

Respiration Assignment

*(***When doing this assignment, make sure you understand the topic, not just get an answer!)*



1. What is in the **air** (and give example(s) of each)?
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2. What is the only substance in the air that our bodies are trying to get?
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3. What is the difference between breathing (respiration) and cellular respiration?
 - **Breathing:**
 - **Cellular Respiration** (include equation):
4. What is **excretion** and where does it occur?
5. What is **breathing rate** and what triggers it to increase?
6. Is it true that you breathe in oxygen and breathe out carbon dioxide (use figure 8.4 to help answer this question with %'s)?
7. On a separate sheet of paper, **draw and label** Figure 8.6, "Structures of the respiratory system" (in addition, add **alveoli** from figure 8.10).
8. Think about "how you breathe."
 - A) How is air brought into your lungs?
 - B) How is air moved out of your lungs?

9. Define the following terms, and explain their part in respiration.

- Lungs:

- Alveoli:

- Chest Cavity:

- Diaphragm:

- Nasal Cavity:

- Trachea:

- Mucus:

- Cilia:

- Bronchi (singular: bronchus):

10. On a separate sheet of paper, **draw and label** Figure 8.13 (c),
“The exchange of gases in the alveoli.”

11. What is **vital capacity**?

What is the average volume of a breath of air?

What is the average vital capacity for an adult?

How does fitness affect vital capacity?

12. What would happen if all the air left your lungs when you exhaled?

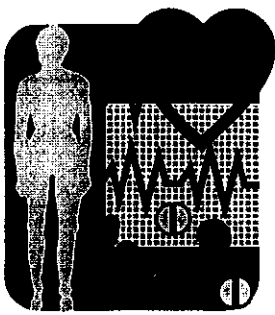
What is **residual air**?

13. Briefly label and describe the two parts to **caring** for your respiratory system.

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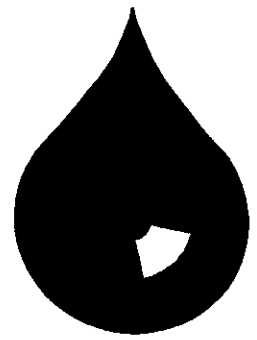
14. What is **the habit that kills**? Make notes on the consequences for you and your respiratory system.



Circulation and Excretion

Assignment

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1. A) All 60 trillion of your cells depend on what? -
B) What does your blood carry TO each cell in your body? -
C) What does your blood carry AWAY from each cell? -
D) How close does your blood get to each of your cells? -
E) About how much blood do men and women have? -
F) What are the tubes that carry your blood called? -
G) What are the circulatory system's 3 main components? -
2. What are the two parts of blood:
A) _____ B) _____
3. **Plasma**, the liquid that is _____ and _____, consists of _____ %
water, and 8% _____. Fill in the function of each solid part:
A) **Glucose:**
B) **Amino Acids:**
C) **Minerals:**
D) **Vitamins:**
E) **Carbon Dioxide:**
Plasma also consists of blood _____. Describe the function of the
following three:
F) **Antibodies:**
G) **Hormones:**
H) **Clot-forming blood proteins:**
4. The **Solid** matter in your blood consists mostly of _____.
Discuss the **function and importance** of the following:

A) **Red Blood Cells:** _____

Old red blood cells are taken to your _____, and the hemoglobin is recycled into _____. The Iron is split away and recycled into _____.

B) **Hemoglobin:** _____

Your body cannot make hemoglobin without _____.

C) **White Blood Cells:** _____

Are part of your _____ system. They guard against _____.

D) **Platelets:** _____

Collect wherever blood vessels are _____, to help form a _____.

5. On separate paper, **draw, color & label** Figure 9.5. Then define the function of:

A) **Arteries:**

B) **Veins:**

C) **Capillaries:**

D) **Valves:**

E) **Pulse:**

6. On separate paper, **draw, color & label** Figure 9.10. Read the paragraphs above it to solidify your understanding. In addition to oxygen, nutrients and carbon dioxide, your circulatory system transports _____ energy throughout your body.

7. Your **HEART** is mostly made of _____. Its job is to _____
_____. Your heart normally beats _____

times every minute. On separate paper, **draw, color & label** Figure 9.12, the heart.

8. On a separate paper, list all the vessels and chambers that blood must pass through on its way from the left ventricle to the left atrium (the whole cycle: steps 7-9, then 1-6).

9. Explain the relationship, and issues, of the following to the circulatory system:

A) **Heart Attack:**

B) **Atherosclerosis:**

C) **High Blood Pressure:**

D) **Liver:**

E) **Kidneys:**

10. On a separate paper, **draw, color & label** Figure 9.20, "the kidneys."