

Activities at WeCreate referencing SESE/Science Curriculum

Activity	Strand + Strand Unit	Learning Objectives (with curriculum page number in brackets) "The child should be enabled to..	Skills
<p>Light as Energy Learning about LASERS</p> <p>Pupils will ;</p> <ul style="list-style-type: none"> ≡ examine how cutting tools have changed over time - from the Stone Age to the Digital Era ≡ investigate cutting different materials using the laser cutter ≡ experiment with the variables involved in laser cutting - powers and speeds etching and cutting ≡ create a design and produce it on a wooden ruler with the laser 	<p>Energy and Forces</p> <p>* Light</p> <p>Materials</p> <p>* Materials and Change</p>	<p>'learn that light is a form of energy' 'know that light travels from a source' (p 85)</p> <p>'investigate how mirrors are good reflectors of light' (p91),</p> <p>'examine the changes that take place in material when physical force is applied' (p 95)</p>	<p>Investigating and experimenting, analysing, exploring materials, planning design</p>
<p>Heat as Energy Printing in 3Dimensions</p> <p>Pupils will ;</p> <ul style="list-style-type: none"> ≡ explore how we make things and how methods of making things have changed over time ≡ experiment with different 2D and 3D shapes ≡ investigate 3D printing and how different materials change in the printing process ≡ create a design for a model and use the machines to print different designs ≡ look at ideas for solving practical problems using this technology 	<p>Energy and Forces</p> <p>* Heat</p> <p>Materials</p> <p>* Properties and Characteristics of Materials, * Materials and Change</p>	<p>'know that heat can be transferred', 'measure and record temperature using a thermometer' (p 86)</p> <p>'recognise that materials can be in solid, liquid or gas form', (p 88)</p> <p>'explore the effects of heating and cooling on a range of solids, liquids' (p 89)</p>	<p>Investigating and experimenting, analysing, planning design, making models, evaluating</p>

<p>Exploring Electricity Investigating Electronics</p> <p>Pupils will ;</p> <ul style="list-style-type: none"> ≡ explore life before electricity and how electricity has changed how we live ≡ investigate electronics and using sensors ≡ control a light using a sensor and experiment with different tasks and commands ≡ record and relate the ways in which different inputs result in different actions 	<p>Energy and Forces</p> <ul style="list-style-type: none"> * Magnetism and Electricity <p>Environmental Awareness and Care</p> <ul style="list-style-type: none"> * Science and the Environment 	<p>'learn about electrical energy', 'investigate current electricity by constructing simple circuits' (p86)</p> <p>'appreciate the need to conserve resources' (p90)</p>	<p>Observing, investigating and experimenting, recording and communicating</p>
<p>How We Make Things Digital Fabrication and the Environment</p> <p>Pupils will ;</p> <ul style="list-style-type: none"> ≡ explore the impact of factories on the environment ≡ investigate the ways that this technology will change traditional manufacturing ≡ experiment with recyclable materials ≡ learn how new ways of manufacturing can reduce waste of materials and energy ≡ explore ideas for their own eco designs 	<p>Environmental Awareness and Care</p> <ul style="list-style-type: none"> *Environmental Awareness *Science and the Environment 	<p>'become aware of the importance of the Earth's renewable and nonrenewable resources', 'foster an appreciation of the way in which people use the Earth's resources', 'come to appreciate the need to conserve resources' (p 90)</p> <p>'examine some ways that science and technology have contributed positively to the use of the Earth's resources', (p 91)</p>	<p>Exploring materials, evaluatin</p>
<p>Renewable Energy Experience Build a Windmill, a Waterwheel and a Solar Powered Device</p> <p>Pupils will ;</p> <ul style="list-style-type: none"> ≡ question how we use power and energy in our lives from the past to present day ≡ investigate the effect of natural forces such as wind and water currents ≡ observe the power of the sun and how sunlight can generate electrical energy ≡ explore different materials and how they contribute to the function of each model 	<p>Energy and Forces</p> <ul style="list-style-type: none"> *Light *Magnetism and Electricity and Forces <p>Materials</p> <ul style="list-style-type: none"> * Properties and Characteristics of Materials, Materials and Change 	<p>'learn that light is a form of energy' (p85),</p> <p>'learn about electrical energy' (p86),</p> <p>'identify and explore how objects and materials may be moved (p87)</p> <p>identify how materials are used (p88)</p>	<p>Exploring materials, planning design, making models</p>

<p>learn how energy is currently generated from the burning of fossil fuels and how this action contributes to global warming</p>	<p>Environmental Awareness and Care</p> <p>* Environmental Awareness</p>		
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Curriculum Integration

Each of the activities incorporates content objectives from the following subject areas:

Curriculum	Strand	Strand Unit
Mathematics	Space and Shape	2D Shapes, 3D Shapes, Symmetry, Lines and Angles
	Data	Recognising and Interpreting Data
History	Change and Continuity	Energy and Power, Factories, Continuity and Change in the Local Environment
	Eras of Change	The Industrial Revolution
Geography	Human Environments	Living and Working in the Local Area
	Natural Environments	Local Natural Environment
SPHE	Myself and the Wider World	Developing Citizenship
	Myself	Safety and Protection
English	Oral Language	Competence and confidence in using language
Visual Arts	Concepts – Looking and Responding	

