

**Lesson Plan for Lower Block (Primary 3 and 4)**

Lesson	About the Unit
<p><b>Unit 1</b></p> <p><b>Skeletal &amp; Muscular Systems</b></p>	<ul style="list-style-type: none"> <li>• Identify the ribcage, skull and backbone as major bones of the skeletal system.</li> <li>• Identify the major muscles of the human body.</li> <li>• Show an understanding of how muscles and bones interact with each other to bring about movement.</li> </ul>
<p><b>Unit 2</b></p> <p><b>Circulatory &amp; Respiratory Systems</b></p>	<ul style="list-style-type: none"> <li>• Show an understanding of how blood acts as a transport medium</li> <li>• Recognise the heart as a pump</li> <li>• Show an understanding of the substances that the arteries and veins transport to and from the heart.</li> <li>• Identify the major components of the respiratory system.               <ul style="list-style-type: none"> <li>- nose</li> <li>- windpipe</li> <li>- lungs</li> </ul> </li> <li>• Show an understanding of the circulatory system and the respiratory system and describe how they interact with each other.</li> <li>• Show an understanding of how breathing takes place.</li> </ul>
<p><b>Unit 3</b></p> <p><b>Digestive System</b></p>	<ul style="list-style-type: none"> <li>• Recognise the presence of herbivores, carnivores and omnivores.</li> <li>• Classify food we eat into               <ul style="list-style-type: none"> <li>- Carbohydrates</li> <li>- Fats</li> <li>- Proteins</li> </ul> </li> <li>• Recognise that food is broken down by digestive juices</li> <li>• Identify components of the digestive system and state their functions               <ul style="list-style-type: none"> <li>- mouth</li> <li>- gullet</li> <li>- stomach</li> <li>- small intestine</li> <li>- large intestine</li> <li>- anus</li> </ul> </li> <li>• Recognise the liver as a component of the digestive system.</li> </ul>

**Lesson Plan for Upper Block (Primary 5 and 6)**

Lesson	About the Unit
<p><b>Unit 1</b></p> <p><b>Skeletal &amp; Muscular Systems</b></p>	<ul style="list-style-type: none"> <li>• Identify the major bones of the skeletal system and recognise that bones interact with one another at the joints (movable and immovable)</li> <li>• Identify the major muscles of the human body and recognise that muscles work as antagonistic pairs.</li> <li>• Show an understanding of how muscles and bones interact with each other to bring about movement (with tendons and ligaments).</li> <li>• Identify the differences and recognise the first aid treatment of               <ul style="list-style-type: none"> <li>- fractures</li> <li>- sprains &amp; strains</li> </ul> </li> </ul>
<p><b>Unit 2</b></p> <p><b>Circulatory &amp; Respiratory Systems</b></p>	<ul style="list-style-type: none"> <li>• Recognise that blood contains red blood cells, white blood cells and platelets.</li> <li>• State the function blood vessels</li> <li>• Recognise the parts of the heart as having, 4 chambers, valves, ventricles, atrium and septum</li> <li>• Show an understanding of oxygenated &amp; deoxygenated blood flow</li> <li>• State the composition of air</li> <li>• Differentiate breathing &amp; respiration, state the difference in inspired &amp; expired air</li> <li>• Identify the parts of the respiratory system               <ul style="list-style-type: none"> <li>- nose</li> <li>- mouth</li> <li>- windpipe</li> <li>- bronchi</li> <li>- air sacs</li> </ul> </li> </ul>
<p><b>Unit 3</b></p> <p><b>Digestive System</b></p>	<ul style="list-style-type: none"> <li>• Show an understanding of different types of diets.</li> <li>• State the dietary source of and explain the importance of:               <ul style="list-style-type: none"> <li>- carbohydrates</li> <li>- fats</li> <li>- proteins</li> </ul> </li> <li>• Recognize that food is broken down by digestive juice</li> <li>• Identify components of the digestive system and state their functions               <ul style="list-style-type: none"> <li>- mouth</li> <li>- gullet</li> <li>- stomach</li> <li>- small intestine</li> <li>- large intestine</li> <li>- anus</li> </ul> </li> <li>• Recognise the liver and pancreas as a components of the digestive system</li> </ul>

**Lesson Plan for Lower Block (Secondary 1 and 2)**

Lesson	About the Unit
<p><b>Unit 1</b></p> <p><b>Skeletal &amp; Muscular Systems</b></p>	<ul style="list-style-type: none"> <li>a) Identify the humerus, radius, ulna and scapula.</li> <li>b) Recognise movement in a ball-and-socket joint and the hinge joint &amp; splinting.</li> <li>c) Recognise the importance of the sternum and the xiphoid process in CPR.</li> <li>d) Identify biceps and triceps as muscles that work as antagonistic pairs.</li> <li>e) Show an understanding of how muscles and bones interact with each other to bring about movement using ligaments and tendons.</li> <li>f) Identify the differences and recognise the first aid treatment of:               <ul style="list-style-type: none"> <li>• Open and closed fractures</li> <li>• Muscle strains</li> </ul> </li> </ul>
<p><b>Unit 2</b></p> <p><b>Circulatory &amp; Respiratory Systems</b></p>	<ul style="list-style-type: none"> <li>a) Recognise that blood contains red blood cells, white blood cells, platelets and plasma.</li> <li>b) Show an understanding of the function of blood in oxygen transport and phagocytosis.</li> <li>c) Identify blood vessels and understand their structure &amp; function:               <ul style="list-style-type: none"> <li>• arteries</li> <li>• veins</li> <li>• capillaries</li> </ul> </li> <li>d) Show an understanding of oxygenated &amp; deoxygenated blood flow and the double circulation.</li> <li>e) Recognize the parts of the heart as having,               <ul style="list-style-type: none"> <li>• four chambers</li> <li>• valves &amp; septum</li> <li>• ventricles &amp; atrium</li> </ul> </li> <li>f) Show an understanding of the first aid treatment for bleeding and hypovolemic shock.</li> <li>g) Identify the parts (from figures and X-ray film) of the respiratory system               <ul style="list-style-type: none"> <li>• nose</li> <li>• mouth</li> <li>• trachea</li> <li>• bronchi</li> <li>• alveoli</li> </ul> </li> <li>h) Differentiate between breathing &amp; respiration; state the difference in inspired &amp; expired air; gaseous exchange at the alveoli and at the capillary bed.</li> <li>i) Show an understanding of the first aid treatment for respiratory emergencies such as choking, drowning, etc.</li> </ul>

**Unit 3**

**Digestive System**

- a) Show an understanding of different types of diets with an overview of diabetes.
- b) Classify food into carbohydrates, fats and proteins and explain their dietary importance.
- c) Recognize that food is broken down by enzymes.
- d) Identify components (from figures, colonoscopy, endoscopy, etc.) of the alimentary canal (including related organs) and recognise their functions
  - Oesophagus
  - Stomach
  - Small intestine
  - Large intestine
  - Pancreas
  - Liver

**Lesson Plan for Secondary Upper Block (Secondary 3 and 4)**

Lesson	About the Unit
<p><b>Unit 1</b></p> <p><b>Skeletal &amp; Muscular Systems</b></p>	<ul style="list-style-type: none"> <li>a) Identify the humerus, radius, ulna, scapula, femur, tibia, fibula and the pelvic girdle.</li> <li>b) Recognise movement in a ball-and-socket joint and the hinge joint &amp; splinting.</li> <li>c) Recognise the importance of the sternum and the xiphoid process in CPR.</li> <li>d) Identify biceps, triceps, hamstrings and quadriceps as muscles that work as antagonistic pairs.</li> <li>e) Show an understanding of how muscles and bones interact with each other to bring about movement using ligaments and tendons.</li> <li>f) Identify the differences and recognise the first aid treatment of:               <ul style="list-style-type: none"> <li>• Different type of fractures (Eg. open, closed, comminuted, etc.)</li> <li>• Muscle contusion, cramps, strains, etc.</li> <li>• Ankle sprains</li> </ul> </li> </ul>
<p><b>Unit 2</b></p> <p><b>Circulatory &amp; Respiratory Systems</b></p>	<ul style="list-style-type: none"> <li>a) Recognise that blood contains red blood cells, white blood cells, platelets and plasma.</li> <li>b) Show an understanding of the function of blood in oxygen transport, phagocytosis, antibody production, etc.</li> <li>c) Identify blood vessels and understand their structure &amp; function:               <ul style="list-style-type: none"> <li>• arteries</li> <li>• veins</li> <li>• capillaries</li> </ul> </li> <li>d) Show an understanding of oxygenated &amp; deoxygenated blood flow and the double circulation.</li> <li>e) Recognize the parts of the heart as having,               <ul style="list-style-type: none"> <li>• four chambers</li> <li>• valves</li> <li>• ventricles</li> <li>• atrium</li> <li>• septum</li> </ul> </li> <li>f) Recognise the cardiac cycle in terms of systole, diastole, electrocardiogram (ECG) trace and myogenic control.</li> <li>g) Show an understanding of the first aid treatment for bleeding and hypovolemic shock.</li> <li>h) Identify the parts (from figures and X-ray film) of the respiratory system               <ul style="list-style-type: none"> <li>• nose</li> <li>• mouth</li> <li>• trachea</li> <li>• bronchi</li> <li>• alveoli</li> </ul> </li> </ul>

	<p>i) Differentiate between breathing &amp; respiration; state the difference in inspired &amp; expired air; gaseous exchange at the alveoli and at the capillary bed.</p> <p>j) Show an understanding of the first aid treatment for respiratory emergencies such as choking, drowning, etc.</p>
<p><b>Unit 3</b> <b>Digestive System</b></p>	<p>a) Show an understanding of different types of diets with an overview of diabetes and hypercholesterolemia.</p> <p>b) Classify food into carbohydrates, fats, proteins, vitamins &amp; minerals and explain their dietary importance.</p> <p>c) Recognize that food is broken down by enzymes.</p> <p>d) Identify components (from figures, colonoscopy, endoscopy, etc.) of the alimentary canal (including related organs) and recognise their functions</p> <ul style="list-style-type: none"> <li>• Oesophagus</li> <li>• Stomach</li> <li>• Small intestine</li> <li>• Large intestine</li> <li>• Pancreas</li> <li>• Liver</li> </ul> <p>e) Role of the liver and liver diseases.</p>