Getting Ready For ***Physical Education***		
Your Name		
A Level PE	Anatomy and Physiology	AQA

We are delighted you have chosen to study Physical Education at Worthing College.

Instructions: This pack will help you make the best possible start to studying this subject.

The tasks in this pack:

- should take you **about 4 hours to complete**
- should be handed into your teacher when teaching starts **from Monday 9th September 2024** with your name on it for assessment

If you need help: The tasks are designed to get a bit more difficult as you work through them as they are preparing you for studying at a higher level and to become an effective independent learner. You should try to get as far as you can working on your own but if you do need help, please email us at gettingreadyfor@worthing.ac.uk, telling us which Getting Ready For pack you are working on and what help you need. Help is available throughout the summer holidays.

Your PE teachers are also available if you would like to get in touch with any questions and queries:
m.rugman@worthing.ac.uk

Skills Focus for this Getting Ready for Pack
• **Effective note taking - Link (in class or researching for homework)** • **AO1 – making sure you use the appropriate key term and define it** • **AO2 – make sure you apply the correct key term - using the appropriate practical application and context** • **AO3 – make sure you can evaluate the theory – give opposing points of view and use connectives to help with this**

A Level PE Textbooks

Compulsory:
My Revision Notes: AQA A-level PE (AAQ A Level My Revision Notes) Paperback – by Sue Young (Author), Symond Burrows (Author), Michaela Byrne (Author) ***(This contains Year 1 and Year 2 content and quiz questions and answers)***

Optional:
AQA A Level Physical Education Student Guide 1 (Paper 1 – Participation) & **AQA A Level Physical Education Student Guide 2 (Paper 2 – Performance)** – by Symond Burrow (Author), Michaela Byrne (Author) Sue Young (Author). **(These contain Year 1 and Year 2 content)**

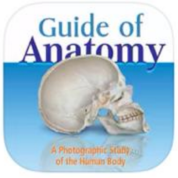
Getting Ready for… A Level PE

An introduction to Anatomy workbook

In preparation to begin study on the A1 PE course at Worthing College you are required to show a base of knowledge and understanding in Anatomy. If you have studied GCSE PE then some of this information should be familiar. However, don't worry if you haven't. Below is a reference that you can use in addition to the compulsory My Revision Notes textbook:

Anatomy Zone YouTube Channel - http://www.youtube.com/user/TheAnatomyZone

Or download one or more of the following **free** iPhone/iPad apps (Android apps are also available) Please write down ALL references used at the back of this booklet!



Anatomy Guide (Pocket Book)

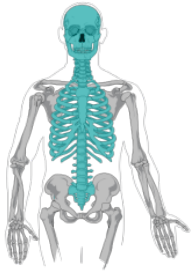
Anatomy & Physiology Made…

Teach Me Anatomy

The Skeletal System

DESCRIBE the 5 functions of the skeleton:

- Support
- Protection
- Attachment
- Blood cell production
- Mineral Storage

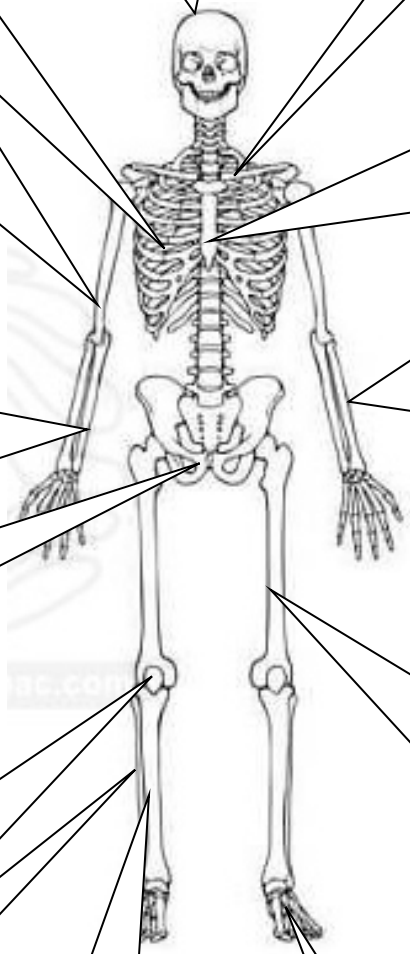
What is the Axial skeleton?	What is the Appendicular skeleton?
	

Ribs

Cranium

Clavicle

Humerus



Sternum

Ulna

Radius

Pubis

Femur

Patella

Tarsals

Fibula

Tibia

Metatarsals

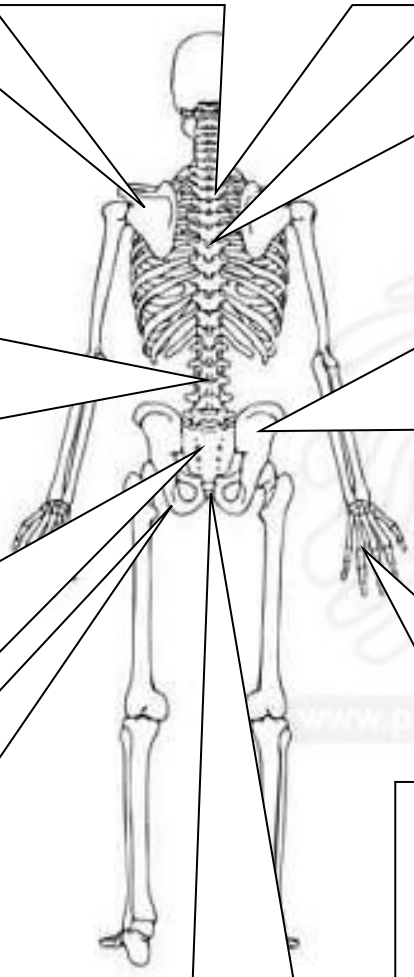
Phalanges

DESCRIBE the major bones of the skeletal system.

Scapula

Cervical vertebrae

Thoracic vertebrae



Lumbar vertebrae

Ilium

Sacrum

Carpals

Metacarpals

Phalanges

Ischium

Coccyx

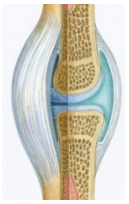
DESCRIBE the major bones of the skeletal system.

DESCRIBE the 3 classifications of joint in the human body? EXPLAIN the range of movement each one allows by relating to examples from sport.

Fixed

Slighty movable

Synovial

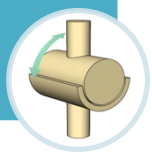


Please provide additional notes here if required:

What are the 6 types of synovial joints in the human body? DESCRIBE
Give an example of each in the human body.

- **H_____**

E.g.



- **B_____&_____**

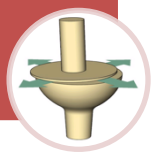
E.g.

- **E_____**

E.g.

- **G_____**

E.g.



- **P_____**

E.g.

- **S_____**

E.g.

Please provide additional notes if required:

DESCRIBE the main types of movement and give an example of when each movement is used in sport.

Flexion

- E.g.

Pronation

- E.g.

Extension

- E.g.

Supination

- E.g.

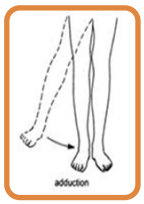
Abduction

- E.g.

Plantar flexion

- E.g.

Adduction



- E.g.

Dorsi flexion

- E.g.

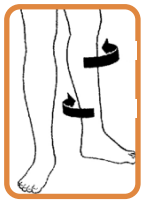
Circumduction

- E.g.

Inversion

- E.g.

Rotation



- E.g.

Eversion

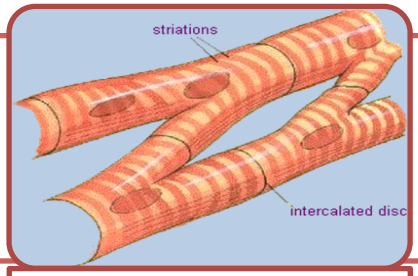
- E.g.

Hyperextension

- E.g.

The Muscular System

What are the 3 types of muscle in the body? DESCRIBE



Cardiac

Skeletal

Smooth

What are the characteristics of the 3 main types of skeletal muscle fibre? Give an example of an athletics event that each fibre type is associated with.

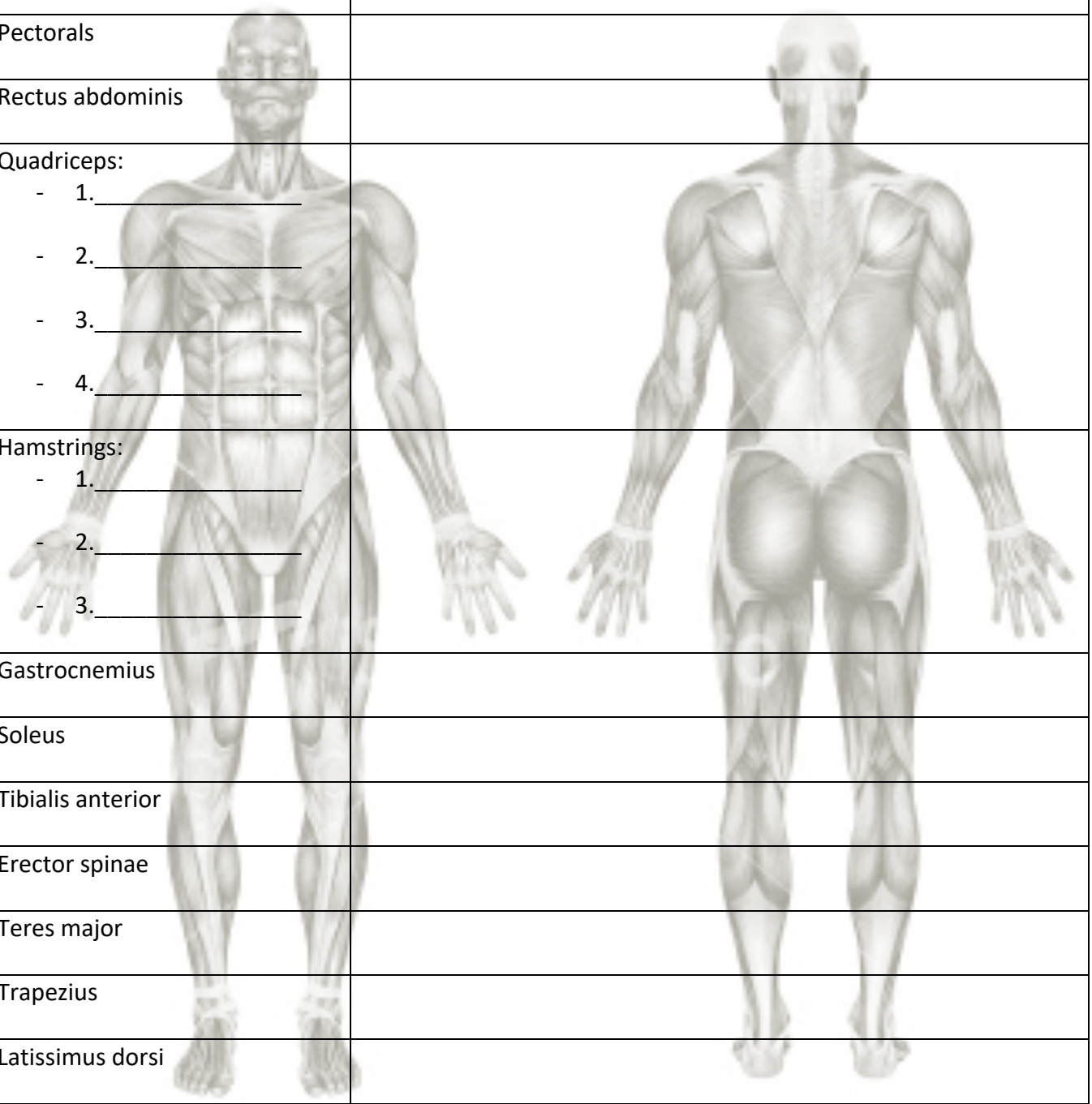
Type I	Characteristics:
Type IIa	Characteristics:
Type IIb	Characteristics:

EXPLAIN why each muscle fibre type is associated with the athletic event. Link the characteristics of the muscle fibre type to the demands of the event.

Muscle fibre type:	**Explanation:**
Type I	
Type IIa	
Type IIb	

What are the major muscles of the human body? Where is each one located? What movements does each one carry out? DESCRIBE in full sentences.

Muscle name	Location and Function
Biceps brachii	Located in the upper arm and produces flexion at the elbow joint.
Triceps brachii	
Detoids	
Pectorals	
Rectus abdominis	
Quadriceps: - 1._____ - 2._____ - 3._____ - 4._____	
Hamstrings: - 1._____ - 2._____ - 3._____	
Gastrocnemius	
Soleus	
Tibialis anterior	
Erector spinae	
Teres major	
Trapezius	
Latissimus dorsi	
Obliques	
Gluteus maximus	

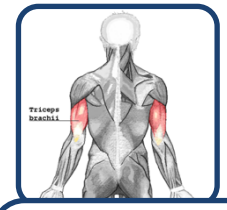


What is antagonistic muscle action? DESCRIBE

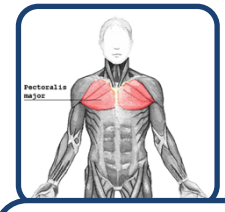
Muscle movement

The pictures show the muscles involved in a bicep curl. DESCRIBE the **role** of each muscle.

Agonist



Antagonist



Synergist

Fixator

Concentric

Eccentric

Describe the 4 types of muscle contraction

Isometric

Isokinetic

The Cardiovascular System

DESCRIBE each function of blood:

Oxygen transport:

Clotting:

Fighting infection:

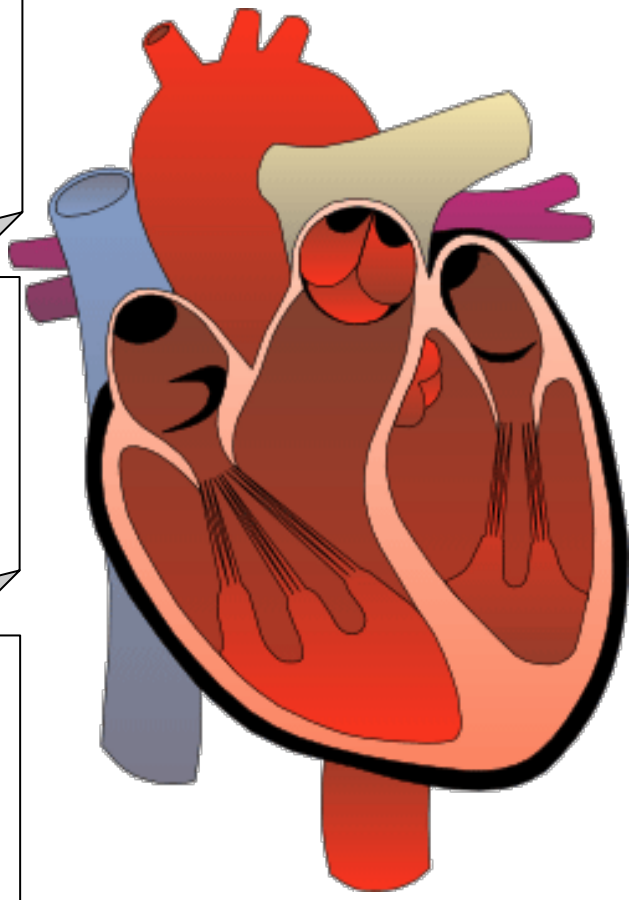
The Heart: DESCRIBE each component of the heart. Label the diagram by adding arrows from each box.

SUPERIOR VENA CAVA

AORTA

PULMONARY ARTERY

TRICUSPID VALVE



PULMONARY VEIN

BICUSPID VALVE

ATRIA

PULMONARY VALVE

AORTIC VALVE

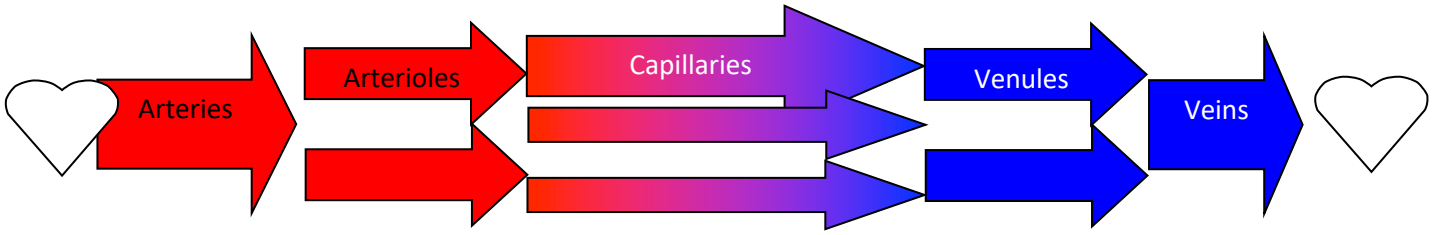
INFERIOR VENA CAVA

VENTRICLES

CHORDAE TENDINEAE

Blood vessels

As the heart contracts, blood flows around the body in a complex network of vessels:



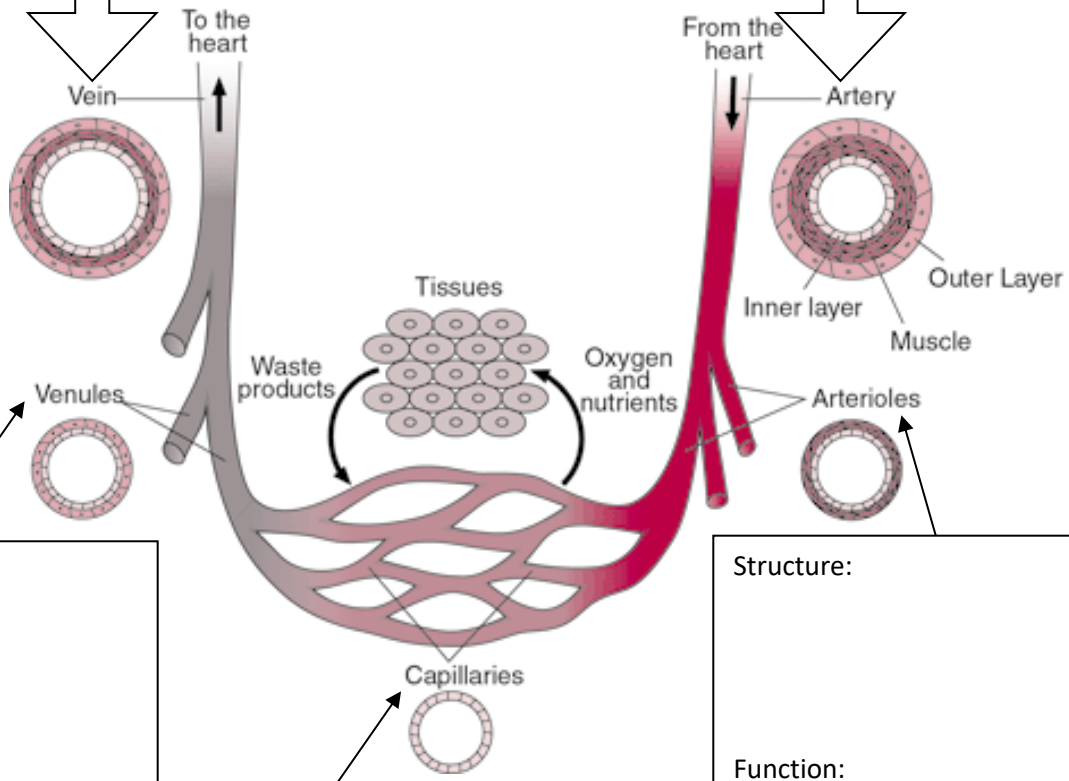
Briefly DESCRIBE the structural characteristics <u>and</u> function of each type of blood vessel.

Structure:

Function:

Structure:

Function:



Structure:

Function:

Structure:

Function:

Structure:

Function:

DESCRIBE the 3 functions of the Cardiovascular System and EXPLAIN the functions during exercise.

Delivery of oxygen and nutrients

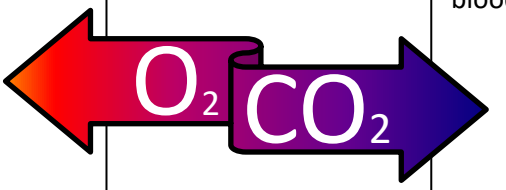
Removal of waste products

Thermoregulation : vasodilation and vasoconstriction of blood vessels

The Respiratory System

The Respiratory system has 2 main roles: diffusion of oxygen into the blood stream and diffusion of carbon dioxide out of the blood stream. **DESCRIBE these functions and EXPLAIN the processes involved.**

Gaseous exchange at the alveoli:



Diffusion of carbon dioxide out of the bloodstream:

Diffusion of oxygen into the muscle:

Role of haemoglobin:

Role of myoglobin:

DESCRIBE the key structures of the respiratory system:

Nasal cavity:

Pharynx:

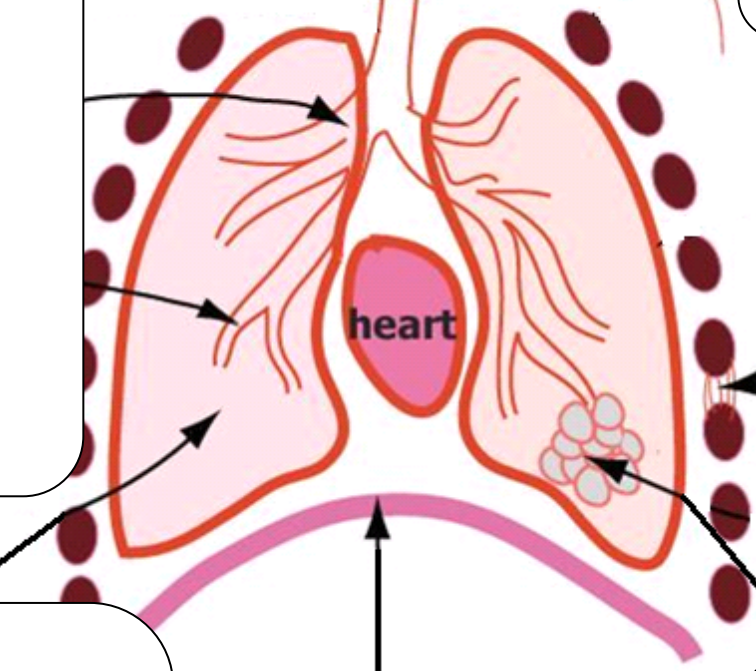
Larynx:

Epiglottis

Trachea:

Bronchus:

Bronchioles:



Internal intercostals:

External intercostals:

Lungs:

Lobes:

Pleural membrane:

Visceral pleura:

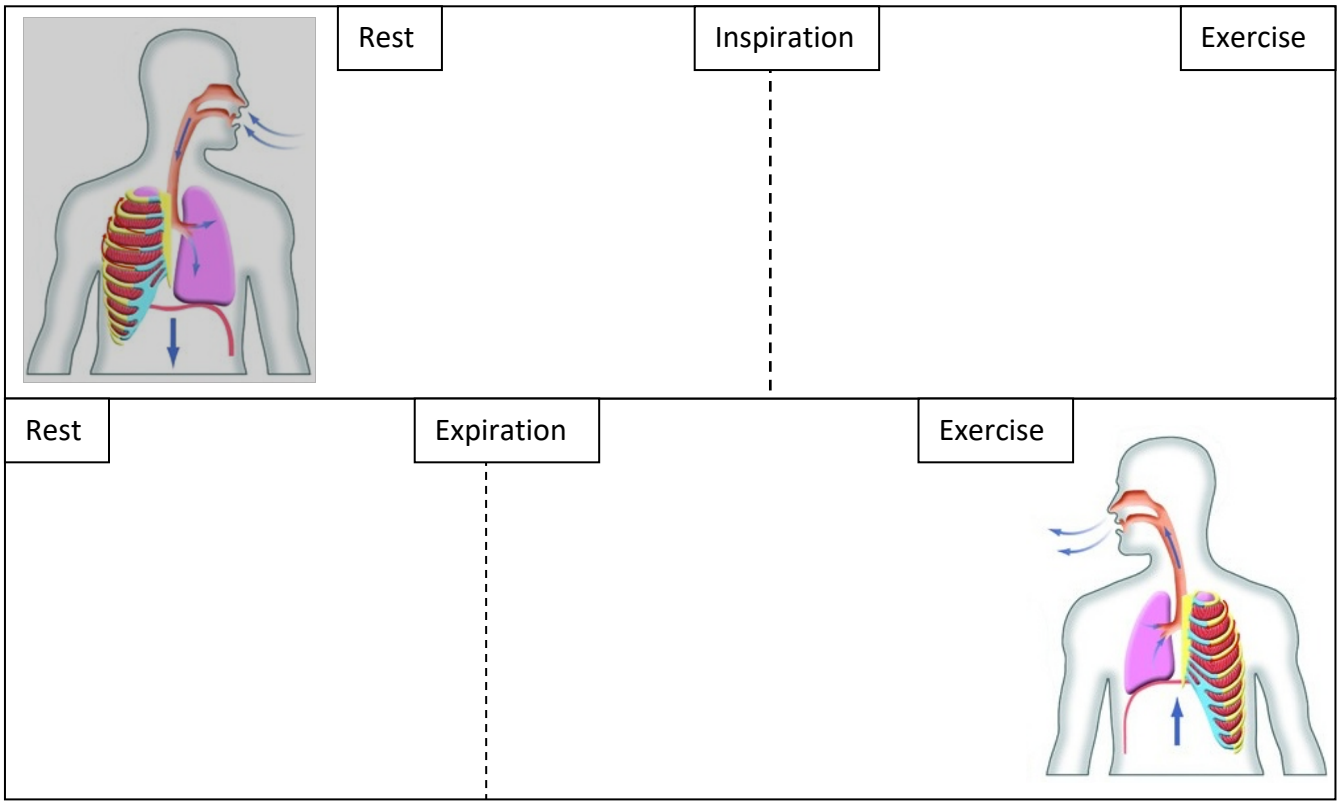
Pleural fluid

Diaphragm:

Alveoli:

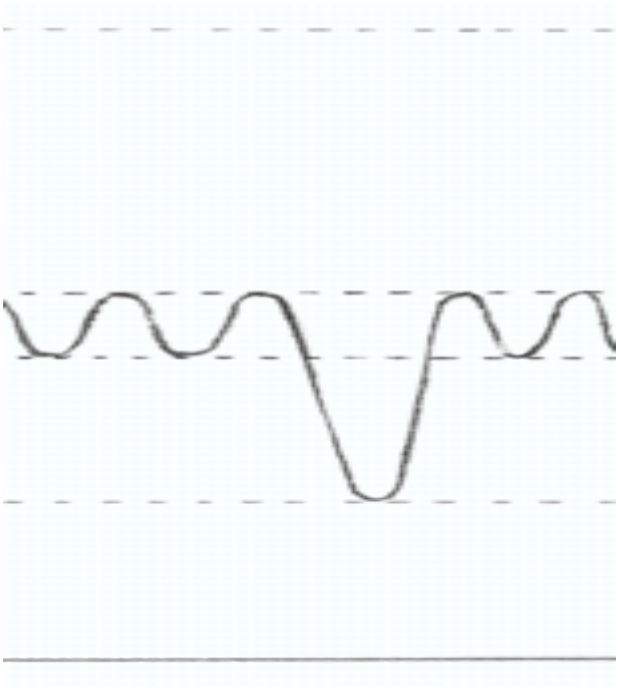
Thoracic cavity:

DESCRIBE the Mechanisms of breathing at rest and EXPLAIN the changes during exercise:



Respiratory volumes

A spirometer can be used to measure different lung volumes. On the example trace below, **LABEL** and **DESCRIBE** the key volumes and capacities used to assess an individual's lung function:



Tidal volume

Inspiratory reserve volume

Expiratory reserve volume

Residual volume

Vital capacity

Total lung capacity

Work Experience week

All year 1 students are required to participate in a week-long work placement during their first year of study. You will be expected to locate one week's worth of work placement and submit your work experience form before October half term.

Placement Dates:

L2/L3 students on double /triple qualifications:	1 week course-specific placement, expected placement dates will be confirmed by the course leaders at the beginning of September.
Students with 2 or more single subjects:	1 week placement during the Easter holidays or w/c 23 June 2025

You can find the work experience form HERE
More information and guidance can be found HERE