



New College Bradford – Y12 BTEC Sport (Extended Certificate)

Y11-12 SIL

Please complete the following tasks and bring to your first lesson. You can do this by hand if needed.

Name:



Summer Challenge (Part 1)

We hope you are looking forward to studying with us very soon. Our SIL work will prepare you with what to expect when you arrive. One unit on your course is Unit 1 Anatomy and Physiology which the Summer Learning is based on.

On the next few pages, there will be a number of body systems you will need to know. Please ensure these are fully labelled. There are instructions and key words on the bottom of each page.

SKELETAL SYSTEM

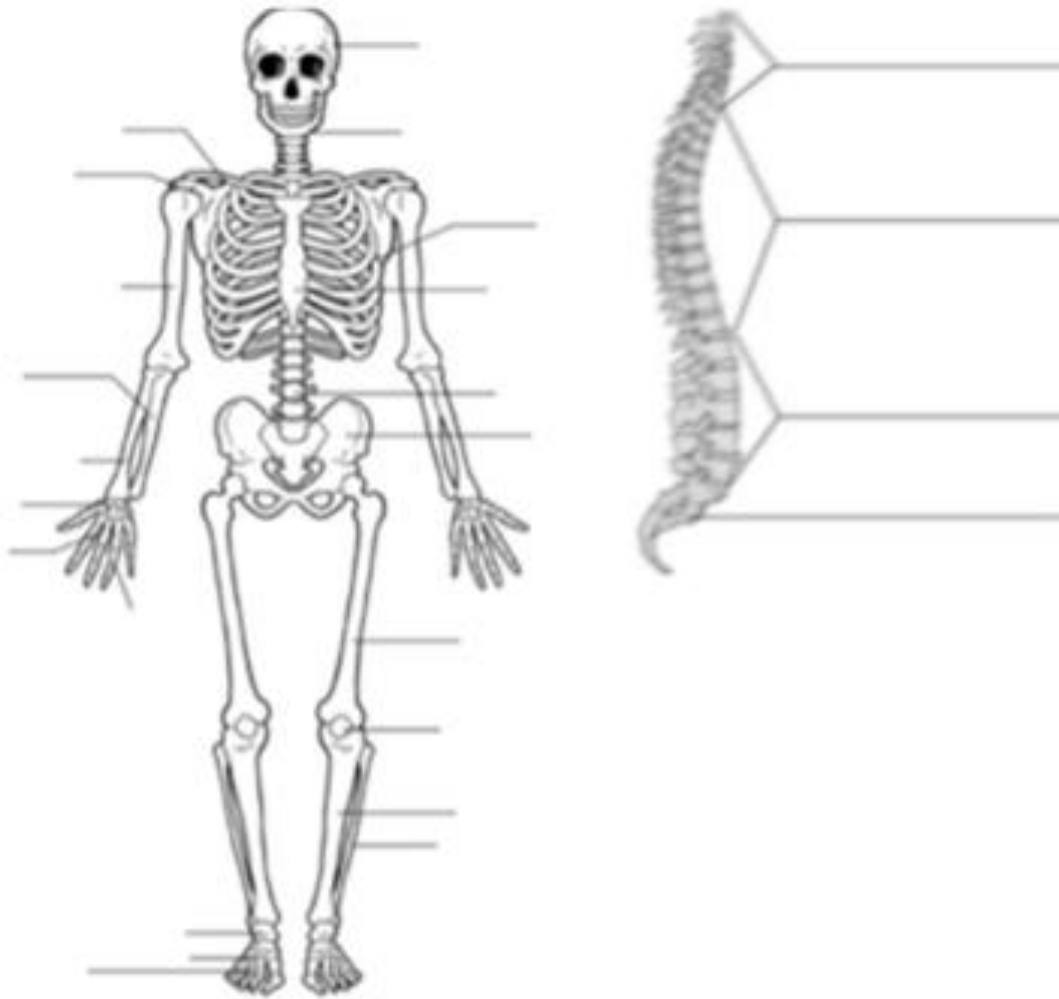


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LABEL THE ABOVE DIAGRAM WITH THE FOLLOWING COMPONENTS:

- . cranium, clavicle, ribs, sternum, humerus, radius, ulna, scapula, ilium, pubis, ischium, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals, metatarsals.

SKELETAL SYSTEM



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LABEL THE ABOVE DIAGRAM WITH THE FOLLOWING COMPONENTS:

- Identify and colour in the Axial and Appendicular Skeleton.
- Identify at least 1 example of each bone type; long bones, short bones, flat bones, irregular bones, sesamoid bones

MUSCULAR SYSTEM

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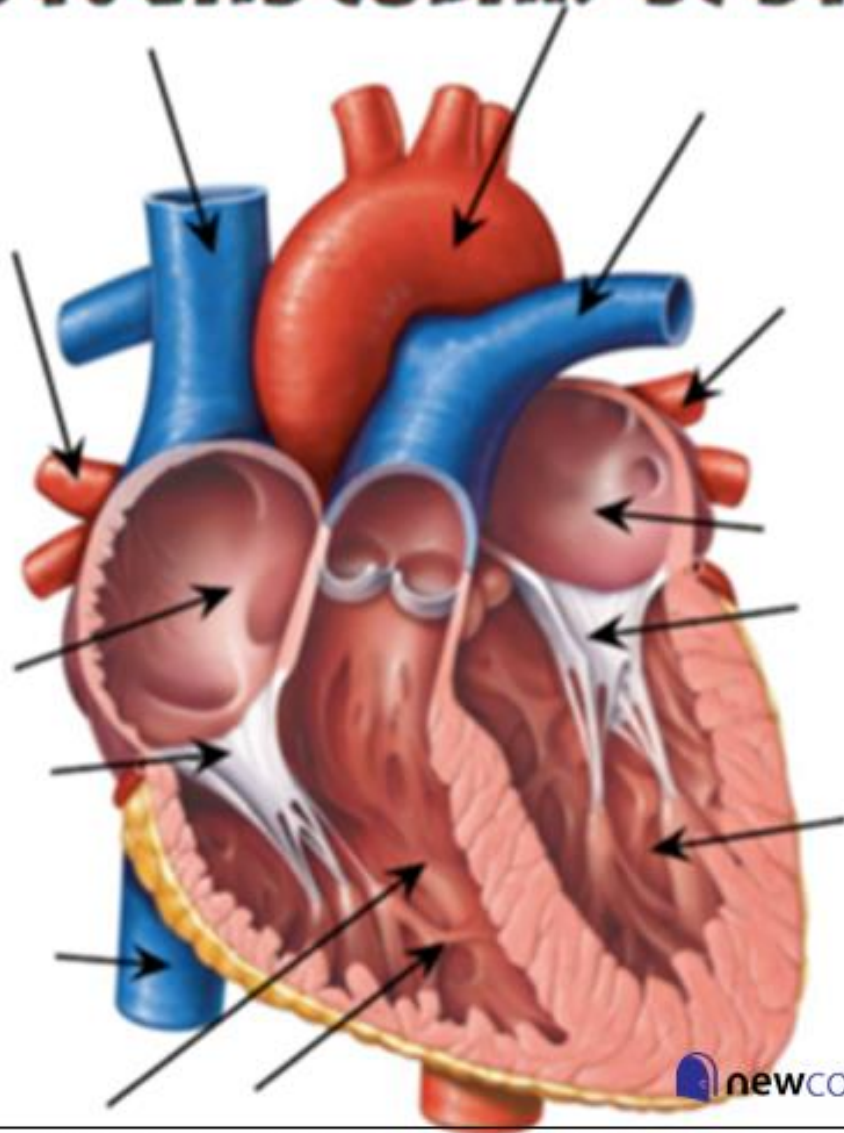


Identify and describe the 3 different types of muscle found within the body.

LABEL THE DIAGRAM ABOVE WITH THE FOLLOWING MUSCLES:

biceps, triceps, deltoids, pectoralis major, rectus abdominis, rectus femoris, vastus lateralis, vastus medialis, vastus intermedius, semimembranosus, semitendinosus, biceps femoris, gastrocnemius, soleus, tibialis anterior, erector spinae, teres major, trapezius, latissimus dorsi, obliques, gluteus maximus

CARDIOVASCULAR SYSTEM



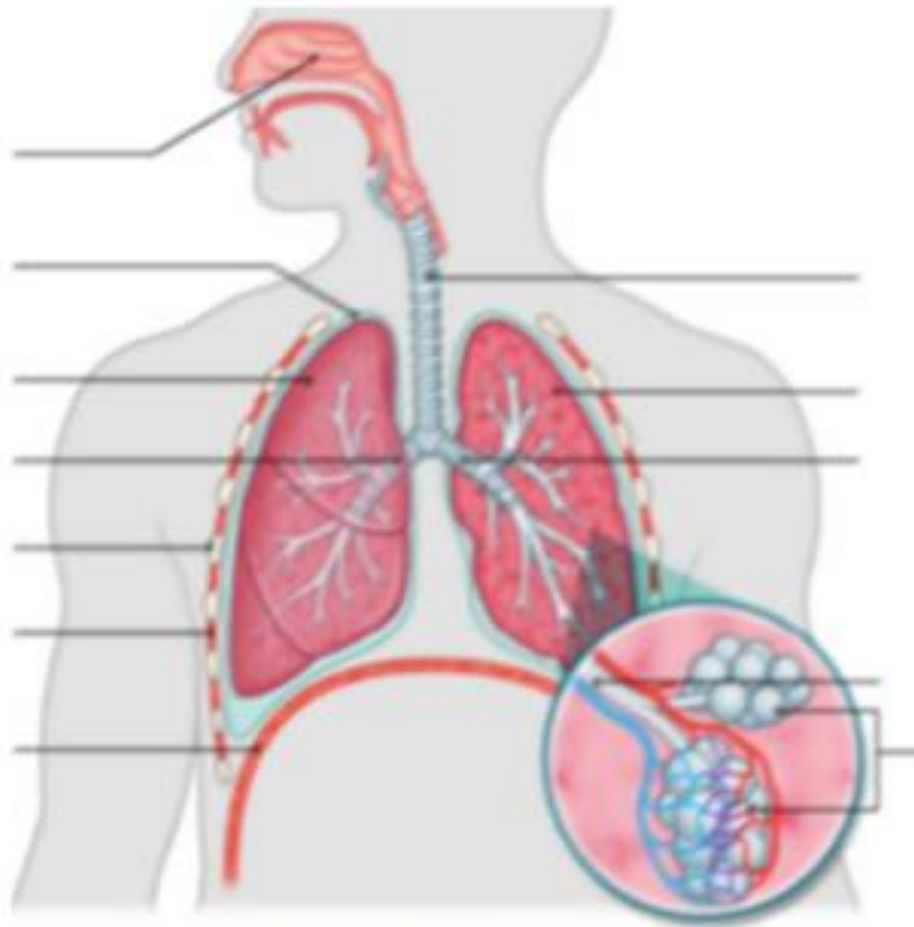
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Describe the 5 different types of blood vessel (Arteries, Arterioles, Capillaries, Venules, Veins)

LABEL THE ABOVE DIAGRAM WITH THE FOLLOWING COMPONENTS:

atria, ventricles, bicuspid valve, tricuspid valve, aortic valve, pulmonary valve, aorta, vena cava - superior and inferior, pulmonary vein, pulmonary artery

RESPIRATORY SYSTEM



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LABEL THE ABOVE DIAGRAM WITH THE FOLLOWING COMPONENTS:

nasal cavity; epiglottis; pharynx; larynx; trachea; bronchus;
bronchioles; lungs (lobes, pleural membrane, thoracic cavity,
visceral pleura, pleural fluid, alveoli); diaphragm; intercostal
muscles (external and internal)

Once you have labelled the body systems above, create either a powerpoint or booklet explaining the key function of each of the systems.

The following key words need to be included when explaining the function of each system:

Skeletal system

Support, protection, attachment of skeletal muscle, source of blood cell production and minerals.

Muscular system

Movement, antagonistic pairs (agonist, antagonist, fixator, synergist), types of contraction (isometric, concentric, eccentric).

Cardiovascular system

Delivery of oxygen and nutrients, removal of waste product, thermoregulation (vasodilation and vasoconstriction), function of blood (oxygen, clotting, fighting infection).

Respiratory system

Gaseous exchange, mechanisms of breathing (inspiration and expiration), lung volumes (tidal volume, vital capacity, residual volume), control of breathing (neural and chemical).

Get creative and include images and colour!!