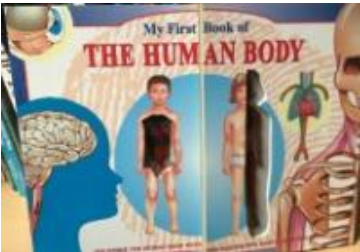
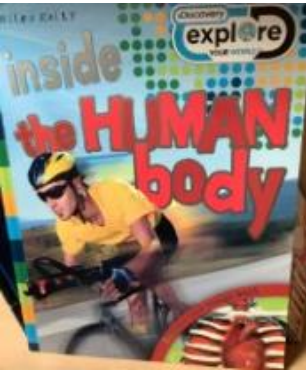

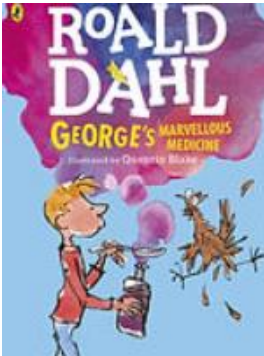



# BILSTON CHURCH OF ENGLAND PRIMARY



## MEDIUM TERM PLANNING

Subject	Topic/Key Question	Year Group	Term	Time Allocation
Science	Amazing Bodies	3	Spring 2	12 hours
 <p data-bbox="243 748 336 781">Library</p>	 <p data-bbox="632 878 724 911">Library</p>	 <p data-bbox="1024 870 1117 902">Library</p>	 <p data-bbox="1373 867 1524 899">Author box</p>	 <p data-bbox="1747 850 1898 883">Author box</p>
<p data-bbox="107 938 415 1036">End of lower Key stage 2 Outcomes</p>	<p data-bbox="495 938 1934 1036">Asking relevant questions and using different types of scientific enquiries to answer them. ?</p> <p data-bbox="495 1052 1602 1092">Setting up simple practical enquiries, comparative and fair tests.</p> <p data-bbox="495 1109 1955 1320">Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ? Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p data-bbox="495 1336 1976 1433">Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p data-bbox="495 1450 1976 1490">Reporting on findings from enquiries, including oral and written explanations, displays</p>			

	<p>or presentations of results and conclusions.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>
End of Unit Outcomes	<p>I can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p>I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>
Vocabulary	<p>stay alive, survive, food, balanced diet, nutrition, nutrients, fruit and vegetables, carbohydrates, protein, roughage, fibre, sugar, fat, dairy, skeleton, bones, protect, support, move, muscles, joints, ribs, heart, skull, brain, backbone, spine, spinal column, vertebrate, footprint, trail, vitamins, minerals, question, classify, investigation, survey, measure, pattern, evidence, draw conclusions</p>

Lesson Sequence	Time Allocation	Key Question/WALT	Teaching Activities	Resources
Lesson 1  What would you	2 hours	<p>WALT: identify the important things that need to be considered in order to survive.</p> <p>WILF:</p>	<p><b>Working Scientifically: Asking relevant questions.</b></p> <p>Key vocabulary: stay alive, survive, food, protection, shelter, exercise, movement</p> <p>Show children the deserted island in Interactive 1. Ask the children what they think has happened.</p>	<p>Snap Science Lesson 1</p> <p>Snap Science Interactive slides</p>

<p>need to survive?</p>		<p>I can ask relevant questions about what I need to survive. I can think of solutions to the questions. I can think of alternative solutions to the questions. I can identify what animals need to do to survive.</p>	<p>Children to discuss what has happened, what they can hear, what can they see? Ask What are the most important things you need to know? Discuss images on the slide – can children suggest questions that could be used to find out the information? Challenge 1: Ask children to think of ways to eat, drink, sleep and keep warm and dry if stranded Children work in pairs using prompt questions – they will record their ideas in drawings and by writing sentences Challenge 2: Ask children to think of ways to eat, drink, sleep and keep warm and dry if stranded, recording any new questions that arise Children work in pairs to address the questions and not down any additional questions that might arise recording their ideas by writing sentences on the back of the cards. Identify which problem they should deal with first. Challenge 3: Ask children to decide on four key questions that they would need to consider if stranded and find solutions to these questions. Display How will you survive? (Interactive 2 Children to share any other questions that they thought of that needed to be considered to stay alive. Ask the children to discuss in pairs which question they think is the most important to consider first and why. Give children this scenario Imagine that a kitten has been left on the streets as the owner no longer wanted it. What would the kitten would need in order to survive? Ask the children if this is the same for all animals.</p>	<p>Prompt question cards</p>
<p>Lesson 2</p> <p>Why do we need</p>	<p>2 hours</p>	<p>WALT: classify food and understand a balanced diet.</p> <p>WILF:</p>	<p><b>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes.</b></p> <p>Key vocabulary: food, nutrition, balanced diet, nutrients, carbohydrates, protein, fat, roughage (fibre), water, dairy, fruits, vegetables, meat Children to share ideas of what we can eat to survive if we were stranded</p>	<p>Snap Science Lesson 2 Local restaurant menus Picture cards</p>

<p>to eat to stay healthy?</p>		<p>I can sort food in different ways.  I know the major food groups that we need and can plan a balanced diet.  I can explain the effects of not having a balanced diet.</p>	<p>Display pictures of people eating various foods children to identify what they are eating.  Look at foods from other countries – children to talk to their partner about why they think people from other countries eat different food. Children discuss what foods they like/dislike and why.  Talk about need for a healthy diet –What are the five food groups?  Look at nutrients and why they are important.  Challenge 1  Children to sort pictures into food groups (in groups)  Challenge 2 Encourage children to plan a balanced diet</p> <p><b>Challenge 2:</b> Encourage children to plan to balanced diet  Display the colour balanced plate. Provide the children with menus from local restaurants. Children fill in their choices for three meals – breakfast, lunch and dinner – and a snack using What will you eat? (Resource sheet 2). They must include food from each food group over the course of a day.</p> <p><b>Challenge 3:</b> Ask children to research the nutrients the body needs and what types of food provide these  Children complete The nutrients our bodies require (Resource sheet 3) by adding appropriate items of food that provide each nutrient. Children carry out some research on the internet to find out what happens if one of the nutrients is missing from a diet.</p> <p>Children who completed challenge 3 to share what they have learnt about nutrients.</p> <p>Show slideshow 2 A balanced diet to consolidate learning</p>	<p>Resource sheets</p>
<p>Lesson 3  Why do we have a skeleton?</p>	<p>2 hours</p>	<p>WALT: identify the similarities and differences between skeletons and explore their functions.  WILF:  I can identify similarities and differences</p>	<p><b>Working Scientifically:</b> Using straightforward scientific evidence to answer questions, or to support their findings.  Show slide 1 of (Slideshow 1). Ask children to look at the skeletons closely and discuss what sort of animal they may belong to. They need to look carefully for clues.  Children share some ideas of what the animals may be.</p>	<p>Snap Science Lesson 4  Slideshow  Resource sheet 1  Laptops</p>

		<p>between different animals' skeletons.  I can explain the three functions of a skeleton.  I can describe how animals that do not have skeletons can move and protect themselves.</p>	<p>Children to look at all the skeletons and identify things that are the same about all of them. Write their ideas on the board for future discussion.</p> <p>Use the other slides in the interactive to explain to the children the role of the skeleton for support, protection and movement.</p> <p>In groups ask the children which bones they think are for protection?). What do they protect? What else helps them to move? What would happen if you did not have a skeleton?</p> <p>Group the children according to their answers to the explore activity: how well they noticed the features of the different skeletons and could compare them.</p> <p><b>Challenge 1:</b>  Children sort animals according to whether they have a skeleton or not  Using resource sheet 1 Skeleton or no skeleton children work with a partner to sort animals. Children may use internet to check their answers.</p> <p><b>Challenge 2:</b>  Children will investigate how animals without skeletons move and protect themselves  Using resource sheet 1 children to sort the animals according to whether they think they have a skeleton or not. Choose one of the animals that does not have a skeleton and to use the internet to research how it moves and protects itself.</p> <p><b>Challenge 3:</b>  Ask children to pose questions about skeletons for further investigation  Children write ten questions that they would like to answer about skeletons. This can be about the human skeleton in particular or skeletons and bones in general. They use the internet to try and answer as many of the questions as possible.  Display key words – (slideshow 1) children talk to their partner about what they have learnt today using the key words. Record this in books.</p>	
--	--	--	--	--

			Show the final slide. Ask the children to help you match the animals to the correct skeleton.	
Lesson 4  How do muscles help us move?	2 hours	<p>WALT: identify different muscles in our body and what they do.</p> <p>WILF: I can complete an exercise correctly following the instructions. I can identify where in my body the muscle is that is working. I can label and name the muscle on a diagram.</p>	<p><b>Working Scientifically: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</b></p> <p>Key vocabulary: bones, joints, muscles, tendons, pull</p> <p>Either show Video 1 or do a similar demonstration with a chicken leg to show how the muscles are attached to the bones and how these muscles help the chicken to move its leg. Ask the children to identify the key points from the video, using the prompt questions.</p> <p>Explain to the children that they are going to explore the muscles in their bodies further</p> <p>Challenge 1: Children will explore seven different muscles Set up seven stations using the Flex your muscles cards. Children to read the cards and carry out the exercise at each station. Blow a whistle to start and finish. Children to share with the other children in their group which muscle they felt working. Ask them to record where the working muscle was in their body on Where did you feel it? (Resource sheet 2). Point out that some exercises may work more than one muscle at a time.</p> <p>Challenge 2: Children will identify where in the body specific muscles are Children to use books or the internet to locate where each of the muscles exercised in Challenge 1 is more precisely. Ask them also to locate the following muscles: trapezius, pectoral, deltoid, latissimus dorsi and hamstrings.</p> <p>Challenge 3: Children will investigate exercises to work different muscles This group of children use the internet to investigate different exercises that work the same muscle as those explored in Challenge 1. These can be presented to the rest of the class in the plenary. Show Interactive 1 to remind the children about what they have learnt today. If children have completed Challenge 2 ask them to label the additional muscles that they located. If children have completed</p>	<p>Resources: Snap Science Lesson 6 Chicken leg, large space such as a hall, small weights such as bottles of water, bench, access to internet and relevant text books Resource sheet 1</p>

			<p>Challenge 3 ask them to share the different exercises that they found for each muscle.</p> <p>Children to show what they have learnt about muscles using writing and drawing.</p>	
<p>Lesson 5</p> <p>Do our bodies affect how well we do thing?</p>	2 hours	<p>WALT: plan a pattern-seeking investigation related to the human body.</p> <p>WILF:</p> <p>I can choose a question to investigate.</p> <p>I can decide what resources I would need.</p> <p>I can decide what to measure.</p> <p>I can explain how to carry out the investigation.</p>	<p><b>Working Scientifically:</b> Asking relevant questions and using different types of scientific enquiries to answer them.</p> <p><b>Setting up simple practical enquiries, comparative and fair test.</b></p> <p>Key vocabulary: taller, shorter, longer, faster, slower, compare, contrast</p> <p>Show What makes a good athlete? (Video 1).</p> <p>Children to compare the different animals they see on the video. Discuss how some move fast and others slow in their groups.</p> <p>Show Do athletes have certain characteristics? (Slideshow 1). For each slide, ask the children if they recognise any of the people. Explain that they are going to explore these ideas further through the course of an investigation that they are going to plan.</p> <p>Challenges are differentiated by the level of support given to identify a question to investigate.</p> <p><b>Challenge 1:</b></p> <p>Ask children to consider questions on how physical attributes affect physical ability</p> <p>Give the children four questions to consider. Can people with longer legs run faster? Can shorter people do forward rolls more quickly? Can people with long arms throw a ball further? Can people with small feet balance better? Children discuss how they could investigate these questions.</p> <p>Ask the children to choose which question they would like to investigate.</p> <p><b>Challenge 2:</b></p> <p>Children will turn ideas into questions to investigate</p> <p>Children look at the statements on I think...(Slideshow 2) and decide whether they agree or disagree with these ideas. The children turn these ideas into questions that can be investigated using the structure 'Can people with...?' Ask the children to choose which question they would like to investigate.</p>	<p>Snap Science Lesson 7</p> <p>Video clips</p> <p>Slideshow</p>

			<p><b>Challenge 3:</b></p> <p>Children will make and record observations and turn them into questions that can be investigated</p> <p>Provide the children with Do athletes have certain characteristics? (Slideshow 1). Ask the children to make general statements about the athletes and their chosen events, such as the weightlifters have very big arms. Ask the children to record four of these observations and then turn them into questions that can be investigated using the structure 'Can people with...?' Ask the children to choose which question they would like to investigate.</p> <p>At end of lesson ask each group to share the question that they have chosen to investigate. Ask them to read out their instructions explaining how to do the investigation. Ask the other children to think about whether these instructions are clear enough. Ask two children from another group to show how they will do the investigation. Would you all have done it the same way? Were the instructions clear?</p>	
<p>Lesson 6</p> <p>How good are we at different activities?</p>	2 hours	<p>WALT: draw conclusions based on data gathered in an investigation.</p> <p>WILF:</p> <p>I can describe a possible pattern between physical characteristics and athletic ability.</p> <p>I can explain what my results tell me.</p> <p>I can suggest how to improve the investigation.</p>	<p><b>Working Scientifically: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</b></p> <p>Key vocabulary :pattern, evidence, conclusion, survey</p> <p>Display a question that was not chosen by any of the groups in the previous lesson, such as can people with longer legs jump further? Ask the children to identify the measurements that are needed in this investigation, such as distance jumped. On the whiteboard, show how this can be recorded in a table.</p> <p>Allow the children time to take the measurements for their own investigation and record their results in a table. They then join another group and repeat their investigation using the members of this group and also complete the other groups' investigation.</p> <p>The challenges are differentiated by the complexity of data handling required so group children accordingly.</p> <p>Challenge 1:</p> <p>Children will look for a pattern in their results</p> <p>Ask the children to look at their table of results. Ask them to look for a pattern in the results. There may not be a clear pattern.</p>	<p>Snap Science Lesson 8</p> <p>Spreadsheet programme, equipment for measuring length such as rulers, tape</p> <p>measures, metre sticks, trundle wheel, balls or bean bags, stopwatches</p>



			<p>Challenge 2:  Children will enter the data from their table data into a spreadsheet and produce a scatter graph  Ask the children to enter the results into a spreadsheet to produce a scatter graph of the data from the investigation.</p> <p>Challenge 3:  Children will devise questions to produce data matching scatter graphs  Give the children Resource sheet 1, which shows possible scatter graphs produced by these types of investigations. Ask them to think of questions that they think will produce data matching each scatter graph. Encourage them to justify why they think it will match the scatter graph and to think of more than one question for each.  Discuss with the children if any of the groups had problems taking their measurements. Ask each group to share what they found out from their investigation.</p> <p>Explain to the children that they were carrying out a survey. As people are all different in so many ways, there is not just one characteristic that will affect their ability to do things such as running or jumping. It will be a combination of what your bones are like, what your muscles are like, how much you practise something and how fit you are, together with a number of other things.  Therefore we can only look for general patterns. There will also be people who are exceptions to this pattern.</p> <p>Discuss how we can be more sure about our results if we have obtained results from more people.</p>	
--	--	--	--	--