr>
<td>Left Pulmonary Artery</td>
<td>Left Pulmonary Veins</td>
<td>Right Pulmonary Artery</td>
</tr>
<tr>
<td>Right Pulmonary Veins</td>
<td>Right Atrium</td>
<td>Right Ventricle</td>
</tr>
<tr>
<td>Left Atrium</td>
<td>Left Ventricle</td>
<td>Inferior Vena Cava</td>
</tr>
<tr>
<td>Coronary Artery</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Contrast the functions of coronary arteries and coronary veins.

3. Click Arteries and Arterioles, and locate each of the following:
   - Arteriole (from the heart)
   - Smooth muscle
   - Precapillary sphincters
   - Capillary
   - Venule (to the heart)

4. From the Arteries and Arterioles screen, identify each of the following parts of an artery:
   - Tunica externa
   - Tunica media
   - Tunica interna
   - Lumen

5. Click Veins and Venules and identify each of the following:
   - Tunica externa
   - Tunica media
   - Valve
   - Tunica interna
   - Lumen

   Vein
   - Tunica externa
     (elastic and collagen fibers)
   - Tunica media
     (smooth muscle tissue)
   - Valve
   - Tunical interna
     (simple squamous epithelium tissue)
   - Lumen
6. Click Blood and identify each of following. Know each by sight.

Plasma
Erythrocytes
Platelets
White blood cells
Monocytes
Neutrophils
Eosinophils
Basophils
Lymphocytes

a. Describe four general blood functions:

1. Transport

2. pH

3. Protection following injury

4. Protection from disease

b. Follow the Plasma link for additional information.

1. What is the general function of plasma proteins, albumin, globulin, and fibrinogen?

2. More specifically, what is the function of these plasma proteins:
   albumin
   globulin
   fibrinogen

3. How much of blood volume is:
   blood proteins
   water
   other solutes
c. Follow the *Erythrocyte* link for additional information.

What is the role of the *heme* molecules? 


Explain one method of carbon dioxide transport (there is another).


7. Click *Capillaries* and identify each of the following:
   - Arteriole
   - Capillary
   - Venule
   - Plasma
   - Red Blood Cell

   a. Describe capillary function.


