

Name: _____

Respiratory System: Practice Stencil

1. What is diffusion and where does it take place in the body and how?

Phenomenon where a fluid (gas) displaces from an area of high concentration to an area of low concentration through semi-permeable membrane

2. Describe what happens when a person inhales.

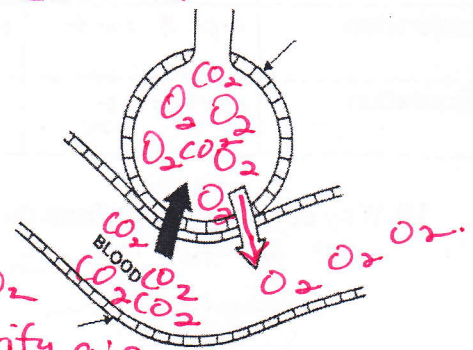
Diaphragm relaxes / moves down. Lungs increase (alveoli + capillaries) in size, pressure of lungs lowers - O_2 enters lungs & goes to alveoli

3. If we get laryngitis, what part of our respiratory system is affected? Why? * chest opens up

Larynx - voice / vocal cords affected.

4. Below is a representation of an alveoli next to a capillary vessel. Draw arrows to show the flow of oxygen and carbon dioxide. What two characteristics allow gas exchange?

diffusion / semi permeable



5. What is the function of the respiratory system?

For Air to enter - gas exchange O_2 / CO_2 can happen, air can exit, purify air.

6. What is the function of the nasal cavity?

Warm air

trap dirt / dust with cilia, moisten air.

7. The air we inhale contains 21% O_2 and 0.04% CO_2 . The air we exhale contains 16% O_2 and 5% CO_2 . When giving mouth to mouth, will the person receive enough oxygen? Explain.

We only retain 5% of O_2 - 16% will be exhaled each breath so that we can provide it to person

8. What defense do we have against foreign particles?

receiving CPR.
Nostril hair, cilia, mucus.

9. Why is it that only carbon dioxide and oxygen can pass through the alveolar membranes?

other molecules are too large to pass through semi-permeable

10. What is the passageway air follows to get to the lungs?

nasal cavity, pharynx, larynx, trachea, bronchi, bronchioles, alveoli

11. What is the waste created during respiration? How is it eliminated?

CO_2 - exhaling

12. What is the functional unit of the lung?

alveoli

13. What is the muscle of respiration?

diaphragm

14. What protects the lungs?

rib cage

15. Explain how our lungs increase and decrease in size. * refer to table in notes *

movement of intercostal muscles / diaphragm / rib cage.

16. People with cystic fibrosis have an accumulation of mucus in their respiratory airways which stop cilia from doing their job and make breathing difficult. Explain why these people are more prone to suffering from pneumonia.

Too much mucus causes excess fluid build up & bacteria is not trapped because cilia is not working well so can get to lungs & cause infection.

17. What parts of the respiratory system are made of cartilage?

larynx, trachea, bronchi, bronchioles.

18. Fill in the table.

	Ribs	Diaphragm	Lung volume
Inspiration	up & out	moves down	increases
Expiration	down + in	moves up	decreases

19. Why does oxygen go from the alveoli to the blood vessel then from the blood vessels to the cells?

* to bring O_2 to cells so that cellular respiration can happen + energy can be created.

20. Why does carbon dioxide go from the cells to the blood vessels then from the blood vessels to the alveoli?

To remove waste from cellular respiration from cells.

21. Draw a diagram (side profile) of what happens when a person inhales and when a person exhales. Include information on the movement of the chest muscles, diaphragm, the pressure (draw air particles to symbolize high and low pressure) and the direction of the flow of air.

INHALATION:

EXHALATION:

* Refer to diagrams in notes.

