



SPORT AND COACHING SCIENCE

Body systems and the effects of exercise of physical activity

'This unit teaches you about the functions of the key body systems and how they support and impact performance in sport and physical activity. As well as the effects that sport and physical activity can have on them.' Follow the tasks below to produce a booklet.

Task 1 Skeletal system

- Find an unlabelled diagram of the skeleton and shade in the appendicular and axial skeleton.
- Label the bones of the skeleton
- Bones are classified by their shape. Long, Short, Flat, Irregular and Sesamoid. Try and find 2 examples of each type of bone.

Task 2 Muscular system

- Find an unlabelled diagram of the muscular system front and back. Identify and locate the name for the muscle groups Hamstrings (3) and Quadriceps (4) and the abdominal muscles.
- Describe how the muscular system changes as a result of long and short term exercise.

Task 3 Cardiovascular system

- Draw a diagram to represent the flow of blood around the body. Distinguish between oxygenated and de-oxygenated blood and label the important structures, including the right and left atriums and ventricles and the major blood vessels that transport blood around the body.
- Find out and explain what the following terms mean:
Vascular Shunt, Cardiac Output, Venous Return, Skeletal Muscle Pump.
- There are 5 types of blood vessel. Arteries, Arterioles, Capillaries, Venules and Veins.

Identify one key feature of each.

- Describe how a warm up helps to prepare the cardiovascular system for exercise.
- Respiratory system

- Watch [this YouTube](#) and make notes on the Respiratory System
- Find a blank image of the lungs and label the main structures: mouth, nasal cavity, pharynx, larynx, epiglottis, trachea, bronchi, bronchioles
- Research the process of Inspiration and Expiration. Create a table to present this information.

Sports Psychology

'This unit teaches you about the different motivations that people have for participating in sport and exercise and how performance can be managed through an understanding of attribution theory, stress and group dynamics..'

- If you have Amazon Prime, watch 'Resurfacing', a documentary about Andy Murray and his rehabilitation throughout his hip injury problems.
- Watch these You Tube clips based on Motivation:
[Mountain Bike Motivational Speech](#)
[Alex Danson: Inspiring the Future](#)
- Find out about Intrinsic and Extrinsic Motivation. What are the differences? Present your findings in a table.
- Find out about a particular sports star and their journey to success. Where did they start? What problems did they overcome? Are they happy? Write a few paragraphs about this personality.