

Deyes High School Remote Learning

Engage, Enable and Empower



DEYES
HIGH
SCHOOL

LYDIATE
LEARNING TRUST

**Yr. 10
GCSE/SC
PE**

Work for individual students not attending school

Half Term 2: October to December

Pupils who are absent should select the activity that they are up to. Click on the link in the activity box below. This will take you to Office 365, OneNote where the work is stored. In the lesson it will tell the pupil if they need to submit the work to their teacher or complete it on their designated homework page on their OneNote.

Lesson



Date (week commencing)	Lessons	Focus/Topic/Theme	Hyper link to Activity
2/11/20		Warm Up	<p>One Note resources https://deyes-my.sharepoint.com/personal/j_mcevoy_deyeshigh_co_uk/_layouts/OneNote.aspx?id=%2Fpersonal%2Fj_mcevoy_deyeshigh_co_uk%2FDocuments%2FClass%20Notebooks%2FKS4%20PE%2020-22</p> <p>All lessons and knowledge organisers are posted on OneNote for every lesson.</p> <p>Students are asked to submit homework on One Note</p>
9/11/20		Cool Down	
16/11/20		Structure of Cardiovascular system	
23/11/20		Function of the cardiovascular system	
30/11/20		Cardiac valves	
7/12/20		Structure and function of respiratory system	
14/12/20		End of unit test and review.	

GCSE Physical Education – The structure and functions of the respiratory system

Structure of the respiratory system

Composition of inhaled and exhaled air

Gas	Inhaled air	Exhaled air
Oxygen	21%	16%
Carbon dioxide	0.04%	4%
Nitrogen	78%	78%

Inhalation/Inspiration

Exhalation/Expiration

Respiratory values

Total Volume – the amount of air inhaled and exhaled per breath. Resting value = 500ml

Vital Capacity – The maximum amount of air exhaled following a maximal breath in.

Frequency – The number of breaths taken per minute. Resting value = 12-20 breaths.

Minute Ventilation – The amount of air inhaled and exhaled per minute. Measured in litres.

Gas exchange at the alveoli

- Diffusion is the movement of molecules from an area of high concentration to a low one.
- The alveoli have thin moist walls to allow diffusion to occur.
- Capillaries are closely wrapped around the alveoli to reduce the distance of diffusion and increase efficiency.

During inhalation:

- The concentration of oxygen in air is higher than the alveoli.
- The concentration of carbon dioxide in the blood is higher than that in the air.

During exercise

Gas exchange increases as the intensity of the activity increases to meet cells:

- An increase in demand for oxygen at working muscles.
- An increase in carbon dioxide production and the need to rid this waste product.

Frequency ↑ = Total Volume ↑
 Training increases total lung capacity and vital capacity readings.

Who to contact

You can email **your class teacher** if you have any questions regarding the activities set.

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Knowledge Organiser

All knowledge organisers are accessible on the OneNote link above