

Medium Term Plan 2020/21 Subject: Science Term: A2 Topic from LTP: Human Body

Lessons per week: 2 Group(s): Yates

Students will show achievement by knowing the various parts of the human body, how they work and how to keep them healthy. There are opportunities to use different equipment whilst carrying out investigations which links to independence. The power point presentations will link to communication as they share their ideas. The whole unit ties directly into health and wellbeing. Opportunities to learn about careers include how scientists develop ideas which lead to new products or improve ways of working and will include many jobs in the health care sector.

	Topic	Learning Intentions	Tasks	Assessed IIs
W1	seasons	<ul style="list-style-type: none"> <li>To Understand why trees change colour and lose their leaves</li> <li>To be able to observe and record signs of autumn.</li> </ul> <p><b>Link steps all levels</b></p> <ul style="list-style-type: none"> <li>To observe changes across the four seasons.</li> <li>To observe and describe weather associated with the seasons and how day length varies</li> </ul>	<ul style="list-style-type: none"> <li>Seasons worksheet</li> <li>Identifying signs of autumn around the school.</li> </ul>	<ul style="list-style-type: none"> <li>Find evidence of autumn in the world around us.</li> <li>Identify the features and what happens in autumn</li> <li>Identify how we change in autumn i.e. wear warmer clothes.</li> <li>Identify how the trees change.</li> </ul>
W2/3	Cells and microscopes	<p><b>Link Steps all levels</b></p> <ul style="list-style-type: none"> <li>To know what all living things do MRS GREN</li> <li>To know that cells are the basic unit of living organisms</li> <li>To be able to label animal cells</li> <li>To be able to list the functions of parts of the cell</li> <li>To be able to observe and record cell structure using a microscope</li> </ul>	<ul style="list-style-type: none"> <li>Mrs Grens worksheet</li> <li>Label plant and animal cells</li> <li>Create a jelly animal cell model</li> <li>Label the parts and functions of a microscope</li> <li>Record cell structures using the bio-viewers</li> </ul>	<p><b>Student should be able to</b></p> <ul style="list-style-type: none"> <li>List what all living things do</li> <li>Explain that cells are the basic unit of living organisms</li> <li>Label simple plant and animal cells</li> <li>Explain the functions of these cells</li> <li>Label the parts of a microscope</li> <li>Observe and record cell structure using a microscope</li> </ul>

		<ul style="list-style-type: none"> <li>To know the organisation of multicellular organisms is: cells to tissue to organs to systems to organisms</li> </ul>	<ul style="list-style-type: none"> <li>observe and record cell structure using a microscope</li> </ul>	<ul style="list-style-type: none"> <li>Explain something of how scientific discoveries led to the microscope and subsequent developments in science that followed</li> <li>List the organisation of multicellular organisms is: cells to tissue to organs to systems to organisms</li> </ul>
W4	Skeleton and joints	<p><b>Link Steps all levels</b></p> <ul style="list-style-type: none"> <li>To know that humans have skeletons for support, protection and movement.</li> <li>To be able to identify a range of bones in the skeleton and their function</li> <li>To know what happens when we break our bones</li> <li>To be able to identify the different types of teeth in humans and their function</li> <li>To know ways to protect skeleton</li> <li>To know what joints are</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Post it notes on real skeleton see what bones they know already</li> <li>Label parts of a skeleton</li> <li>Create a model of a skeleton</li> <li>Identify parts of the body from X Rays</li> <li>Poster to show how to look after our skeleton</li> <li>Create a model of joints</li> <li>More able to use knowledge to compare different animal skeletons as a scientific journal report</li> </ul>	<p><b>All students should be able to</b></p> <ul style="list-style-type: none"> <li>Explain that humans have skeletons for support, protection and movement.</li> <li>Identify a range of bones in the skeleton and their function</li> <li>Show ways to protect their skeleton</li> </ul> <p><b>Some students will be able to</b></p> <ul style="list-style-type: none"> <li>List the nutrients skeletons need and where these nutrients come from</li> <li>Explain what happens when we are deficient in nutrients</li> <li>Use knowledge of the skeleton to compare out skeleton with that of other animals</li> </ul>
W5	Digestive system	<p><b>Link Steps all Levels</b></p> <ul style="list-style-type: none"> <li>To be able to describe the simple functions of the basic part of the digestive system</li> <li>To know how to keep the digestive system healthy</li> </ul>	<ul style="list-style-type: none"> <li>Investigations into the role of acids and bile in the digestive system and recording their observations</li> <li>Creating a model of the digestive system</li> <li>Evaluating this model</li> </ul>	<p><b>All students should</b></p> <ul style="list-style-type: none"> <li>Be able to describe the simple functions of the basic part of the digestive system</li> <li>Create a piece of science literacy about the journey of toast through the digestive system</li> <li>Write accurate observatons</li> <li>Explain how to keep the digestive system healthy</li> </ul>

W6	Circulatory System	<p><b>Link Steps Level 7 – 8</b></p> <ul style="list-style-type: none"> <li>• To recall the parts of the circulatory system</li> <li>• To be able to describe the functions of the lungs, heart, blood vessels and blood in the circulation system</li> <li>• To be able to measure our pulse and blood pressure</li> <li>• To know we breathe out carbon dioxide and breathe in oxygen</li> <li>• To know we get energy from respiration and breathing is part of respiration</li> <li>• To investigate what happened to breathing and our heart rate when we exercise</li> <li>• To know how to keep the lungs and heart healthy</li> </ul>	<ul style="list-style-type: none"> <li>• Labelling systems and producing models</li> <li>• Investigation using lime water to show that we breathe out carbon dioxide</li> <li>• Investigation into why our heart rate increases during exercise</li> <li>• Investigation into the increase in heart rate with exercise, taking blood pressure</li> <li>• Interactive TShirt and computer simulations</li> </ul>	<p><b>All students should be able to</b></p> <ul style="list-style-type: none"> <li>• Recall the function of the lung, heart and blood in the circulatory system</li> <li>• Measure pulse and blood pressure</li> <li>• Explain that we breathe out carbon dioxide and breathe in oxygen</li> <li>• Explain what respiration is</li> <li>• Investigate what happened to breathing and heart rate when we exercise and suggest why</li> <li>• Suggest ways to keep lungs and heart healthy</li> </ul> <p><b>Some students may be able to</b></p> <ul style="list-style-type: none"> <li>• Describe the effect of smoking and pollution on specific parts of the lungs</li> <li>• Independently plan the investigation into the effect on breathing and heart rate of exercise</li> <li>• Explain how respiration is needed to produce energy</li> <li>• Explain the difference in breathing and respiration</li> <li>• Write and explain the symbol equation for respiration</li> </ul>
W7	Keeping your body healthy	<p><b>Link Step all Levels</b></p> <ul style="list-style-type: none"> <li>• To know the importance of sleep</li> <li>• To know the importance of good mental health and ways to achieve this</li> <li>• To know the importance of hygiene on health</li> </ul>	<ul style="list-style-type: none"> <li>• Students will create a booklet outlining how to keep the body healthy</li> <li>• Students will cook simple healthy choices of food and identify ways this will help keep the body healthy</li> </ul>	<p><b>All students should</b></p> <ul style="list-style-type: none"> <li>• Know the importance of sleep for good health</li> <li>• Know the importance of good mental health and ways to achieve this</li> <li>• Know the importance of hygiene on health</li> </ul>

		<ul style="list-style-type: none"><li>• To know ways to keep the immune system healthy</li></ul>	<ul style="list-style-type: none"><li>• Students will identify exercises they like</li><li>• Kahoot</li></ul>	<ul style="list-style-type: none"><li>• List ways to keep the immune system healthy</li></ul>
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