




‘An ambitious curriculum that meets the needs of all’  
**Medium Term Planning - Topic: Movement**

<b>Curriculum Intent</b>	
<b>Skills/National Curriculum Links</b>	<p>In addition to working further on objectives from KS2 and the Cells topic, pupils will be taught, following National Curriculum guidelines, the following this topic:</p> <ul style="list-style-type: none"> <li>the hierarchical organisation of multicellular organisms: from cells to tissues to organs to systems to organisms.</li> </ul> <p>The skeletal and muscular systems</p> <ul style="list-style-type: none"> <li>the structure and functions of the human skeleton, to include support, protection, movement and making blood cells</li> <li>biomechanics – the interaction between skeleton and muscles, including the measurement of force exerted by different muscles</li> <li>the function of muscles and examples of antagonistic muscles.</li> </ul>
<b>Spiritual, moral, social, and cultural development</b>	<p><b>SMSC:</b> Enable students to develop their self-knowledge of their own body.</p> <p><b>PSHE/British Values:</b> Having an understanding of our bodies is important with being able to make decisions to keep us healthy but also in medical research when things go wrong for exam muscular dystrophy and leukemia</p> <p><b>Skills Builder:</b> Listening (Receiving, retaining and processing info), Speaking (The oral transmission of info and ideas), Problem solving (Find a solution to a situation or challenge), Creativity (imagination and generation of new ideas), Staying positive (The ability to use tactics and strategies to overcome setbacks), aiming high (Set clear and tangible goals), Leadership and teamwork</p>
<b>Numeracy</b>	Heart rate and exercise
<b>Literacy</b>	<p><b>Vocabulary Tier 2:</b> transmit, hierarchy, internal, co-ordinate, protect, infection, reduce, rigid, connected, raise, torso,</p> <p><b>Vocabulary Tier 3:</b> Multi-cellular, tissue, organ, organ system, circulatory system, respiratory system, reproductive system, digestive system, muscular skeletal system, immune system, bone, skeleton, bone marrow, joints, cartilage, ligament, tendons, antagonistic muscle pair, tricep, biceps, contract, relax,</p> <p><b>Reading:</b> Following a written method and read risk assessments. Students may be directed to the textbook; this could be in lesson or at home on Kerboodle.</p> <p><b>Writing:</b> Describing and explaining scientific phenomenon, free response writing for describing precautions taken, use of word mat to promote sentence formation.</p> <p><b>Oracy:</b> inclusion of BEST resources which are research evidence on common misunderstandings in science, effective diagnostic questioning and formative assessment, constructivist approaches to building understanding, and effective sequencing of key concepts that promote metacognitive talk and dialogue.</p>
<b>Becoming future ready</b>	<p><b>Careers/Employability:</b></p> <ul style="list-style-type: none"> <li>Doctor</li> <li>Physiotherapist</li> <li>Pharmacist</li> </ul>
<b>Adaptation</b>	Throughout this topic, quality first teaching will provide differentiation:
<b>QFT/SEND Provision</b>	<p><b>By product:</b> Linear assessments and differentiated practical work.</p> <p><b>By resource:</b> Lessons are differentiated per class and students, worksheets are coloured blue if support and assessments are linear.</p> <p><b>By Intervention:</b> by providing different levels of supervision and support</p> <p><b>By Progressive Questioning:</b> exploring pupils’ understanding through interactive dialogue.</p> <p><b>By Grouping:</b> according to prior attainment, gender, social preference, preferred learning style.</p> <p><b>By Task:</b> Pupils should be involved in the identification of targets which are meaningful to them and in the selection of an appropriate task from the given range.</p> <p><b>By Offering Optional Activities:</b> In class or as homework, to extend learning.</p>

	This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work.	
<b>Implementation Curriculum Delivery</b>	To be able to:	
<b>Learning Outcomes (Core Knowledge)</b>	<p><i>Know</i></p> <ul style="list-style-type: none"> <li>- State what is meant by a tissue, an organ, and an organ system.</li> <li>- State the sequence of the hierarchy of organisation in a multicellular organism.</li> <li>- Use information provided to list the organs found in a given organ system, and state the function of that system.</li> </ul> <p><i>Apply</i></p> <ul style="list-style-type: none"> <li>- Define and state examples of tissues, organs, and organ systems.</li> <li>- Explain the hierarchy of organisation in a multi-cellular organism.</li> <li>- Interpret information provided to decide on the function of the individual organs and of the organ system.</li> </ul> <p><i>Extend</i></p> <ul style="list-style-type: none"> <li>- Explain in detail the hierarchy of organisation in a multi-cellular organism, using a range of examples.</li> <li>- Explain how the different tissues in an organ, and the different organs in an organ system function together.</li> <li>- Interpret information to explain the functions of several organ systems.</li> </ul>	
	<p><i>Know</i></p> <ul style="list-style-type: none"> <li>- Name the main parts in the skeleton.</li> <li>- List the functions of the muscular skeletal system.</li> </ul> <p><i>Apply</i></p> <ul style="list-style-type: none"> <li>- Describe the structure of the skeleton.</li> <li>- Describe the functions of the muscular skeletal system.</li> </ul> <p><i>Extend</i></p> <ul style="list-style-type: none"> <li>- Explain the relationship between the bones and joints in the skeleton.</li> <li>- Explain the link between structure and functions in the muscular skeletal system.</li> <li>- Predict the consequences of damage to a bone.</li> </ul>	
	<p><i>Know</i></p> <ul style="list-style-type: none"> <li>- State where joints are found in the body.</li> <li>- State how a muscle exerts force during movement.</li> <li>- Carry out an experiment to make simple observations.</li> </ul> <p><i>Apply</i></p> <ul style="list-style-type: none"> <li>- Describe the structure and function of joints.</li> <li>- Explain how to measure the force exerted by different muscles.</li> <li>- Carry out an experiment to make and record measurements of forces using the correct units.</li> </ul> <p><i>Extend</i></p> <ul style="list-style-type: none"> <li>- Explain how the parts of a joint allow it to function.</li> <li>- Explain the relationship between the forces required to move different masses.</li> <li>- Carry out an experiment to record measurements of forces in newtons, evaluating the accuracy and precision of the method chosen.</li> </ul>	
	<p><i>Know</i></p> <ul style="list-style-type: none"> <li>- State the function of major muscle groups.</li> <li>- State the definition of antagonistic muscles.</li> <li>- Carry out an experiment to study the muscle system in a chicken wing.</li> </ul> <p><i>Apply</i></p> <ul style="list-style-type: none"> <li>- Explain the function of different muscles within the body.</li> <li>- Explain how antagonistic muscles produce movement around a joint.</li> <li>- Interpret observations in a chicken wing to describe how the muscles work together to cause movement.</li> <li>- Use a diagram to predict the result of a muscle contraction or relaxation.</li> </ul> <p><i>Extend</i></p> <ul style="list-style-type: none"> <li>- Explain how the muscle groups interact with other tissues to cause movement.</li> <li>- Explain why it is necessary to have both muscles in an antagonistic pair to cause movement.</li> <li>- Interpret observations in a chicken wing to explain how the muscles work together to cause movement.</li> </ul>	
<b>Current learning to be developed in the future within:</b>	<p><b>Before:</b></p> <p>Once the topic or variation and interdependence is taught there are many</p>	<p><b>Future:</b></p>

	<p>example of adaptations of animals that allow one animal to escape predation and leads itself to discussion around muscles and the skeleton. Our second chosen topic is movement which is another unit which starts of in a concrete way with the skeletal system. This topics builds on KS2 muscular skeletal work and has physics links with the forces and levers.</p>	<p>At GCSE the need for energy to allow muscular contractions, beating of the heart and examples of muscle cells being studied. It is not until A level Biology in year 13 that the structure of muscles and the sliding filament theory of movement is studied.</p> 
<b>Assessment</b>	Refer to assessment maps for formative and summative assessment opportunities.	
<b>Impact</b>	Attainment and Progress – Refer to assessment results / data review documentation.	