

# BILSTON CHURCH OF ENGLAND PRIMARY



## MEDIUM TERM PLANNING

Subject	Topic/Key Question	Year Group	Term	Time Allocation
Science	Body Health	6	Summer 2	14 hours

Lesson Sequence	Time Allocation	Key Question/WALT	Teaching Activities	Resources
Lesson 1 What does being healthy mean?	2 hour	<p><b>WALT:</b> describe the impact of diet and exercise on human health.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>I can explore the link between diet, exercise and a healthy lifestyle.</li> <li>I can present my findings as a concept map or poster.</li> </ul>	<p><u><b>Working Scientifically Link.</b></u></p> <p><b>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</b></p> <p>Remind children that in Year 3 they learned about how their bodies need different types of food to stay alive. Explain to them that in this module they are going to investigate in more detail what humans can do to look after their bodies and be healthy.</p> <p>Give pairs of children the pictures from Healthy or not? (Resource sheet 1). Ask children to sort the pictures into two groups according to whether they think the activity or behaviour is healthy or unhealthy. Make sure that children consider the activity or behaviour, not the person's appearance.</p>	<p>Snap Science:</p> <p>Resource sheet 1</p> <p>Resource sheet 2</p> <p>Resource sheet 3</p> <p>Large sheets of flip chart paper, sheets of A3 paper, pens, glue, scissors, plain A4 paper, access to secondary sources,</p>

			<p>Ask each pair of children to compare their picture sorting with another pair.</p> <p>Ask: Do you disagree about any of the activities? Why? Does it make a difference if the person does something every day or just occasionally?</p> <p>Now ask them to sub-divide the healthy and unhealthy piles according to whether they are connected to diet or exercise.</p> <p>Explain to children that their challenge is to produce a concept map or poster to show others what they know or can find out about a healthy lifestyle. Use your observations of children's responses to the Explore part of the lesson to help you group children for either Challenge 1, 2 or 3. Challenges 1 and 2 ask children to create a concept map with differing levels of support and Challenge 3 involves the creation of a poster, offering children an open-ended opportunity to share what they already know beyond the vocabulary provided for Challenges 1 and 2. All groups work to develop their understanding of a healthy diet. Careful observation of all groups and the work they produce will allow you to identify any misconceptions children may have about diet, exercise and obesity.</p> <p>Children create a concept map to explain what they know about leading a healthy lifestyle. The children work independently to stick the word cards from Concept vocabulary (Resource sheet 2) onto a large sheet of paper in close proximity to each other, draw lines, add annotations and any new words they wish to show what they understand about being healthy, and the links between diet, exercise</p>	<p>including the internet and healthy education pamphlets and posters, for all levels of challenge.</p>
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			and other variables. As the children work on their concept map, offer them regular opportunities to select a rumour from Rumour mill (Resource sheet 3). They should search for evidence to support or refute the rumours and add information to their concept maps to demonstrate these as facts. For example: Childhood obesity is the parents' fault. The children's research should uncover that parents have a responsibility to buy food that provides a balanced diet and of suitable portion size but that blame is not overly helpful.	
Lesson 2 How is food divided into different groups?	2 hour	<p><b>WALT:</b> evaluate healthy eating guidance.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can use packaging information to sort foods into the different food groups.</li> <li>• I can use health guidelines to plan a healthy menu.</li> <li>• I can say how guidance about food content is helpful.</li> </ul>	<p><u><a href="#">Working Scientifically Link.</a></u></p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Show children the Eatwell plate (Resource sheet 1).</p> <p>Ask: What do you think this is for? Either as a class using the IWB, or individually or in pairs using a laptop, children play Sort the food types (Interactive 1). This is designed to be simple and a quick check of knowledge from Year 3.</p> <p>As children move each type of food to the various boxes on screen, ask them if they know which food group contains which food and why we need to eat foods from each group. You may need to remind them that the different food groups provide the nutrients that humans need to live and grow. The body gets energy from food and oxygen.</p> <p>Establish that children understand that a calorie is a unit of energy and that without sufficient calories our bodies would not function. The four main food groups are: proteins that help our bodies grow and repair themselves carbohydrates that give us energy vitamins and minerals that are good for</p>	<p>Snap Science:</p> <p>Resource sheet 1</p> <p>Interactive 1</p> <p>Range of food packaging either sealed or clean and empty, mini whiteboards, small paper plate (one per child).</p>

			<p>our skin, bones, teeth and blood fats that provide energy and help in building our bodies. This should be familiar to children from Year 3 when they learned about how the different types of food – fruit and vegetables; starchy foods including breads and pasta; meat, fish, eggs and beans; dairy products; and sugars – are sources of the different food groups.</p> <p>Explain to children that a great deal of money is spent helping people plan healthy diets. Leaflets and posters are produced, adverts are made and food packaging has large amounts of information. Their challenge today is to evaluate how useful this information is. Discuss the term ‘recommended daily allowance’.</p>	
<p>Lesson 3</p> <p>What makes a healthy snack or drink?</p>	<p>2 hour</p>	<p><b>WALT:</b> identify criteria to judge whether a drink or snack is healthy.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can use food packaging to find out what is in a food or drink product.</li> <li>• I can compare this with what I know about a balanced diet.</li> <li>• I can make decisions about</li> </ul>	<p><u><a href="#">Working Scientifically Link.</a></u></p> <p><b>Recording data using a table and reporting and presenting findings from enquires, including causal conclusions, relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</b></p> <p>Ask children to divide into pairs.</p> <p>Ask: What do you understand by the word ‘snack’? Give them 1 minute to discuss. Collect responses from the class and agree a definition that includes the idea of it being a food or drink that is consumed beyond their normal three meals a day. In order to collect data about the foods which the class snack on, give each child five sticky notes.</p> <p>Ask them to write down five typical snacks they eat or drink in a normal week, putting one on each sticky note. Create a</p>	<p>Snap Science:</p> <p>.Resource sheet 1</p> <p>Resource sheet 2</p> <p>Resource sheet 3</p> <p>Sticky notes (five per child), wide range of snack food packaging with nutritional</p>

		<p>which snacks I eat based on what I know.</p> <ul style="list-style-type: none"> <li>• I can interpret information I have collated in a table and link it to my own diet.</li> </ul>	<p>large collection space in the classroom for children to bring their notes together and classify them. They may wish to use hoops on the floor, a large whiteboard or sheets of flipchart paper. They should then collectively decide names for each group they have created. Note: with larger classes, you may wish to do this in smaller groups rather than as a whole class</p> <p>Explain to children that their challenge is to look in more detail at the food labels on the snack packaging and compare them to decide if they would make a healthy snack. Remind them of the work they did in Lesson 2 about the different food groups and what constitutes a balanced diet. In order to benchmark whether a snack is healthy or not, ask them to look carefully at the food packaging information, in particular the recommended daily allowance (RDA), which is usually expressed as a percentage. Discuss how, in the main, the lower the percentage, the more suitable the product is as a healthy snack.</p>	<p>value information accessible.</p>
<p>Lesson 4</p> <p>How have diets changed?</p>	<p>2 hour</p>	<p><b>WALT:</b> use secondary sources to investigate how scientific ideas were developed in the past.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can describe how diet can affect health.</li> <li>• I can talk about at least one way</li> </ul>	<p><u><b>Working Scientifically Link.</b></u></p> <p><b>Identifying scientific evidence that has been used to support or refute ideas or arguments.</b></p> <p>Hand out one old wives' tale card to each pair of children from the selection provided on Old wives' tales (Resource sheet 1). In pairs, ask children to spend time talking about their old wives' tale.</p> <p>Ask: What message is it giving us about that particular food? Is it positive or negative? Do you know if there is any truth in it? What evidence do you have to explain your answer? Explain to them that there have long been ideas that link</p>	<p>Snap Science:</p> <p>Resource sheet 1</p> <p>Resource sheet 2</p> <p>Resource sheet 3</p> <p>Video 1</p> <p>Access to secondary sources for all</p>

		<p>scientists gathered evidence to test scientific ideas.</p> <ul style="list-style-type: none"> <li>• I can use secondary sources to find information to support or refute my ideas.</li> <li>• I can present my findings to others in a presentation.</li> </ul>	<p>food to health. These are based on observed evidence and patterns identified. Most are based on a modicum of truth. For example, carrots really do give your eyes a boost because they contain beta-carotene, which the body is able to convert into vitamin A, an essential vitamin for healthy vision. Other vegetables such as sweet potato and apricots also contain high levels of beta-carotene.</p> <p>Explain to children that they are going to find out about times when we knew less about healthy eating and many people died because of diet-related illnesses.</p> <p>Explain to children that they are going to learn how scientists set about trying to work out what causes particular illnesses and how to avoid them in the first place or cure them if not. Show children the video about James Lind (Video 1). It includes a timeline and a brief outline of how he used the first ever clinical trial aboard a naval ship in the 1700s to identify the role citrus fruits had in aiding recovery from scurvy, thus almost eradicating it from the navy.</p> <p>Explain to children that they are going to research the problems caused by poor diet in the past. Challenge 1 looks in more detail at the work of James Lind, Challenge 2 uses drama to tell the story of the first clinical trial and Challenge 3 investigates other diet-related illnesses that have been largely eradicated from the UK because of the work of scientists.</p> <p>Useful starting points for pupils' research include:  <a href="http://www.bbc.co.uk/history/historic_figures/lind_james.shtml">http://www.bbc.co.uk/history/historic_figures/lind_james.shtml</a></p>	<p>levels of challenge.</p>
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Lesson 5 How is pulse rate affected by exercise?	2 hour	<p>WALT: investigate variables that affect pulse rate.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can measure my pulse rate accurately.</li> <li>• I can repeat measurements appropriately.</li> <li>• I can interpret data in a table, identifying patterns in resting pulse rate.</li> <li>• I can identify how exercise affects pulse rate.</li> <li>• I can calculate my own recovery rate after exercise.</li> </ul>	<p><u><a href="#">Working Scientifically Link.</a></u></p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate; reporting and presenting findings from enquires, including degree of trust in results.</p> <p>Show children Heartbeat and exercise (Slideshow 1) and ask them to discuss, in pairs, the statements made about a person’s heartbeat. They should decide which response they agree with and why.</p> <p>Ask: What is a pulse rate? Why is it important to take your pulse rate? Ask children to discuss in pairs where to take a pulse.</p> <p>Explain to children that the pulse is taken on an artery and not a vein. Ask children to talk to a partner for a moment about why they think that might be.</p> <p>Ask children if they know the names of any arteries. Remind them of what they have learned about the heart from Module 2, Body Pump. Show How can I take my pulse rate? (Video 1). Afterwards, clarify that the resting pulse rate for babies and newborns is usually 120–160 beats per minutes (bpm), for under-12s it is usually between 80–110 and for adults it is usually 60–100 bpm. It should be made clear to children that these are normal ranges but there are of course exceptions. A resting pulse rate of below 50 for an athlete is considered perfectly healthy. Ask children to find their own pulse. Some children will require help with this.</p>	<p>Snap Science:</p> <p>Resource sheet 1</p> <p>Resource sheet 2</p> <p>Resource sheet 3</p> <p>Resource sheet 4</p> <p>Slideshow 1</p> <p>Video 1</p> <p>Stopwatch (one per pair)</p>

			<p>By the end of this activity, each group will have recorded the resting pulse rate in bpm and identified patterns in the class relating to the norm for children their age. They then all explore what happens to their pulse when exercising and how long it takes for their pulse to return to the resting rate.</p>	
<p>Lesson 6</p> <p>What are the benefits of sport and exercise?</p>	<p>2 hour</p>	<p><b>WALT:</b> identify the impact exercise has on the way the body functions.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can explain the benefits of exercise on the human body.</li> <li>• I can recognise variables that improve participation levels in sport.</li> <li>• I can persuade others to try a new sport or exercise.</li> </ul>	<p><b><u>Working Scientifically:</u></b></p> <p><b>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results in oral and written forms such as displays and other presentations.</b></p> <p>Ask: What sports do you participate in regularly? Give each child some sticky notes and ask them to write each sport they regularly participate in on a separate sticky note. Gather these responses by arranging them as a graph where everyone can see it.</p> <p>Ask: What sport in our class has the most participants? Why do you think that might be? Are there any sports here that no one else has tried? Which is your favourite sport and why? What encouraged you to take up your favourite sport? Show the class Sporting quotes (Slideshow 1), which shows a series of quotes from the world of sports about motivation, engagement, fitness and determination.</p> <p>Ask children to pick one athlete and consider them.</p> <p>Ask: What motivates them to take part? Why do you think that is? What are the benefits of sport and exercise? How do you think people choose what sport to do?</p>	<p>Snap Science:</p> <p>Resource sheet 1</p> <p>Resource sheet 2</p> <p>Slideshow 1</p> <p>Access to secondary sources, including the internet, for all levels of challenge: sticky notes</p>



			<p>Explain to children that they are going to link what they already know about healthy lifestyle, food, exercise, pulse rate and the circulatory system (from Module 2, Body Pump) and write an advert for a new sport, encouraging other Year 6 children to take part. Children doing Challenge 1 have a writing frame to support them, those doing Challenge 2 use some prompts and children completing Challenge 3 select their own presentation method and research a new extreme sport to engage with.</p>	
<p>Lesson 7</p> <p>How do drugs affect the body over time?</p>	<p>2 hour</p>	<p><b>WALT:</b> identify and present the long-term effects on the body of drug use.</p> <p><b>WILF:</b></p> <ul style="list-style-type: none"> <li>• I can research the long-term effects of drug use.</li> <li>• I can research the short-term effects of drug use.</li> <li>• I can adapt information from secondary sources to help my presentation.</li> <li>• I can share my findings with others in a visual way.</li> </ul>	<p><u>Working Scientifically:</u></p> <p>Presenting findings including causal relationships in oral and written forms.</p> <p>Explain to children that in this, and following lessons, they are going to learn about the longer-term effects of drugs and other lifestyle choices on the body. Establish that children understand what lifestyle means, that is, a mixture of elements including diet, exercise, drug usage, smoking, plus other variables such as stress, rest, happiness, fresh air and sleep.</p> <p>Explain that they are going to start with a quiz to see what everyone already knows.</p> <p>Display Quick quiz – How do drugs affect the body? (Interactive 1) and ask children to record their answers independently. The answers are provided on screen after each question and on Quick quiz answers (Resource sheet 1).</p> <p>In pairs, ask children to discuss the question: How can medicines help us? Possible answers may be: to help us get better; cure us; stop us from getting more unwell.</p>	<p>Snap Science</p> <p>Resource sheet 1</p> <p>Resource sheet 2</p> <p>Interactive 1</p> <p>Existing drugs resources your school may already have, access to secondary sources for all levels of challenge.</p>

			<p>Ask: Can you think of any dangers of taking them over a long period of time? Answers may include: dependence and over-reliance on drugs rather than lifestyle or diet change; the drugs may not be so effective over a long period of time.</p> <p>Remind children of the three drugs referred to in the quiz – alcohol, caffeine and solvents – and explain to them that they are going to investigate these and their effects on the human body in more detail. Explain to children that they are going to work independently to present findings of research into the longer-term effects of drugs on the human body. Children can choose which topic to undertake, combining their preferred subject matter and presentation style.</p>	
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