

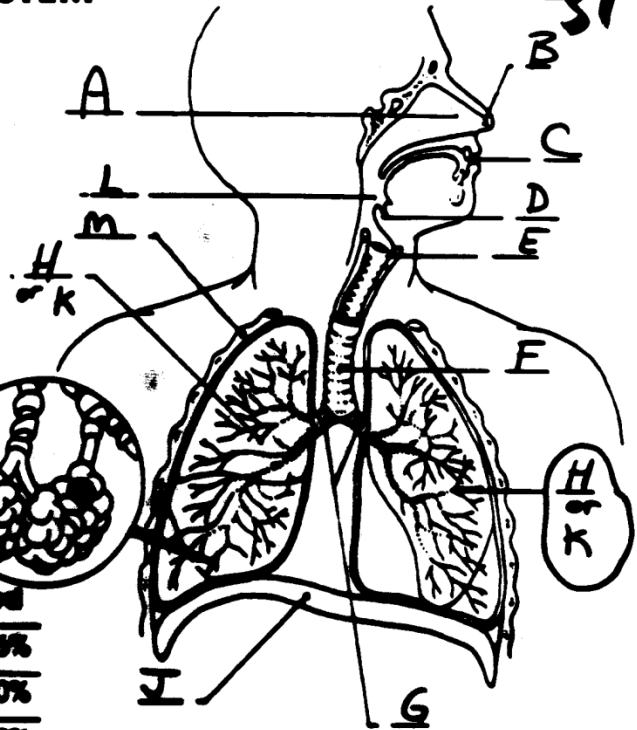
THE HUMAN RESPIRATORY SYSTEM

Name _____

Respiratory System

Label the following parts of the human respiratory system on the diagram.

- a. nasal passage
- b. nostrils
- c. mouth
- d. epiglottis
- e. larynx
- f. trachea
- g. bronchi
- h. bronchiole
- i. alveoli
- j. diaphragm
- k. lung
- l. pharynx
- m. pleura



Gas Exchange

The table shows what happens to the air we inhale.

Gas	Inhaled	Exhaled
oxygen (O ₂)	20.71%	14.6%
carbon dioxide (CO ₂)	0.04%	4.0%
water (H ₂ O)	1.20%	5.9%

1. What gas is removed from inhaled air? oxygen
2. What gases are added to inhaled air and then exhaled? CO₂ and H₂O
3. Which gas shows the greatest difference in percent between inhaled and exhaled air? Oxygen

Fill in the blanks below with the correct answers.

Inspired air rich in oxygen enters the body through the nostrils (nose) or mouth. It passes through the pharynx and larynx, or voice box, and into the trachea. Air then enters each bronchus, which branches into bronchioles, and finally into the air sacs or alveoli of the lungs. The lungs are housed in the thoracic cavity that is bound on the bottom by a thin layer of muscle, the diaphragm. Each lung is covered by a very thin pleural membrane. In the alveoli, carbon dioxide is exchanged for oxygen.

Fill in the table below, identifying the blood vessels and predicting their function based on their location in the body. The first one has been done for you. Be careful to follow the example closely.

Organ	Artery	Function	Vein	Function
Head	<i>Carotid</i>	1) type of blood: <i>oxygenated</i> 2) from: <i>heart</i> 3) to: <i>head</i>	<i>jugular</i>	1) type of blood: <i>deoxygenated</i> 2) from: <i>head</i> 3) to: <i>heart</i>
Arms	BRACHIAL	1) type of blood: <u>Oxygenated</u> 2) from: heart 3) to: arms	BRACHIAL	1) type of blood: <u>deoxygenated</u> 2) from: arms 3) to: heart
Kidney	RENAL	1) type of blood: <u>Oxygenated</u> 2) from: heart 3) to: kidney	RENAL	1) type of blood: <u>deoxygenated</u> 2) from: kidney 3) to: heart
Legs	ILIAC	1) type of blood: <u>Oxygenated</u> 2) from: heart 3) to: legs	ILIAC	1) type of blood: <u>deoxygenated</u> 2) from: Legs 3) to: heart
Intestines	MESENTERIC	1) type of blood: <u>Oxygenated</u> 2) from: heart 3) to: intestines	HEPATIC PORTAL !!	1) type of blood: <u>deoxygenated</u> 2) from: intestines 3) to: LIVER!!
Lungs	PULMONARY	1) type of blood: <u>deoxygenated</u> 2) from: heart 3) to: lungs	PULMONARY	1) type of blood: <u>Oxygenated</u> 2) from: lungs 3) to: heart

Based on the table above and the diagram you previously labelled, predict the path of blood in the systemic circuit, from the heart to the kidney and back. Include the words “arterioles”, “venules”, and “capillaries” where appropriate.

Left ventricle AORTA – RENAL ARTERY

Kidneys RENAL ARTERIOLES – RENAL CAPILLARIES – RENAL VENULES – RENAL VEIN - INFERIOR VENA CAVA Right atrium.