

ANS

Respiration worksheet

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1. What is the function of the respiratory system? /1

-To bring  $O_2$  in +  $CO_2$  out

2. What is the passageway air follows to get to the lungs? /2

Nasal cavity  $\rightarrow$  pharynx  $\rightarrow$  Trachea  $\rightarrow$  Bronchi  $\rightarrow$  Bronchioles  
 $\rightarrow$  Alveoli

3. What is the function of the nasal cavity? /3

$\rightarrow$  Filter air  $\rightarrow$  Moisturize air  
 $\rightarrow$  warm air

4. What is the functional unit of the lung? /1

Alveoli

5. What controls our lungs increasing and decreasing in volume? /1

Diaphragm

6. Fill in the blanks

When the diaphragm goes down, it will pull the ribs up/out. This causes the lung to increase in volume. As this occurs, to balance the pressure in the lung air will enter/go in the lung. When the diaphragm goes up, lung volume will decrease. Air must leave the lung to balance the pressure. Our lungs increasing and decreasing in volume in controlled by the diaphragm. /6

7. Fill in the table. /3

|             | Ribs         | Diaphragm    | Lung volume  |
|-------------|--------------|--------------|--------------|
| Inspiration | Move up/out  | $\downarrow$ | $\uparrow$   |
| Expiration  | Move in/down | $\uparrow$   | $\downarrow$ |

8. Define diffusion. /1

Movement of substances from an area of high conc. to low concentration across a membrane

9. Why can diffusion occur? /1

→ Permeable  
→ Semi-permeable } membrane

10. Why does diffusion occur? /1

To achieve equilibrium

11. Why does oxygen go from the alveoli to the blood vessel then from the blood vessels to the cells? /1

Moves from area of ↑ to ↓ conc. & to go where it's needed

12. Why does oxygen go from the cells to the blood vessels then from the blood vessels to the alveoli? /1

Excess, not needed

13. Why are the two lungs not identical in size? /1

Left smaller to leave room for the heart

14. How much oxygen is taken out of the air we breathe in each breath (%)? /1

5%

15. Define metabolism. /1

Nutrients +  $O_2$  → Energy +  $CO_2$  + Waste

The rate the body transforms nutrients & oxygen into usable energy for the body