

Chapter 1 : Circulatory System: Matching

Some of the worksheets displayed are Lesson, Human circulatory system answers, 1 function of the circulatory system 1, Circulatory system work, Match column a with column write the letter of the, Lesson 2 human body systems the circulatory system, Digestive circulatory and respiratory systems, Chapter 18 the circulatory system.

Blood gives up oxygen as moves along Deoxygenated except for pulmonary vein 4. The photo below shows cross sections through an artery and a vein. Label which vessel is the artery and which the vein. A is the artery and B is the vein. Give 2 reasons for your answer. Assuming these are not the pulmonary artery and vein the vessel with red oxygenated blood is the artery and that with blue deoxygenated blood is the vein. The vessel with the thicker wall is the artery. The vessel that appears collapsed is the vein as its walls are much thinner than those of the artery. If false give the correct answer. Mammals have a double open blood system. F No, mammals have a double system in that the blood flows through the heart twice, once on the way to the lungs and the second time to be pumped round the body however, the system is not an open one. Open blood systems have the blood leaving the blood vessels and bathing the organs, as in insects. In mammals the blood remains in the blood vessels all the time ie it is a closed system. Arteries only carry oxygenated blood. F The pulmonary artery carries deoxygenated blood. Artery walls have many more layers of tissue in them than the walls of veins. F Both arteries and veins have the same 3 layers of tissue in them. The difference is that the layers are much thicker in arteries as they need to withstand the passage of high pressure blood. The pulse is only felt in arteries. T Arteries have valves in them to stop the blood flowing backwards. F Veins have valves as there is no pulse and the blood is at low pressure so there is a tendency for the blood to pool or flow backwards. Blood leaks out of capillaries so that the oxygen and glucose etc. F Many substances in the blood pass through the capillary wall to enter the tissue fluid that surrounds the cells. These substances move across by various processes but the blood can not be said to leak out of undamaged capillaries. Diastole is the phase between pulses. T Blood flows along veins back to the heart because of gravity. T Gravity may help blood flow in veins located above the heart but generally most of the movement of blood in veins is brought about by contraction of the surrounding muscles. The diagram below shows the changes in the blood pressure during the passage of the pulse along an artery. Add labels to the diagram to show: As there is no pulse in veins, what moves the blood along them? Give at least 2 methods 1. The contraction of the muscles surrounding the veins. The contracting heart pulls blood along the veins towards it. Name the vessel that: Carries oxygenated blood to the heart muscle. Supplies the brain with oxygenated blood. Carries deoxygenated blood to the lungs. Carries blood from the intestines to the liver. The hepatic portal vessel. Carries deoxygenated blood away from the kidneys. Look at the diagram below and then answer the following questions. Which is the blood capillary? How thick is the wall of the capillary? Very thin -one cell thick. What is happening to the blood pressure as the blood flows along the capillary? What substances pass out of the capillary walls to surround the tissues? Water, oxygen, salts, amino acids, glucose, etc. What is tissue fluid? It is the clear fluid that surrounds the cells of the tissues It is formed from blood plasma. Which vessel is the lymphatic vessel? How do lymphatic vessels differ from capillaries? They are similar in structure having walls only one cell thick. The main difference is that capillaries carry blood whereas lymphatic vessels carry lymph. What passes into the lymphatic vessel? Tissue fluid passes into lymphatic vessels and Hey Presto! How does lymph differ from tissue fluid? Both have a similar constitution. The main difference is one of geography. Tissue fluid surrounds the tissues while lymph flows in lymphatic vessels. Why does the fluid leave the capillary at the beginning of the capillary bed and flow back in at the other end? This is quite a complicated question probably above the level required but here goes. The tissue fluid leaves the capillary at the arterial end because it is forced out by the high blood pressure. At the other end of the capillary the blood pressure is lower and because water has left the capillary at the arterial end the blood in it is more concentrated. Click here to find out more.

Chapter 2 : Circulatory System Answer Worksheets - Printable Worksheets

Circulatory System Answer. Showing top 8 worksheets in the category - Circulatory System Answer. Some of the worksheets displayed are Human circulatory system answers, An introduction to the circulatory system, 5th grade reading comprehension work fifth grade, Chapter 23 the circulatory respiratory digestive and, 1 function of the circulatory system 1, Match column a with column write the.

How do you calculate cardiac output formula? Arteries carry blood away from the heart. Which arteries or veins carries oxygenated blood? What do you call the loose, outer layer of the sac around the heart? Describe the size and location of the heart. What three things push blood back to the heart through the veins? Describe the function of the sinoatrial node and trace the path of a nerve cardiac impulse through the cardiac conduction system. What is the pacemaker? What do the terms tachycardia and bradycardia mean? Be able to identify these on an ECG. At what point is blood pressure at its highest? Be able to analyze one - electrocardiogram. What is a defibrillator used for? How does it work? What are systolic pressure and diastolic pressure? The first time you hear the sound of a heart beat is the systolic pressure. The cuff continues to deflate until you no longer hear the sound, this is the diastolic pressure. Name and give the function of all four valves of the heart. Some have multiple names; make sure you know all of them. List the three major vessels that branch off of the aortic arch. You may want to draw a diagram. Label all of the major vessels that attach to the heart. Label a diagram of the heart and trace the flow of blood through the heart.

Chapter 3 : The Circulatory System

Unit: Biology C - Circulation Science 21 Bio C - Circulation B46 LESSON - AN INTRODUCTION TO THE CIRCULATORY SYSTEM Overview: Students will read about the circulatory system and answer probing questions to test their.

Circulation is the movement of substances such as nutrients and gases within blood vessels and cavities throughout the body. Do all animals have a circulatory system? Not all animals have a circulatory system. Poriferans, cnidarians, platyhelminthes and nematodes have pseudocoelom fluid but no vessels are avascular animals. Echinoderms do not have true circulatory systems either. What is the alternative means of substance transport in animals without a circulatory system? Why is blood important for larger animals? In animals that do not contain a circulatory system, the transport of substances occurs by cell to cell diffusion. Blood is a fundamental means of substance transport for larger animals since, in these animals, tissues are distant from each other and from the environment thus making diffusion impossible. Open and Closed Circulatory Systems 4. What are the two types of circulatory systems? Circulatory systems can be classified into open circulatory systems and closed circulatory systems. What is an open circulatory system? An open circulatory system is one in which blood does not circulate only inside blood vessels but also flows into cavities that irrigate tissues. In open circulatory systems, blood pressure is low and generally the blood called hemolymph has a low level of cellularity. Arthropods, molluscs cephalopods are exception and protochordates have open circulatory systems. Circulatory System Review - Image Diversity: What is a closed circulatory system? A closed circulatory system is one in which blood circulates only inside blood vessels. For this reason, the blood pressure is higher in animals with closed circulatory systems. The cellularity of the blood is also higher, with many specific blood cells. Closed circulatory systems are a feature of annelids, cephalopod molluscs and vertebrates. What are the advantages of a closed circulatory system over an open circulatory system? A closed circulatory system is more efficient. Since blood circulates only inside blood vessels, it has a higher pressure and, as a result, can travel greater distances to the organs where hemostasis happens and to peripheral tissues. Animals with an open circulatory system with the exception of insects, which carry out gas exchange separately from circulation are generally slower and have a low metabolic rate. What is the difference between octopuses and mussels regarding their circulatory systems? How does that difference have an effect on the mobility of these animals? Cephalopod molluscs, such as octopuses and squids, have a closed circulatory system with blood pumped under pressure flowing within vessels. Bivalve molluscs, such as mussels and oysters, have an open circulatory system also known as a lacunar circulatory system where blood flows under low pressure, since it falls into cavities in the body and does not only circulate within blood vessels. Molluscs with closed circulatory systems are larger, agile and can actively move; molluscs with open circulatory systems are smaller, slow and some are practically sessile. Why can flying insects such as flies beat their wings at a great speed despite having an open circulatory system? In insects, the circulatory system is open but this system does not participate in the gas exchange process or in oxygen supply to tissues. Therefore, an insect can supply the large oxygen demand of its fast-beating wing muscles even though it has an open circulatory system. Select any question to share it on FB or Twitter Just select or double-click a question to share. Challenge your Facebook and Twitter friends. The Components of the Circulatory System What are the typical components of a closed circulatory system? How does the heart pump blood? The heart is a muscular organ that contains chambers right atrium and right ventricle and left atrium and left ventricle through which blood passes. The blood enters the heart in the atria, goes to the ventricles and then leaves the organ. The blood is pumped out of the heart by the contraction of the muscle fibers that form the ventricular walls. The contraction reduces the volume of ventricle, thus increasing the internal pressure and forcing the blood to flow to the exit vessels the pulmonary artery for the right ventricle and the aorta for the left ventricle. When ventricular muscle fibers expand, the ventricles regain their original size and receive new blood flow from the atria. What is the difference between systole and diastole? Systole and diastole are the two stages into which the cardiac cycle is divided. Systole is the stage when the contraction of ventricular muscle fibers

occurs and the ventricles are emptied. Diastole is the stage of the cardiac cycle when the ventricular muscle fibers expand and the ventricles are filled with blood. What are arterial vessels, arteries and arterioles? Arterial vessels are every blood vessel that carries blood from the heart to tissues. Arteries and arterioles are arterial vessels. Arterioles are thin arteries that end in capillaries. However, not all arteries contain arterial blood highly oxygenated blood. The pulmonary artery and its branches, arteries that carry blood from the right heart ventricle to the lungs, contain venous blood. What are venous vessels, veins and venules? Venous vessels are every blood vessel that carries blood from tissues to the heart. Veins and venules are venous vessels. Venules are thin veins connected to capillaries. In general, venous vessels carry venous blood. However, the pulmonary veins that carry blood from the lungs to the left atrium of the heart contain arterial blood. What are the capillaries of the vascular system? Capillaries are small blood vessels that carry out the exchange of substances between the blood and body tissues. Capillaries are neither arteries nor veins since they have distinct features. In capillaries, the wall is made of a single layer of endothelial cells through which substances are exchanged. These vessels receive blood from arterioles and drain into venules. What part of the vascular system carries out the exchange of gases and other substances between tissues? Only capillaries carry out the exchange of gases and other substances between tissues. Which contain more muscle tissue, arteries or veins? How different are the walls of these two types of blood vessels? The arterial system has thicker muscle walls, since within arteries blood circulates under higher pressure. Veins are more flaccid than arteries. From the lumen to the external layer, both types of vessels are made of endothelium, muscle tissue and connective tissue. The endothelium of both is made up of a single layer of cells. In arteries, the muscle tissue portion is thicker than in veins whereas, in veins, the external connective tissue is thicker than in arteries. Arteries are pulsating blood vessels. The arterial pulse can be felt during a medical examination, for example, through the palpation of the radial artery in the internal-lateral face of the wrist near the base of the thumb. What are the valves of the venous system? What is their function? The valves of the venous system are structures inside veins that make it so that blood only flows in the right direction from tissues to the heart. The valves close when the pressure of the fluid column above afterwards, in terms of normal flow is higher than the fluid pressure below them. Valves are therefore necessary for the process of blood returning to the heart. How do the muscles of the legs and feet contribute to venous return? The muscles of the legs, and mainly the muscles of the calves, contract and compress the deep veins of the legs, pushing blood towards the heart. Why are they more common on the lower limbs? A varix means is an abnormal enlargement of a vein. Varices are more common in the veins of the lower limbs since the fluid column above these vessels is higher. This is the reason why people who spend a large amount of time standing e. In general, varices are not the superficial veins that can be seen on the legs of varix patients. These superficial veins are the result of internal varices venous insufficiency in the deep internal veins of the legs. These outer veins appear this way because blood flow is diverted from the internal veins to superficial ones. However, superficial veins with this appearance are often called varices. What is the lymphatic system? The lymphatic system is a network of specialized vessels with valves, which drains interstitial fluid lymph. The lymphatic system is also responsible for the transport of chylomicrons vesicles that contain lipids produced after the absorption of fats by the intestinal epithelium. Along lymphatic vessels are ganglial-like structures called lymph nodes. These cells filter impurities and destroy microorganisms and cellular waste. The lymphatic vessels drain to two major lymphatic vessels, the thoracic duct and the right lymphatic duct, which in turn drain into tributary veins of the superior vena cava. Why may clinical signs regarding the lymphatic system be observed during inflammatory and infectious conditions? The lymph nodes, or lymph glands, have lymphoid tissue that produces lymphocytes a type of leukocyte.

Chapter 4 : The Circulatory System Crossword - WordMint

About This Quiz & Worksheet. This quiz/worksheet combo tests you on parts of the circulatory system and their functions.

Chapter 5 : Circulatory System Worksheets

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Chapter 6 : Quiz: Heart & Circulatory System

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Chapter 8 : Circulatory System

This worksheet teaches students vocabulary terms related to the circulatory system, asking them to fill in the correct terms in both a table and a paragraph. Circulatory System This worksheet has 2 printed pages.

Chapter 9 : Circulatory System Vocabulary - Vocabulary List : calendrierdelascience.com

Want to know how the blood travels through out your body? These circulatory system worksheets for kids will teach you all about how your body works.