

Ourselves

Science Extension Activities



Science Extension Activities

The Science extension activities linked to the ‘Ourselves’ project provide the students with opportunities to use ICT to either research or to produce work.

The extension activities are not required to complete the project but provide other learning opportunities.

The activities will enable students to extend their knowledge about themselves.

The activities will provide the students with further investigative opportunities.

ICT Opportunities

Students use the Internet to find information to support specific areas of study.

Some students may be able to devise their own survey sheets to support their investigative work.

Older students could make simple information books for younger students.

Step	Title	Notes
1	Skeletons	Develop knowledge of bones and muscles.
2	Teeth	Develop knowledge of teeth.
3	Healthy Eating. What I Eat. What I Like to Eat. A Healthy Menu.	Develop knowledge of a healthy diet.

Resources	Vocabulary	Expectations
<p>Provided</p> <ul style="list-style-type: none"> • Skeleton worksheet • Tooth worksheet • What I Eat worksheet • What I Like to Eat worksheet • Healthy Diet Menu worksheet • <p>Suggested</p> <ul style="list-style-type: none"> • reference books providing information about food types and diets of animals • models of teeth or real teeth, small mirrors for examining teeth • healthy eating posters • collection of foods/food packets 	<p>muscles ribs spine skull</p> <p>contract relax vertebrate feed</p> <p>feeding growth activity vegetables</p> <p>meat fish sugars and starches</p> <p>fruit fats incisor molar</p> <p>canine diet root activity</p> <p>decay evidence conclusion</p> <p>contract relax balanced diet</p> <p>side effect fats sugars starches</p> <p>heart circulation heart beat pulse</p> <p>pulse rate muscle blood vessel lung</p>	<p>Most students will be able to</p> <ul style="list-style-type: none"> • explain the functions of the skeleton and muscles • explain how to look after teeth • describe an adequate diet <p>Some students will be able to</p> <ul style="list-style-type: none"> • suggest ways in which to investigate the effects of food on their bodies • identify foods that are the components of a healthy diet

The focus of the activity is for the students to know that humans have skeletons and muscles to support and protect their bodies and to help them move.

Objectives	Lesson Activities	Outcomes	Notes
Students develop their knowledge of the names of bones in their bodies	<ul style="list-style-type: none"> Ask the students to feel the major bones in their bodies. Name the bones. Use flashcards to label bones. <p>Younger Students</p> <ul style="list-style-type: none"> Play the game ‘Simon Says’ to see if the students can locate the major bones in their bodies. <p>Older Students</p> <ul style="list-style-type: none"> Use the Skeleton worksheet to label the bones of the body. 	<p>Students are able to name the major bones in their bodies</p> <p>Students are able to locate the major bones in their body.</p>	This activity could be extended. See QCA Science 4a Moving and Growing.
Students will be able to identify what happens to their bones and muscles when they move.	<ul style="list-style-type: none"> Ask the students if they know why they have muscles in their bodies. Let the students investigate what happens when they move their arm. What can they see and feel happening? Introduce and explain the meaning of the word contract. Can the students feel the way in which the muscles in their arm contract? 	<p>Students know that they have a skeleton with muscles attached.</p> <p>Students know that muscles have to contract to enable a bone to move.</p>	

Internet Link	Description
http://kidshealth.org/kid/index.jsp	Site for students about health.
http://kidshealth.org/kid/body/bones_noSW.html	Information for students about bones.
http://kidshealth.org/kid/body/muscles_noSW.html	Information for students about muscles.
http://kidshealth.org/kid/stay_healthy/fit/work_it_out.html	Information for students about why exercise is important.
http://www.standards.dfes.gov.uk/schemes2/science/sci4a/?view=get	QCA Unit 4A Moving and Growing Students learn what happens to the skeleton and muscles as they move.

The focus of the activity is for the students to investigate the importance of teeth.

Objectives	Lesson Activities	Outcomes	Notes
<p>Students learn the names of different types of teeth.</p> <p>Students develop an understanding of the function of different types of teeth.</p>	<ul style="list-style-type: none"> Ask the students about their teeth. Have they any gaps? Have they any milk teeth left? Let the students use a mirror to look at their teeth. Discuss the purpose of each set of different shaped teeth. <p>Older students</p> <ul style="list-style-type: none"> Tell the students the names of the different parts of a tooth. The students use the Tooth worksheet to label the parts of a tooth. Link these activities to a visit by a dental nurse or hygienist. 	<p>Students are able to explain why it is important to take care of teeth.</p>	<p>This activity could be extended. See QCA Science 3a Teeth</p> <p>Use a photocopier to enlarge the Tooth worksheet.</p>
<p>Students learn to explain how they look after their teeth and recognise why they need to do so.</p>	<ul style="list-style-type: none"> Ask the students how they look after their teeth. Discuss the importance of a visit to the dentist. Invite a dental hygienist to give a demonstration about cleaning teeth. Discuss the importance of cleaning teeth correctly to prevent tooth decay and gum disease. Discuss which foods the students think would harm their teeth. Present students with pictures of a range of food and drinks and ask them to suggest which ones would be particularly damaging. Discuss when it is most important to clean teeth. 	<p>Students are aware of the need to clean their teeth properly.</p> <p>Students know that certain foods are damaging to teeth.</p> <p>Students are able to name foods which damage teeth and those which are less damaging.</p>	<p>Organise a visit by a dental hygienist to support this activity.</p>
<p>Students learn to present information in a style appropriate to the audience.</p>	<ul style="list-style-type: none"> Discuss with the students what would be an appropriate method of presenting information to students younger than themselves. Give the students the task of creating 'teeth' fact sheets. The students research information for their fact sheets using information books or web sites. The students use a word processing program to produce their information sheets. 	<p>Students are able to use a style of presentation that is appropriate to the audience.</p> <p>Students are able to research effectively.</p> <p>Students are able to assemble text.</p>	<p>Students may be able to combine text and graphics.</p>

Internet Link	Description
http://kidshealth.org/kid/body/teeth_noSW.html	Information for students about teeth.
http://www.scholastic.com/magicschoolbus/games/colgate/print.htm	Information and teeth diagrams.
http://www.standards.dfes.gov.uk/schemes2/science/sci3a/?view=get	QCA Unit 3A Teeth and Eating develops students' knowledge of how teeth are related to diet and the importance of dental care.

The focus of the activity is to introduce the students to the basic elements of a healthy diet.

Objectives	Lesson Activities	Outcomes	Notes
Students learn that to stay healthy they need to eat a varied and healthy diet.	<ul style="list-style-type: none"> • Discuss with the students the foods that should be part of a healthy diet – fish, meat, cheese, and vegetables. • Discuss with the students the foods which provide sources of energy – sugar, bread, pasta and fats. • Explain to the students that some foods contain high levels of fats and sugar and are therefore not healthy foods. 	<p>Students are able to identify which foods should be part of a healthy diet.</p> <p>Students know that certain foods need to be part of a healthy diet but should not be eaten in large amounts.</p>	<p>The following is a widely accepted model of a balanced diet –</p> <p>bread, other cereals, potatoes 33%</p> <p>fruit and vegetables 33%</p> <p>milk and dairy foods 15%</p> <p>meat, fish and alternatives 12%</p> <p>foods containing fat and sugar 7%</p> <p>Leaflets about food can be obtained from supermarkets and health centres.</p>
Students learn to read for information.	<ul style="list-style-type: none"> • Give the students some food labels and ask them to identify those that are high in fat and sugar content. • Let the students look at a variety of leaflets and posters about food. • Discuss what information the leaflet or poster provides. • Older students decide upon the effectiveness of the poster design. 	Students know how to find information from food packaging labels.	

The purpose of this activity is for the students to look at their food preferences and to decide if they have a healthy diet.

Objectives	Lesson Activities	Outcomes	Notes
<p>Students collect information. Students interpret the information to make overall judgments.</p>	<ul style="list-style-type: none"> • Use the enlarged What I Like to Eat worksheet to show the students how to record their food preferences. • The students record whether they like or dislike the foods listed on the worksheet. • Use the completed worksheets to discuss with the group their food preferences. • Older students decide whether they think that they themselves, or the group as a whole, eat a healthy diet. 	<p>Students are able to explain food preferences.</p> <p>Students are able to make decisions based on collated information.</p>	<p>Enlarge the What I Like to Eat worksheet on the photocopier to use with the group.</p>

The purpose of this activity is for the students to collect and analyse information.

Objectives	Lesson Activities	Outcomes	Notes
<p>Students learn about the components of a healthy and varied diet.</p>	<ul style="list-style-type: none"> • Show the students the enlarged What I Eat worksheet. • Ask the students to record what they eat over the weekend. • The students return the completed worksheet to school. • Ask one student to share their weekend eating information. • Use the information to complete an enlarged copy of the worksheet. • Students then compare their own worksheet with the completed enlarged worksheet. <p>Let the students share their worksheet comparisons.</p>	<p>Students are able to research effectively.</p> <p>Students are able to make comparisons of collected information.</p>	<p>Send an explanatory note home with the What I Eat worksheet.</p> <p>Enlarge the What I Eat worksheet on the photocopier to use with the group.</p>

The purpose of this activity is for the students to use their knowledge of healthy foods to create a healthy menu.

Objectives	Lesson Activities	Outcomes	Notes
Students learn to present information in a style appropriate to the task.	<ul style="list-style-type: none"> • Discuss with the students what would be an appropriate method of presenting information on healthy eating to students younger than themselves. • Explain that the information needs to be presented in a clear, factual style. • Explain the importance of the visual effect of the presentation. • Give the students the task of creating a healthy diet fact sheet. • The students use a word processing program to produce their information sheet. • The students could also make a healthy eating menu using the Today's Healthy Menu worksheet. 	<p>Students are able to assemble facts to provide information.</p> <p>Students may be able to combine text and graphics</p>	<p>If possible show the students posters that are advertising a healthy diet.</p> <p>The Healthy Eating Science extension activities can be linked to QCA Design Technology Unit IC See link below.</p>

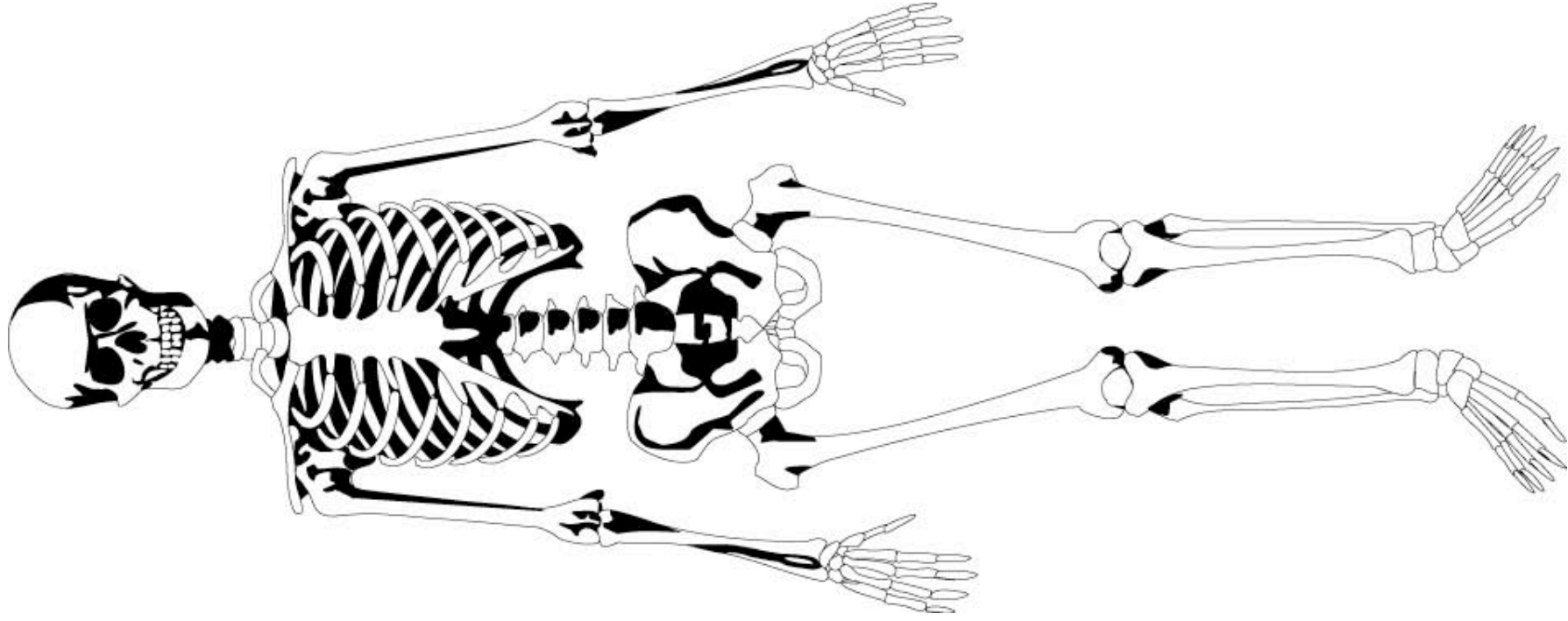
Internet Link	Description
http://www.standards.dfes.gov.uk/schemes2/science/sci3a/?view=get	QCA Unit 5A Keeping Healthy develops the students' knowledge of the importance of diet as part of keeping healthy.
http://www.standards.dfes.gov.uk/schemes2/designtech/det1c/?view=get	QCA Design Technology Unit 1C Eat More Fruit and Vegetables

Extension Activity Resources

Week 1	Resource
Skeleton	Worksheet for students to label the major bones of the body.
Tooth	Worksheet for students to label the main parts of a tooth.

Week 2	Resource
What I Like to Eat	Worksheet for the students to record their food preferences.
What I Eat	Worksheet for the students to record the food they eat over the weekend.
A Healthy Menu	Worksheet for the students to create a healthy menu.

Skeleton



Name _____ Date _____

What I Like to Eat

	Me	Group	Total
Fruit			
Vegetables			
Chips			
Pizza			
Fish			
Cheese			

Name _____

Date _____

What I Eat

On Saturday I ate

On Sunday I ate



A Healthy Menu