

# Boardworks Primary Science for Scotland

## Planet Earth

	Outcome		Boardworks presentation
	First Level	Second Level	
<b>Sustainability</b>	Through my experience of different materials which I use, I can talk about the need to conserve the Earth's resources at home and in school and what I can do to help. <b>SCN 101A</b>	I can assess the sustainability of my school environment and by helping to create and carry out an action plan to make improvements I can record how my responsible actions make a difference over time. <b>SCN 201A</b>	
		I can research a major environmental or sustainability issue of national or global importance and report on my findings. <b>SCN 202A</b>	
		I can give a presentation to demonstrate my understanding of the importance of the water cycle in nature. <b>SCN 203A</b>	
		I can talk about the importance of water supplies to people all over the world and can demonstrate ways to clean and conserve water. <b>SCN 204A</b>	
<b>Biodiversity</b>	I have observed and recorded some features of living things which allows me to place them in groups. Using this information I can sort living and non living things into groups giving reasons for my decisions. <b>SCN 102B</b>	From a range of sources, including my local environment, I can identify and classify examples of living things to help me appreciate their variety. <b>SCN 205B</b>	<i>Habitats: The key to sorting</i>
		I can research examples of extinctions in the past and recent times and use my understanding to develop arguments that could be used in a campaign to save an endangered species. <b>SCN 206B</b>	
		I can express an informed opinion on the role of zoos, wildlife parks and botanical gardens. <b>SCN 207B</b>	

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	I can help design experiments to find out what plants need in order to grow and develop. I can observe and record my findings and from what I have learned I can grow healthy plants in school. <b>SCN 103B</b>	From observations and a variety of resources I can present a visual representation explaining plant reproduction. <b>SCN 208B</b>	<i>Helping plants grow well Life cycles</i>
		Having carried out a series of activities and research, I can contribute to a display showing how plants have benefited society and will continue to improve our quality of life. <b>SCN 209B</b>	<i>Helping plants grow well: Plants for food</i>
<b>Climate and Earth science</b>		From a variety of resources I can produce a report to inform others on some of the causes of climate change and its possible impact on people's lives. <b>SCN 210C</b>	
	I can investigate melting, freezing and boiling, and relate my findings to my everyday experiences, including weather. <b>SCN 104D</b>	In my group I can take part in designing and carrying out activities to help me understand the consequences of melting and freezing on global sea levels. <b>SCN 211D</b>	<i>Changing state Solids, liquids and how they can be separated</i>
		I can make and test predictions about solids dissolving in water and use my practical problem-solving skills to investigate water samples from the environment. <b>SCN 212D</b>	<i>More about dissolving</i>
<b>Astronomy</b>	I have observed and recorded the position of the Sun and Moon at various times. I can make connections between the shape, position and size of shadows and the Sun at different times of the day. <b>SCN 105E</b>	I can use simple models to communicate my understanding of size, scale and relative motion in our solar system. I can observe or research a feature of space that I find fascinating and describe this to others. <b>SCN 213E</b>	<i>Earth, Sun and Moon</i>

## Energy in the Environment

	Outcome		Boardworks presentation
	First Level	Second Level	
Energy transfer	Using my local environment and other resources, I can create food chains to show that the Sun is the primary source of energy for all living things. <b>SCN 106F</b>	I can use my knowledge of food chains and webs to help plan, create and protect a wildlife area. <b>SCN 214F</b>	<i>Interdependence and Adaptation</i>
	I am aware of some of the different types of energy around me and can create a visual display to show its importance to my survival. <b>SCN 107F</b>	I can demonstrate and describe energy transfers in everyday situations and devices to develop my understanding that energy cannot be created or destroyed. <b>SCN 215F</b>	<i>Changing sounds: How are sounds made?</i> <i>Keeping warm: Hot and cold</i>
		Using modern technology, for example a data logger, to gather and present information, I can analyse and compare the thermal insulating properties of materials and choose the most appropriate material for a particular purpose. <b>SCN 216F</b>	<i>Keeping warm</i>
Energy sources	I can give examples of how fuels are used and discuss their importance in meeting the basic needs of humans in local and global communities. <b>SCN 108G</b>	I can discuss why it is important to me and to the future of the world that alternatives to fossil fuels are developed. I can identify examples of where these are used in Scotland today and present this information to others. <b>SCN 217G</b>	<i>Reversible and irreversible change: Red hot reaction</i>
		I can research ways to use energy resources more efficiently and draw up a proposal for improvement for my home, school or community. <b>SCN 218G</b>	
Energy in food		I can investigate the burning of different foods. Using my results I can conclude which foods release the most energy and can evaluate my method. <b>SCN 219H</b>	<i>Keeping healthy: Food facts</i> <i>Teeth and eating: A balanced diet.</i>

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<b>Electricity</b>		I can design and build a game or model which uses simple components in a series circuit, and explain in simple terms why the circuit works. <b>SCN 220J</b>	<i>Circuits and conductors</i> <i>Technological enquiry</i> <i>Changing circuits</i>
		I can design a circuit which can be used to sort materials into electrical conductors and insulators. I can identify where conductors and insulators are important in everyday applications. <b>SCN 221J</b>	<i>Circuits and conductors</i>

## Forces and Motion

<b>Forces and motion</b>	<b>Outcome</b>		<b>Boardworks presentation</b>
	<b>First Level</b>	<b>Second Level</b>	
	Using my results from investigations with toys or other objects, I can explore links between how far things move and the force applied. <b>SCN 109L</b>	By carrying out investigations into friction I can explain how it affects movement, and can use my understanding of friction to design or improve a product. <b>SCN 222L</b>	<i>Forces in action</i> <i>Friction</i>
		Using my understanding of forces, I can test ideas about safety design features in vehicles and use my results in an innovative safe design. <b>SCN 223L</b>	<i>Technological enquiry</i>
	In my group I have explored the forces exerted by magnets and using my knowledge can create and develop a game for others to enjoy. <b>SCN 110L</b>		<i>Magnets and springs</i>
		I have experienced the upward force of water on objects, and can investigate why ships float. <b>SCN 224L</b>	<i>Forces in action: Push and pull</i>

## Life and Cells

	Outcome		Boardworks presentation
	First Level	Second Level	
Keeping my body healthy	I have contributed to the development of a learning resource which shows the position and function of the major organs of the body and what I need to do to keep them healthy. I can evaluate our resource and say how it helps my learning. <b>SCN 111M</b>	Having researched common problems relating to bones, muscles, eyes and ears, I can make informed decisions to allow me to maintain a healthy, active lifestyle. <b>SCN 225M</b>	<i>Keeping healthy</i>
	I have carried out a range of activities to help me understand ways to keep my teeth healthy and to find out how healthy they are. <b>SCN 112M</b>	I can debate the risk and benefits of taking supplements in order to help me keep my body healthy. <b>SCN 226M</b>	<i>Teeth and eating</i>
Cells	–	–	–
Biotechnology		From a variety of activities I can show how microscopic living things can be used to produce and break down foods. <b>SCN 227P</b>	<i>Micro-organisms</i>
Reproduction		<i>Reproduction is being developed through the health and wellbeing outcomes and will be duplicated in this line of development.</i> <b>SCN 228Q</b>	<i>Life cycles: Circle of life</i>

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<b>Genetics</b>	–	–	–
<b>Using my senses</b>	Through a range of activities I have explored my senses and can discuss their reliability. <b>SCN 113S</b>	I have researched the structure and function of the eyes and ears, and have taken part in activities to discover the limitations of my senses. <b>SCN 229S</b>	<i>Changing sounds</i> <i>How we see things</i> <i>(partial coverage)</i>

## Communications

	<b>Outcome</b>		<b>Boardworks presentation</b>
	First Level	Second Level	
<b>Communications systems</b>	Using my knowledge of light, sound and my senses, I can demonstrate and evaluate simple methods of communication and comment on their limitations. <b>SCN 114T</b>		<i>Changing sounds</i> <i>How we see things</i>
<b>Light</b>		I have investigated the properties of light, and can show how these can be used in a creative way. <b>SCN 230U</b>	<i>Light and shadows</i>

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<b>Electromagnetic spectrum</b>	–	–	–
<b>Sound</b>		I can use my understanding of how to change the pitch of a sound to design and construct a simple musical instrument. Using my instrument I can demonstrate that sounds are produced by vibrations. <b>SCN 231W</b>	<i>Changing sounds</i>

## Materials

	<b>Outcome</b>		<b>Boardworks presentation</b>
	<b>First Level</b>	<b>Second Level</b>	
<b>Properties and uses</b>	I have explored the properties of different materials and can use my experience to choose appropriate materials to solve a practical challenge. <b>SCN 115X</b>	Having planned and carried out an investigation into a property of a material, I can evaluate the effectiveness of the material for its purpose. <b>SCN 232X</b>	<i>Characteristics of materials</i>
<b>Elements</b>	–	–	
<b>Chemical reactions</b>		I have developed my skills in questioning, observation and recording by taking part in activities which demonstrate simple chemical reactions safely using everyday 'kitchen chemicals'. <b>SCN 233Z</b>	<i>Reversible and irreversible changes</i>

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<b>Forensic Science</b>		<p>I can use my knowledge on separation techniques to solve problems or challenges in a scientific way. <b>SCN 234AA</b></p>	<p><i>Reversible and irreversible changes</i> <i>Solids, liquids and how they can be separated</i></p>
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## Topical Science

<b>Topical Science</b>	<b>Outcome</b>		<b>Boardworks presentation</b>
	<b>First Level</b>	<b>Second Level</b>	
<b>Topical Science</b>		<p>Through research and discussion I have an appreciation of the contribution that individuals are making to scientific discovery and invention and the impact this has made on society. <b>SCN 235BB</b></p>	
<b>Topical Science</b>	<p>I have contributed to a class display of current scientific news items to help me develop an awareness of topical science. <b>SCN 116BB</b></p>	<p>I can report and comment on a current scientific news item to develop my awareness of topical science. <b>SCN 236BB</b></p>	