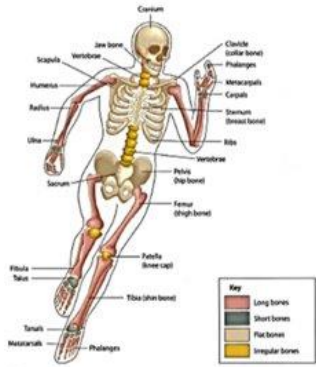

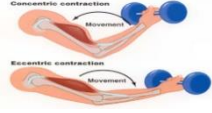


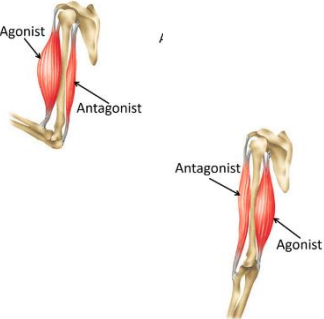





Year 8 Cycle 1 Sport and PE Knowledge Organiser

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 7 and 8	Week 9 and 10	Week 11 & 12
Major Bones	Major Bones	Major Muscles	Types of Muscle Contraction	Muscles working in pairs	Types of movement
 <p><b>Can you label the major bones?</b></p> <ul style="list-style-type: none"> <li>• Cranium</li> <li>• Vertebrae</li> <li>• Scapula</li> <li>• Humerus</li> <li>• Radius</li> <li>• Ulna</li> <li>• Pelvis</li> <li>• Femur</li> <li>• Tibia</li> <li>• Fibula</li> <li>• Patella</li> </ul>	<p><b>The functions of the Skeleton</b></p> <p><b>Remember the acronym:</b> Scary Skeletons Make Many People Petrified</p> <p><b>Support</b> Bones keep us upright and support muscles and organs.</p> <p><b>Shape</b> Skeleton gives us our height and build.</p> <p><b>Mineral Storage</b> Bones store minerals such as calcium and phosphorus.</p> <p><b>Movement</b> Muscles attach to and pull on bones to produce movement. Bones act as levers.</p> <p><b>Protection</b> Bones protect vital organs – e.g. Cranium protects brain, ribs protect heart and lungs.</p> <p><b>Production of red blood cells</b> Inner marrow of bones produces red and white blood cells. Red cells carry oxygen, white cells fight infections.</p>	 <p><b>Can you label the major Muscles?</b></p> <ul style="list-style-type: none"> <li>• latissimus dorsi</li> <li>• deltoid</li> <li>• pectorals</li> <li>• biceps</li> <li>• triceps</li> <li>• abdominals</li> <li>• hip flexors</li> <li>• gluteus maximus</li> <li>• hamstring</li> <li>• quadriceps group</li> <li>• gastrocnemius</li> <li>• tibialis anterior</li> </ul>	<p><b>Isotonic Contraction</b> Muscle changes shape and creates movement. There are 2 types; concentric &amp; eccentric</p>  <p><b>Concentric Contraction</b> Muscle contracts and shortens</p> <p><b>Eccentric Contraction</b> Muscle contracts and lengthens – only used in the downwards phase of a movement.</p>  <p><b>Isometric Contraction</b> Muscle contracts but the length of the muscle <u>does not</u> change. There is no movement e.g. holding a balance</p> 	<p><b>Antagonist &amp; Agonist</b></p> <p>Muscles are arranged in <u>antagonistic pairs</u>. One muscle contracts &amp; shortens (<b>Agonist</b>) and a partner muscle relaxes and lengthens (<b>Antagonist</b>) to create a movement.</p>  <p><b>Examples in the body</b></p> <ul style="list-style-type: none"> <li>• Biceps &amp; Triceps</li> <li>• Quadriceps &amp; Hamstrings</li> <li>• Hip flexors &amp; Gluteus Maximus</li> <li>• Tibialis Anterior &amp; Gastrocnemius</li> </ul>	<p><b>Flexion</b> Decreasing the angle at a joint (bending)</p> <p><b>Extension</b> Increasing the angle at a joint (straightening)</p>  <p><b>Abduction</b> Taking a limb away from the body (abduct)</p> <p><b>Adduction</b> Bringing a limb back towards the body (Add)</p>  <p><b>Rotation</b> Turning a limb along its axis (circular)</p>  <p><b>Plantar flexion</b> Pointing toes (P for Point)</p> <p><b>Dorsi flexion</b> Toes towards the nose</p> 