

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 Haywards Heath 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 12th September 2023** with your name on it for assessment.
- are also available on the internet – follow the links in the document.

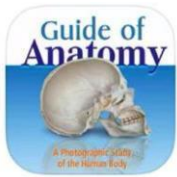
If you need help: The tasks are designed to get a bit more difficult as you work through them as they are preparing you for studying at a higher level and to become an effective independent learner. You should try to get as far as you can working on your own but if you do need help, please email us at info@haywardsheath.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.

Skills Focus for this Getting Ready for Pack	
Effective note taking A01 – making sure you use the appropriate key term and define it	A02 – make sure you apply the correct key term – using the appropriate practical application and context A02 – make sure you can evaluate the theory – giving opposing points of view and use connectives to help with this

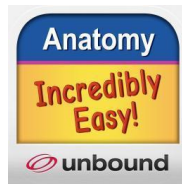
An Introduction to Anatomy Workbook

In preparation to begin study on the PE course at Haywards Heath 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 are a couple of references that you can use to help you:

- Anatomy Zone YouTube Channel - <http://www.youtube.com/user/TheAnatomyZone>
- Or Anatomy Zone video tutorial links - [AnatomyZone - Your Guide to Human Anatomy](#)
- Or download one or more of the following **free** iPhone/iPad apps (Android apps are also available)



Anatomy Guide



Anatomy & Physiology




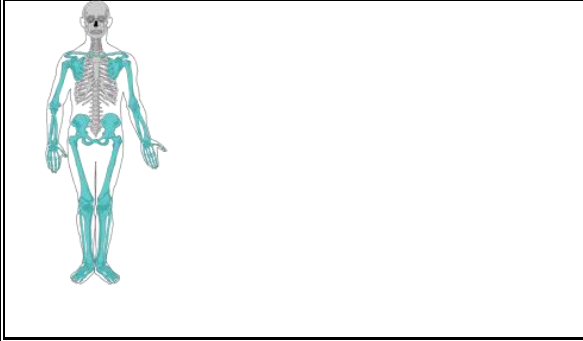
Teach Me Anatomy

Please write down ALL references used at the back of this booklet!

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?
	

Cranium

Clavicle

Ribs

Humerus

Sternum

Ulna

Radius

Pubis

Femur

Patella

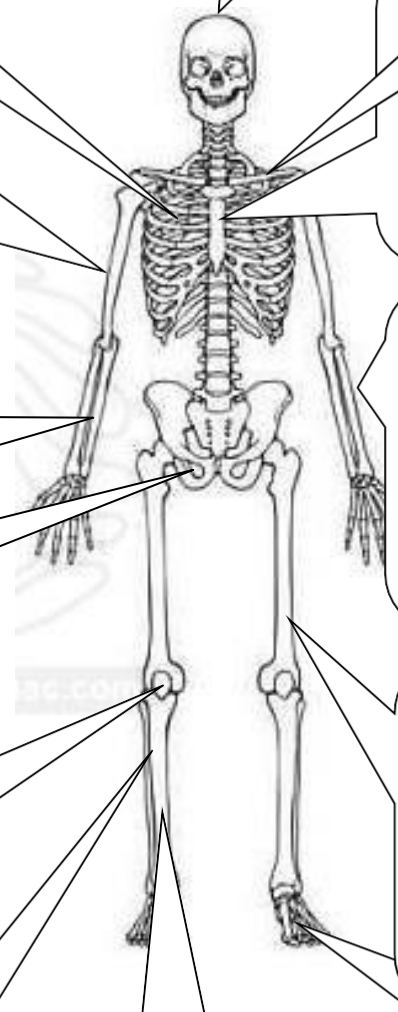
Tarsals

Fibula

Tibia

Metatarsals

Phalanges



DESCRIBE the major bones of the skeletal system.

DESCRIBE the major bones of the skeletal system.

Scapula

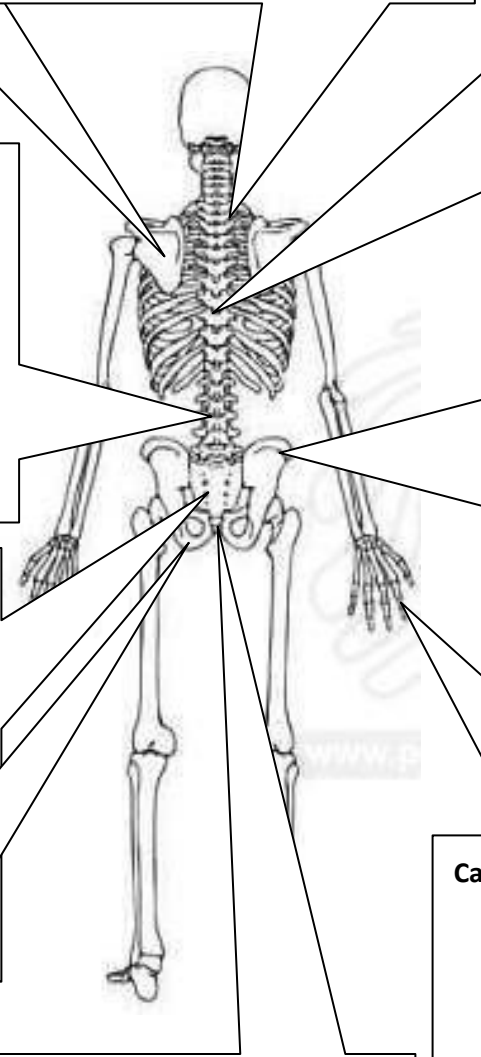
Cervical vertebrae

Thoracic vertebrae

Lumbar vertebrae

Ilium

Sacrum



Ischium

Coccyx

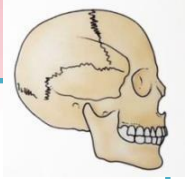
Carpals

Metacarpals

Phalanges

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



Slightly 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




...g:

Pronation




• E.g.

Extension




• E.g.

Supination




• E.g.

Abduction




...

Plantar flexion




• E.g.

Adduction




• E.g.

Dorsi flexion




• E.g.

Circumduction




...

Inversion




...

-----m.a:rati.




...

Eversion



• E.g.

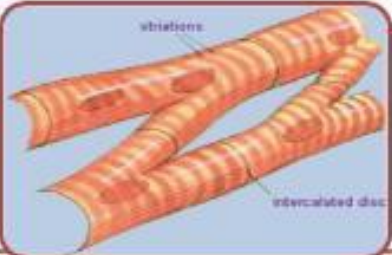
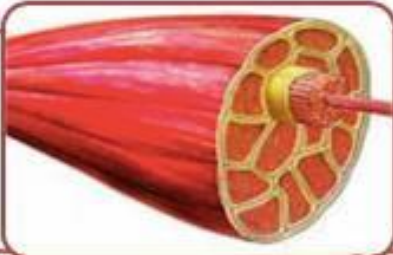

Hyperextension



• 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	
Deltoids	
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

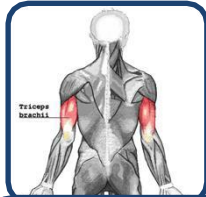
Muscle movement

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



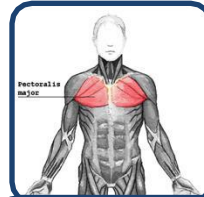
Agonist

+



Antagonist

+

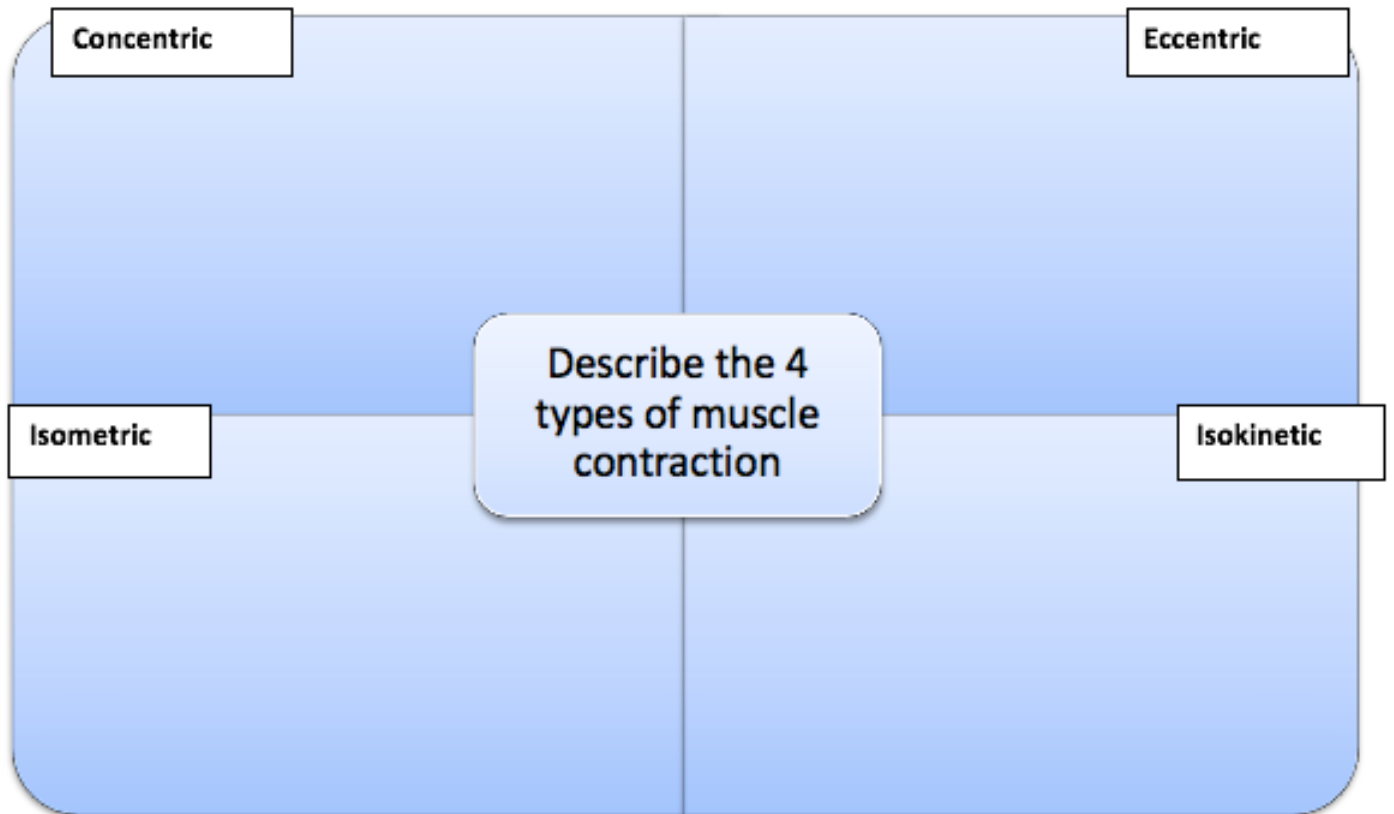


Synergist

+



Fixator



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

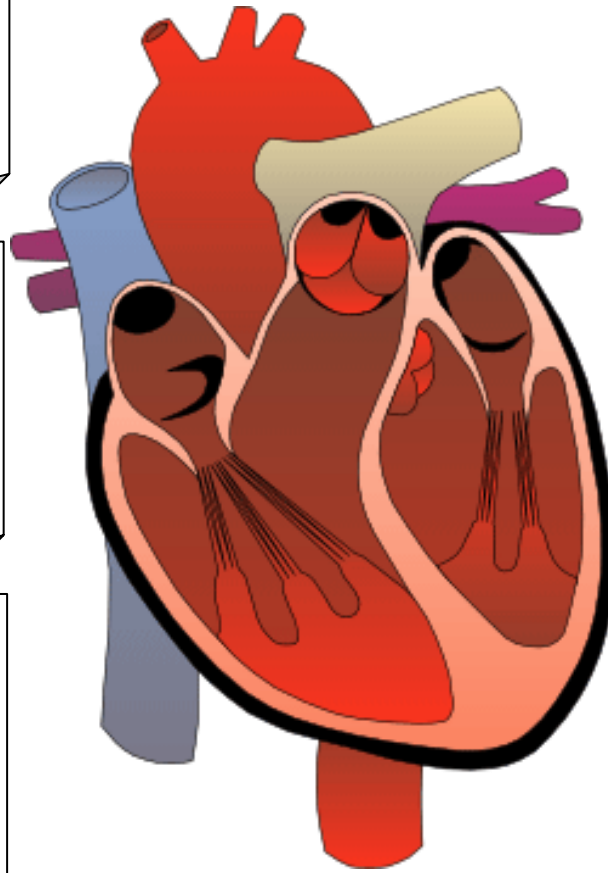
PULMONARY VALVE

AORTIC VALVE

INFERIOR VENA CAVA

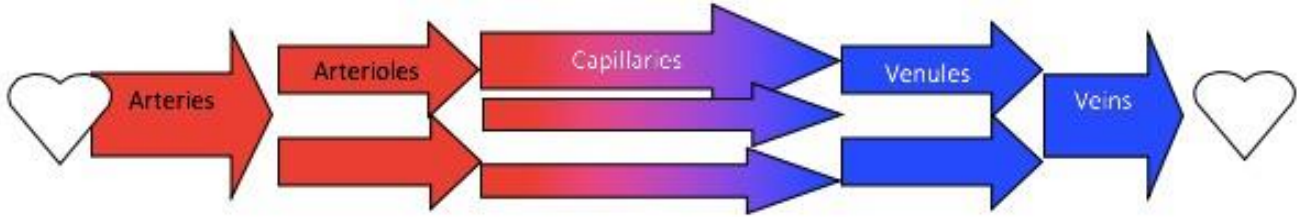
VENTRICLES

CHORDAE TENDINEAE



Blood vessels

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



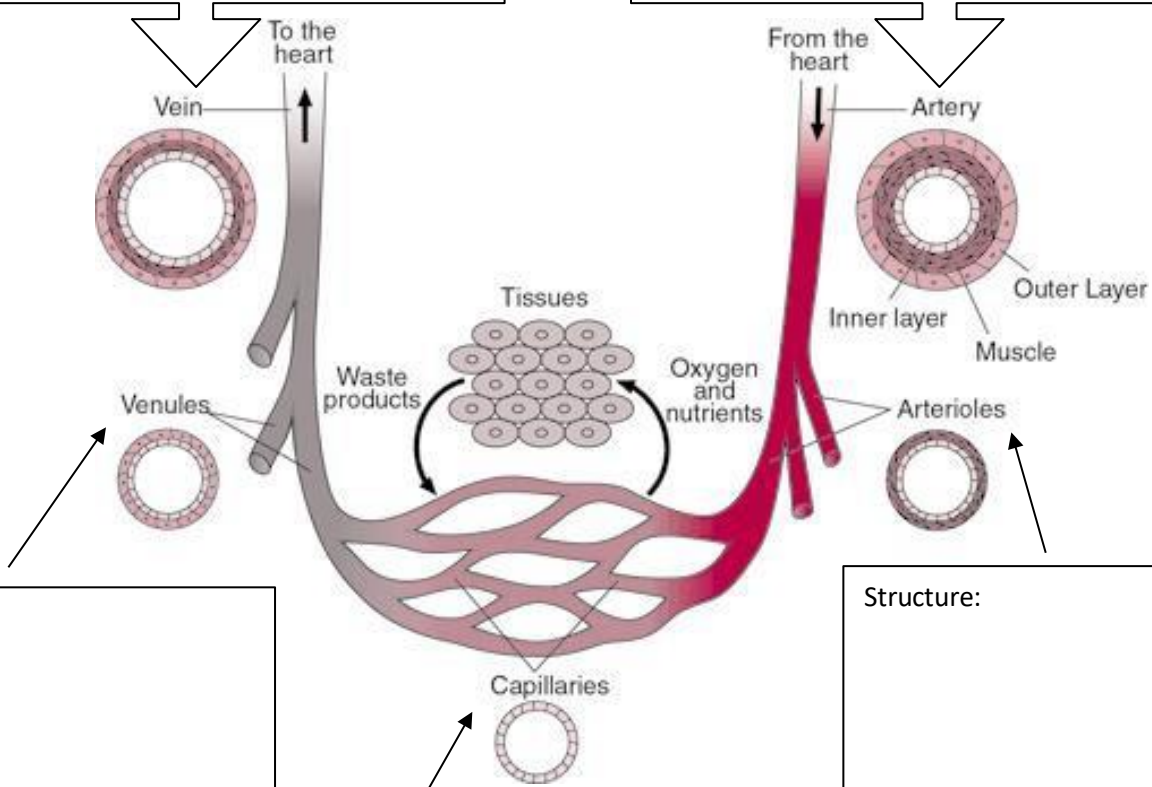
Briefly **DESCRIBE** the structural characteristics and function of each type of blood vessel.

Structure:

Function:

Structure:

Function:



Structure:

Function:

Structure:

Function:

Structure:

Function:

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

Deliv-ry of oxyge-n aOO nutre-nts



Removal of waste-products

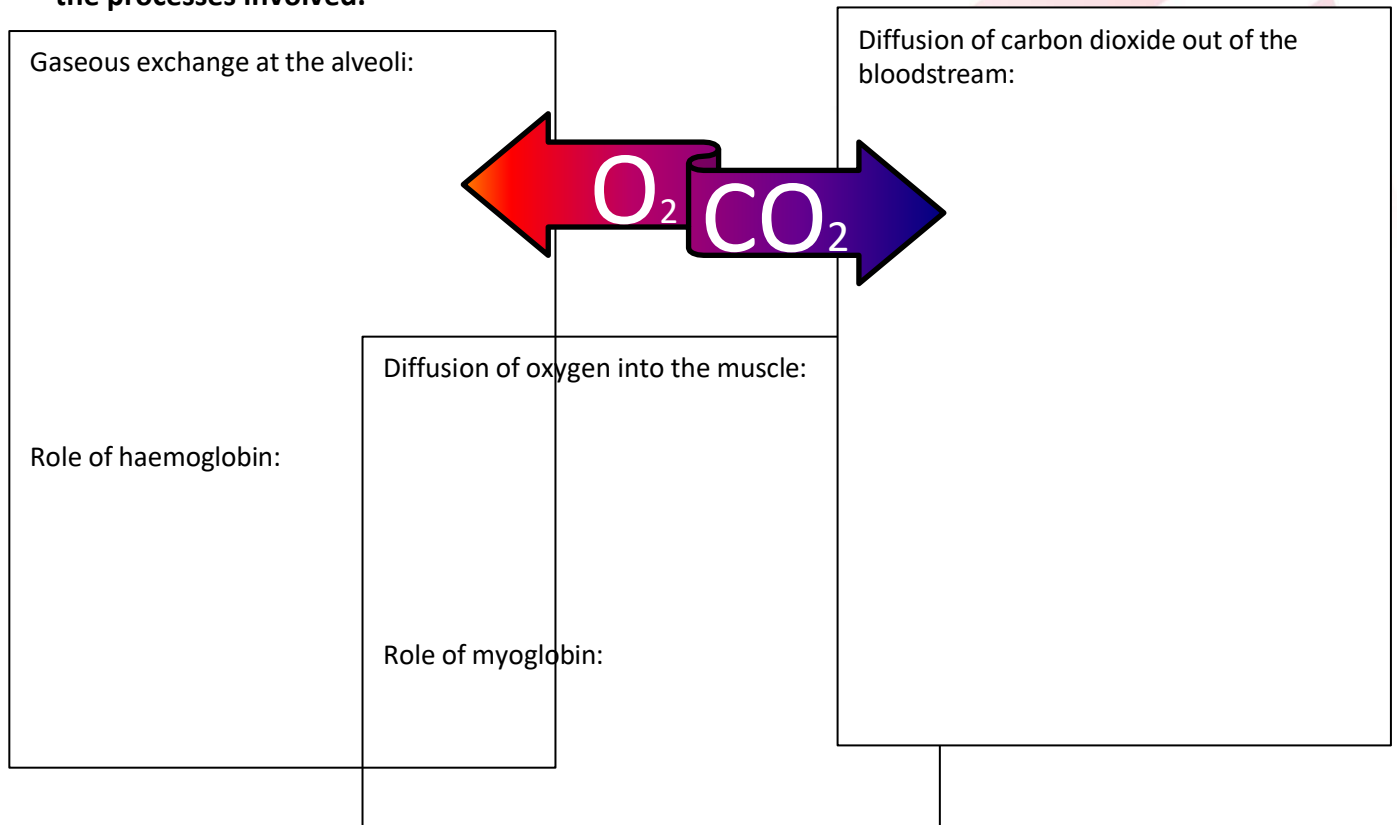


T-ermoregulation : vasodilatation aOO vasoconstriction of blood v-esse-ls

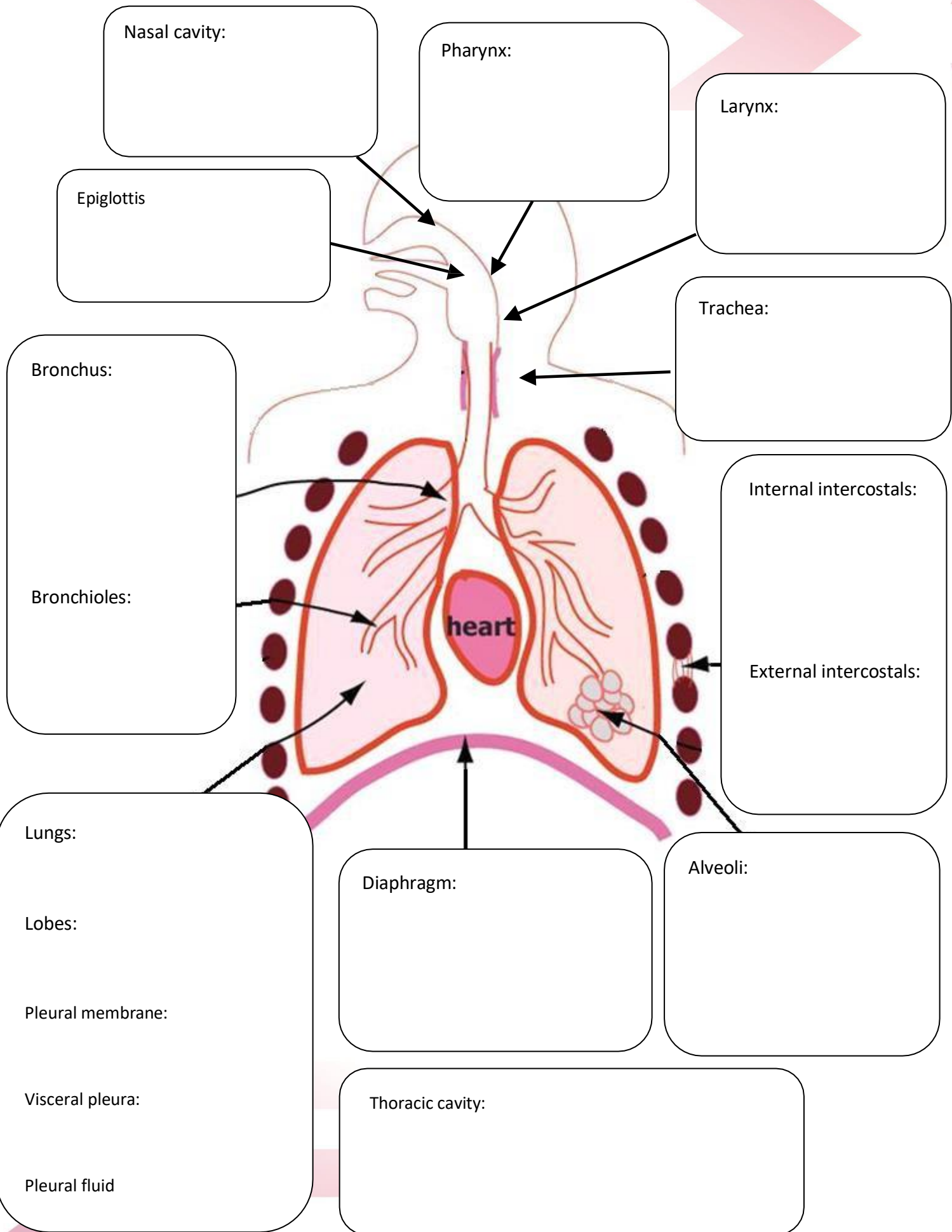


The Respiratory System

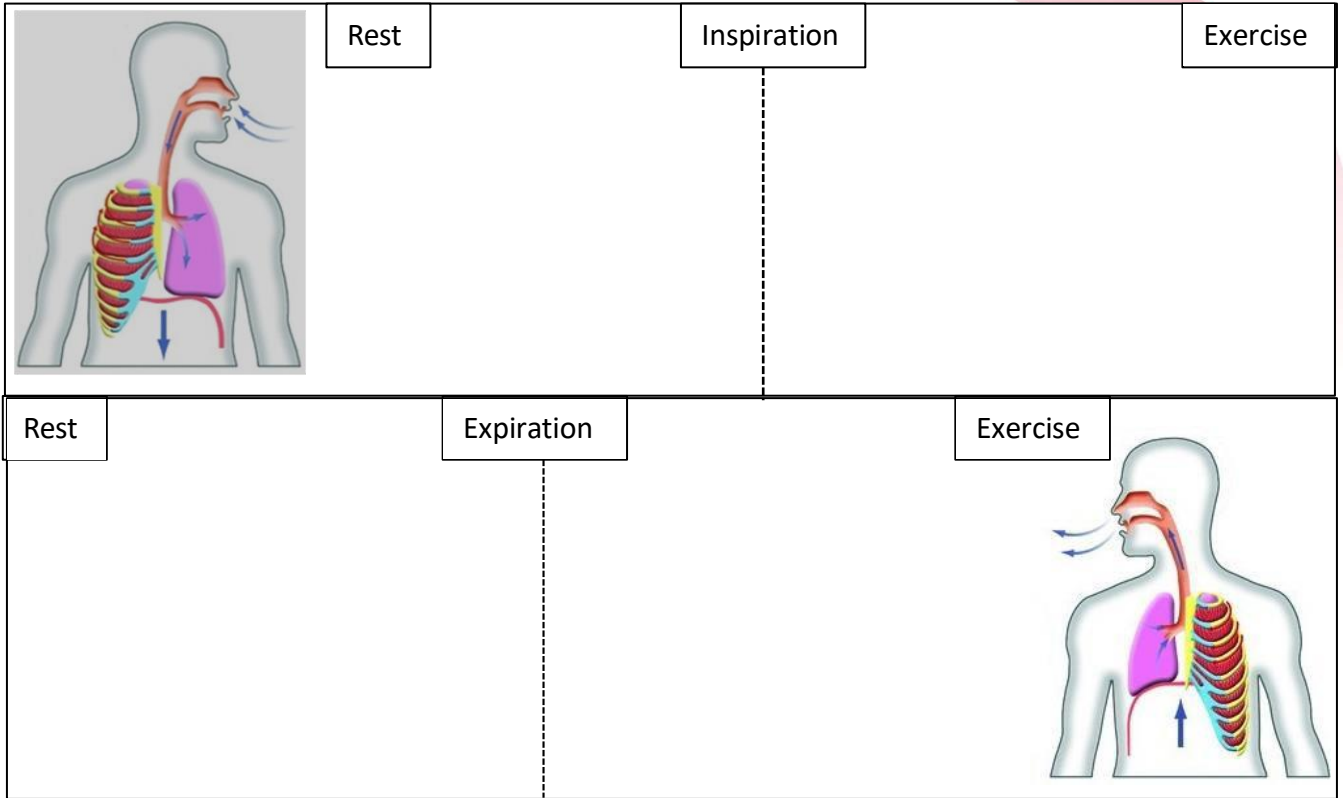
The Respiratory system has 2 main roles: diffusion of oxygen into the blood stream and diffusion of carbon dioxide out of the blood stream. **DESCRIBE these functions and EXPLAIN the processes involved.**



DESCRIBE the key structures of the respiratory system:

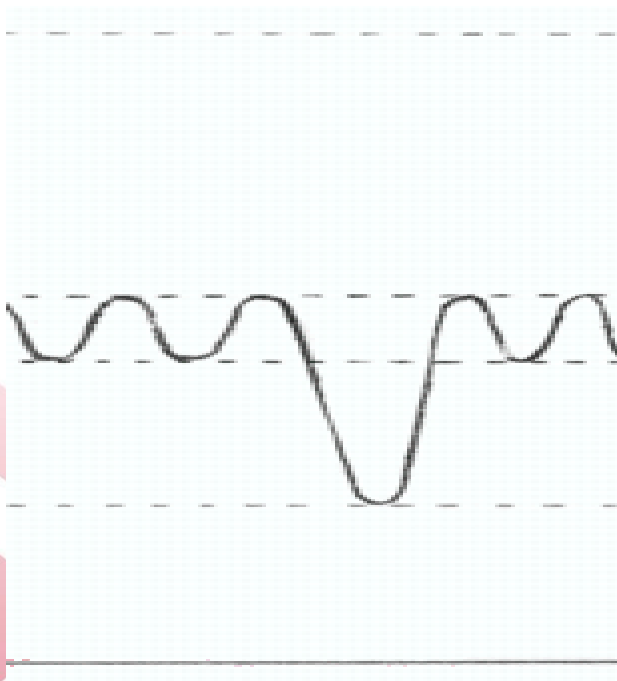


DESCRIBE the Mechanisms of breathing at rest and EXPLAIN the changes during exercise:



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