Summer Task 2020

For single and double option students

Please complete the task below for unit 1 Body systems and the effects of physical activity

Hand in date - first lesson back in September with SSK

Assessment practice questions

Below are practice questions for you to try. Answer what you know in black or blue pen and when you use other resources like the internet to help you please use a green pen.

- 1. What type of bone is the scapula?
 - a. Long bone
 - b. Short bone
 - c. Flat bone
 - d. Irregular bone
- 2. What type of joint is the knee?
 - a. Ball and socket
 - b. Hinge
 - c. Saddle
 - d. Condyloid
- 3. Below are listed four components of blood.

Which components carries oxygen?

- a. Red blood cells
- b. White blood cells
- c. Platelets
- d. Plasma
- 4. What part of the structure of a joint holds bones together?
 - a. Tendon
 - b. Hyaline cartilage
 - c. Ligaments
 - d. Menisci

5.	Define stroke volume and give a typical resting value. [2marks]			
6	Apply your knowledge of the skeletal and muscular systems to complete the following table			

6. Apply your knowledge of the skeletal and muscular systems to complete the following table. [4 marks]

Joint	Joint movement	Muscle acting	Type of contraction
Shoulder	Adduction		Concentric
		Biceps brachii	

7. Regular physical activity places the body under stress, forcing it to accommodate the demands placed upon it. Over time the body adapts to these stressors. Describe what changes occur to the muscular and cardiovascular systems as they adapt to physical activity. [10 marks] – this is hard as you have not yet been taught this but give it a go!

Key words that you could include:

Muscular adaptations:
Hypertrophy, hyperplasia, fuel source (CP, glycogen and triglycerides), muscle fibre
recruitment, overuse injuries.
Cardiovascular adaptations:
Stroke volume, resting heart rate, resting cardiac output, maximal cardiac output.

Useful resources:

The BBC website has a clear labelled skeleton. It also has an interactive activity which learners can use to assemble their own skeleton using a drag and drop feature http://www.bbc.co.uk/science/humanbody/body/factfiles/skeleton_anatomy.shtml

The Visible Body web page – 'The Long and the Short of It' – gives an introduction to the five types of bone. The website also links to useful articles on the skeletal system, axial and appendicular skeleton and joints and ligaments amongst other things http://learn.visiblebody.com/skeleton/types-of-bones

This website gives a good overview of the different joints:

https://www.boundless.com/biology/ textbooks/boundless-biology-textbook/the-musculoskeletal-system-38/joints-and-skeletalmovement-217/types-of-synovial-joints-822-12066/

YouTube has lots of clips which show the joints and joint actions including: https://www.youtube.com/watch?v=DLxYDoN634c

The effects of exercise are explained in this article http://www.livestrong.com/article/131711- what-are-effects-exercise-skeletal-system/

and this website includes quizzes and tests to check understanding https://quizlet.com/36967058/long-term-short-term-effects-of-exercise-on-theskeletal-system-flash-cards/

This website gives a good overview of the differences between tendons and ligaments http://www.livestrong.com/article/217679-differences-betweenligaments-tendons/

This website has a clear explanation of the difference between stroke volume, heart rate and cardiac output; along with a worked example of the equation http://www.biosbcc.net/doohan/sample/htm/COandMAPhtm.htm