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| Respiratory System  **Topic 2 – Respiration and the Respiratory system**  http://www.lessontutor.com/resp8.gif | b) Test for Carbon Dioxide:   |  |  |  | | --- | --- | --- | | Name of Gases in air | % in air inspired | % in air expired | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | | Oxygen diffuses into the blood because there is a high concentration of oxygen in the  \_\_\_\_\_\_\_\_ and a low concentration of oxygen in the \_\_\_\_\_\_\_\_\_\_\_.  Carbon dioxide diffuses into the lung because there is a high concentration of carbon  dioxide in the \_\_\_\_\_\_\_\_\_\_ and a low concentration in the\_\_\_\_\_\_\_\_\_  The Capillaries are able to let gasses diffuse in and out because they have such  \_\_\_\_\_\_\_\_\_\_ walls. |
| Alveoli  **What makes the lungs so efficient**? | Cilia  nares | |  |
| PUL_diaphragm_breathingInspiration | PUL_diaphragm_breathingExpiration | | How can we mimic breathing in the lab? What are the limitations? |
| Three harmful substances in smoke and their effects:  Three SMOKING related diseases | Respiration   1. write the WORD equation for **Aerobic** respiration 2. write the WORD equation for **Anaerobic** respiration | | Investigating the energy released as heat during respiration  How do you kill PEAS?  Why would we use another flask with dead peas and disinfectant? |
| What is the difference between breathing and respiration?  What is the advantage of aerobic respiration?  What is an advantage of ANAEROBIC respiration?  What is a disadvantage of ANAEROBIC respiration?  What is oxygen debt? | | **Word equations to memorise**  **Aerobic respiration**  **Glucose + Oxygen = Carbon dioxide + water (+ chemical energy and heat)**  **Anaerobic respiration**  **Glucose = Lactic Acid (+ a little chemical energy and heat)**  **Yeast : Glucose = Carbon dioxide + Ethanol (+ a little chemical energy and heat)**  **Dispersing oxygen debt lactic acid**  **Lactic acid + Oxygen = Carbon dioxide + Water (+ the remaining chemical energy and heat)** | |