



SCIENCE YEAR 5-6 Cycle A – Unit 1

Healthy living

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RANGE

Interdependence of organisms

1. the names, positions, functions and relative sizes of the human's main organs
2. the need for a variety of foods and exercise for human good health
3. the effect on the human body of some drugs, e.g. alcohol, solvents, tobacco

KEY VOCABULARY

balanced diet
nutrition
fruit, vegetable, starch, meat,
fish, eggs, dairy, fat, sugar
salt (sodium)
carbohydrate
vitamins
smoking
alcohol
drugs
questionnaire
variables
line graph
bar chart
reliability
prediction

Developing thinking

(Plan-Develop-Reflect
integrated into activities)



LNF - Main Numeracy Strands covered*

Strand: *Developing numerical reasoning*

Elements:

*Identify processes and connections.
Represent and communicate.
Review.*

Strand: *Using data skills.*

Element: *Collect and record data, Present and
analyse data, Interpret results*

**Refer to LNF Numeracy framework for details of
specific skills within each element.*

LNF – Literacy (writing) opportunities

Element: Organising information and ideas
Writing accurately

Writing to inform, instruct and find out

Developing ICT



*School to identify and provide opportunities for
developing this skill within the scope of the unit.*

Curriculum Cymreig



*School to identify and provide opportunities
for developing this skill within the scope of the
unit.*

Personal and social education



*School to identify and provide opportunities
for developing this skill within the scope of the
unit.*

Science – Medium Term Planning (half term)

Year Group	5-6	Term	Cycle A – Unit 1	Unit Title	Healthy living
Range: <i>Interdependence of organisms</i> 1. the names, positions, functions and relative sizes of the human’s main organs 2. the need for a variety of foods and exercise for human good health 3. the effect on the human body of some drugs, e.g. alcohol, solvents and drugs					
Cross Curricular Links:					
Skills (Principal skills in bold italics)	Suggested activities	Resources and web links	Assessment Opportunities		
PLAN <i>Identify gaps in prior knowledge</i> Ask relevant questions	1. Big Question: What do you know about drugs, alcohol and tobacco? Introduce topic and elicit pupils’ ideas about the dangers of drugs, alcohol and solvents. What do pupils understand by the term ‘drug’? Consider using either: <ul style="list-style-type: none">• True-false game, odd-one-out activity or online interactive activities• Concept Cartoon and/or video clips.• Begin to create a graffiti board of pupils’ questions, identifying those which may be investigated and/or researched. Begin to create a KWL grid. Challenge pupils to say <i>how</i> they intend to find things out. List sources of information that are available.	http://resources.hwb.wales.gov.uk/VTC/2008-09/science/cripsat/human_body/eng/index.html http://www.echalk.co.uk/ http://www.bbc.co.uk/education/subjects/z2pfb9q http://www.bbc.co.uk/nature/	Use preferred diagnostic strategy/tool		
PLAN <i>Plan method/process to be used</i> <i>Ask relevant questions</i> DEVELOP Make comparisons in findings REFLECT Decide whether the method was successful	2. Big Question: Can you plan questions to ask an expert? Ask pupils to plan questions on the topic of drugs and solvents in readiness for a visit by the police liaison officer and/or school nurse. Introduce the skill – Identifying questions and plan the process/method to be used <ul style="list-style-type: none">• What questions do pupils have in relation to these topics? Consider using a placemat activity to allow pupils to share ideas.• Is it realistic to ask the expert any type of question? Refer to initial KWL grid or diagnostic activity to elicit what pupils would like to find out.• Gather exemplar questions from the class and list on board. Practise the skill – Identifying questions and plan the process/method to be used <ul style="list-style-type: none">• Pupils list questions in groups and prioritise the questions they have. Consider using diamond ranking as a tool to help pupils prioritise questions.• Allow pupils time to practise asking questions. Focus on oracy skills.• What makes a ‘good’ public speaker?• Model key features.	http://news.bbc.co.uk/cbbcnews/hi/find_out/guides/uk/drugs/newsid_1609000/1609624.stm	<i>Can pupils plan the method using science ideas? (Level 4)</i> Can pupils decide on success criteria? (Level 4) Can pupils justify success criteria? (Level 5)		

<p>PLAN <i>Plan the method/process to be used</i></p> <p>DEVELOP Identify patterns and trends in findings</p> <p>REFLECT Describe how they have learned</p>	<p>3. Big Question: Can you form a drugs/alcohol questionnaire for parents?</p> <p>Pupils listen and respond to the question-and-answer session with the police officer/school nurse.</p> <p>Review the new knowledge pupils have acquired. Can pupils devise a questionnaire in order to test the knowledge of adults and/or other pupils in school?</p> <p>Introduce the skill – Plan the process/method to use</p> <ul style="list-style-type: none"> Discuss using questionnaires as a means for gathering opinions and/or data. What questions do we need in our drugs/alcohol questionnaire? Do the questions need to be 'open' or 'closed'? Tell pupils we aim to plot responses as a bar chart – therefore, do we need closed question responses from the questionnaire in order to make a tally? Show examples of questionnaires – discuss features. What makes a 'good' questionnaire? <p>Practise the skill – Plan the process/method to use</p> <ul style="list-style-type: none"> Discuss using questionnaires as a means for gathering opinions and/or data. What questions do we need in our questionnaire? Pupils plan and create a drugs/alcohol questionnaire. Homework learning log task: ask adults/friends to complete questionnaire. <p>To write to question or find out Text type: Questionnaire</p>		<p><i>Can pupils plan the method using science ideas? (Level 4)</i></p> <p><i>Can pupils identify patterns and trends? (Level 4)</i></p>
<p>COMMUNICATE <i>Use tables and charts to communicate findings</i></p> <p>DEVELOP Form considered opinions and make informed decisions</p> <p>REFLECT Link learning to similar situations within and outside school.</p>	<p>4. Big Question: How do we present the data from our questionnaire?</p> <p>Recap and discuss the findings from the pupils.</p> <p>Practise the skill – Using bar charts to communicate findings</p> <ul style="list-style-type: none"> Review knowledge of graph types – explain nature of categoric and continuous data. Introduce/review the pupil graphing help sheet. Words plotted against numbers produces a bar chart. <p>Practise the skill – Using bar charts to communicate findings</p> <ul style="list-style-type: none"> Consider asking pupils to select 5 key questions from their questionnaire and plot correct responses as a bar chart. Less able pupils produce bar chart with support. More able pupils: construct their own bar chart, including scales. What patterns can pupils describe from their findings? Challenge pupils to annotate their bar graph with true and false statements about the data. Swap graphs and challenge other groups to identify which statements are true and which are false. Challenge pupils to plan and present a balanced argument based on findings. 	<p>http://www.echalk.co.uk/</p> <p>http://www.mrnussbaum.com/coo/graphing.htm</p> <p>http://www.amblesideprimary.co.uk/ambleweb/mentalmaths/grapher.html</p>	<p><i>Can pupils construct tables and bar charts? (Level 4)</i></p> <p><i>Can pupils identify patterns and trends? (Level 4)</i></p> <p>Can pupils draw conclusions and form considered opinions? (Level 4)</p> <p>Can pupils draw conclusions consistent with findings and consider others' views? (Level 5)</p>

<p>PLAN <i>Search for relevant information</i></p> <p>Ask relevant questions</p> <p>DEVELOP Form considered opinions and make informed decisions</p> <p>REFLECT Decide whether the method was successful</p>	<p>5. Big Question: What are the harmful effects of smoking?</p> <p>Review NGfL Smoking activity. What questions do pupils have about smoking and its harmful effects?</p> <p>NOTE: Sensitivity may need to be exercised with pupils who have smokers in their families.</p> <p>Introduce the skill – Search for and access relevant scientific information</p> <ul style="list-style-type: none"> Review any previous research work undertaken by pupils. Can they suggest any improvements? Show examples of various presentations. What features do they notice? Challenge pupils to research and record some of the dangers of smoking. How would they like to present their findings? Suggest poem or report. What will be their success criteria for their chosen genre of presentation? Tell pupils they should try to find information and ideas that are directly relevant to their chosen questions(s). <p>Practise the skill – Search for and access relevant scientific information</p> <ul style="list-style-type: none"> Allow pupils to research a variety of books and websites in order to gather information. Review method and identify key features of information sources. Discuss 'fact' and 'opinion' in science. 	<p>http://resources.hwb.wales.gov.uk/VTC/2008-09/science/cripsat/healthy_lifestyle/eng/index.html</p>	<p><i>Can pupils find and use relevant scientific information and ideas? (Level 5)</i></p> <p><i>Can pupils find and use a variety of information and ideas? (Level 4)</i></p>
<p>PLAN <i>Search for relevant information</i></p> <p>Ask relevant questions</p> <p>DEVELOP Form considered opinions and make informed decisions</p> <p>REFLECT Suggest how the method may be improved</p>	<p>6. Big Question: Diet and exercise – can you solve the argument?</p> <p>Introduce the question about pupils' lifestyles. Ask pupils to add additional statements regarding the features of healthy and unhealthy lifestyles. Discuss.</p> <p>Introduce the skill – Search for and access relevant scientific information. SEM unit 8, p.14</p> <ul style="list-style-type: none"> Discuss ideas using a placemat activity and/or concept map. Challenge pupils to select a question to investigate. Discuss fact and opinion with reference to health stories. Discuss the variety of sources of information that pupils access. <p>Practise the skill – Search for and access relevant scientific information</p> <ul style="list-style-type: none"> Pupils search for and access information to answer their chosen question(s). What opinions can pupils now form as a result of their research? Can pupils sort statements into fact and opinion? Pupils may elect to present their findings/opinions via an oral presentation. 	<p>http://parentsforhealth.org/</p> <p>http://www.greatgrubclub.com/?jklid=8a8ae4cc23bf38810123ebd78ff7e63&it=1&jadid=3765204675&js=1&jk=healthy%20eating%20kids&jsid=16395&jmt=1&qclid=CNWjiNvG0awCFVBTfAodYnOQNA</p> <p>http://www.healthykids.org.uk/</p> <p>http://kidshealth.org/teen/food_fit/ness/sports/eatnrun.html</p>	<p><i>Can pupils find and use relevant scientific information and ideas? (Level 5)</i></p> <p><i>Can pupils find and use a variety of information and ideas? (Level 4)</i></p>

<p>PLAN Find relevant information and ideas</p> <p>DEVELOP <i>Form considered opinion and make informed decisions</i></p> <p>REFLECT <i>Link learning to similar situations outside school</i></p>	<p>7. Big Question: Do all humans have the same diets?</p> <p>Introduce the big question and elicit pupils' ideas via a placemat activity or similar strategy.</p> <p>Introduce the skill – Form considered opinions and link learning. SEM unit 8, p.18</p> <ul style="list-style-type: none"> Give pupils a range of information and ideas about diets in humans and other animals. Allow pupils to research additional information if required, in particular why different food groups are useful to the body. <p>Practise the skill – Form considered opinions and link learning</p> <ul style="list-style-type: none"> Why do athletes require particular diets? What foods provide energy? Which foods help the body grow and repair? How much water should adults drink each day? <p>To write to inform Text type: non-chronological report</p>	<p>http://parentsforhealth.org/</p> <p>http://www.greatgrubclub.com/?ikId=8a8ae4cc23bf38810123ebd78fff7e63&it=1&jadid=3765204675&js=1&jk=healthy%20eating%20kids&jsid=16395&jmt=1&qclid=CNWjijNvG0awCFVBTfAodYnOQNA</p> <p>http://www.healthykids.org.uk/</p> <p>http://kidshealth.org/teen/food_fit/ness/sports/eatnrun.html</p>	<p><i>Can pupils draw conclusions and form considered opinions? (Level 4)</i></p> <p><i>Can pupils draw conclusions consistent with findings and consider others' views? (Level 5)</i></p> <p><i>Can pupils link their learning to similar situations? (Level 4)</i></p>
<p>COMMUNICATION Communicate using tables, bar and line graphs</p> <p>DEVELOP <i>Form considered opinion and make informed decisions</i></p> <p>REFLECT Suggest how the method could have been improved</p>	<p>8. Big Question: Do all humans have the same diets? ...cont.</p> <p>Continue previous task.</p> <p>Practise the skill – Form considered opinions and link learning</p> <ul style="list-style-type: none"> Challenge pupils to compare and contrast two menus – one everyday menu and one for an athlete. Can pupils annotate the food types with science ideas and explanations <p>To write to inform Text type: notes and annotation</p>		<p><i>Can pupils draw conclusions consistent with findings and consider others' views? (Level 5)</i></p> <p><i>Can pupils link their learning to similar situations? (Level 4)</i></p>
<p>REFLECT <i>Describe how they have learned, and identify the ways that worked the best.</i></p> <p>Link the learning to similar situations, within and outside school.</p>	<p>Revisit initial diagnostic assessment. Can pupils demonstrate understanding at end of topic and discuss new skills learned and/or practised?</p>	<p>Use preferred AfL strategy</p>	<p><i>Can pupils describe how they have learned and identify the ways that worked the best? (Level 4)</i></p> <p><i>Can pupils identify the thinking/learning strategy they used? (Level 5)</i></p>
<p>Evaluation</p>			