

|  |
| --- |
| **Theme Overview** |
| **Lead Subjects** | **Additional Subjects** | **English** |
| * Geography
* History
 | * Mathematics
* PSHE
* Computing
 | * Folk Tales
* Recount: Biography
 |
| **Visits** | **Visitors** | **Experiences** | **Events** |
|  |  |  |  |
| **Getting Started…** |
|  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Be Curious** |  | **Be Knowledgeable** |  | **Be Adventurous** |  | **Be Ambitious** |  | **Be Creative** |  | **Be Collaborative** |  | **Be Reflective** |  | **Be Positive** |
| * Engage in first-hand experiences
* Embrace experiences which are remarkable to the individual
* Invoke a sense of awe and wonder
* Develop an appreciation of and responsibility for the environment
* Engage in multi -sensory learning
* Experience contrasts (polluted/unspoilt, light/dark, urban/rural, loud/quiet)
 |  | * Secure strong Literacy/Numeracy Skills
* Develop subject specific language
* Manage, receive, record and apply information
* Nurture a thirst for knowledge
* Apply cross -curricular skills
* Develop Information processing skills
 |  | * Work within one's own comfort zone and outside it
* Work in the real world with first-hand experiences
* Work practically
* Work on a large scale
* Experience exhilaration, challenge and achievement
* Develop problem-solving skills
 |  | * Develop responsibility for one's own learning
* Link with experts
* See possibilities
* Strive for improvement
* Seek opportunities
* Develop an open outlook
* Develop a 'Growth Mindset'
* Develop relevant attributes of learning
 |  | * Choose how to use free time
* Developing hobbies and interests
* Apply skills to new situations
* Explore alternatives in problem solving situations
* Question 'What if...?' 'Why not....?', etc.
* Develop creative thinking skills
 |  | * Work with others in an interactive learning process
* Respect the opinions and differences of others
* Value one's own perceptions and those of others
* Challenging one's own perceptions and those of others
* Work as a team
* Develop empathy
* Develop social skills
 |  | * Make lifestyle choices in response to thoughts
* Identify and use one's aptitudes and interests as a vehicle for learning
* Move towards the understanding of a wide range of feelings (success/failure, apprehension, anticipation)
* Develop awareness of individual strengths and areas of development
* Develop reasoning skills
 |  | * Listen and respond to advice
* Value pupil voice
* Develop self-esteem
* Be listened to
* Manage one's own behaviour
* Develop own opinions
* Secure and articulate preferences
* Consider one's place in the world
* Foster intrinsic motivation
* Develop relevant attributes of learning
 |

|  |
| --- |
| **Geography** |
| **Key Learning** |
| **Location and Place Knowledge*** Name and locate counties and cities of the United Kingdom.
* A region of the United Kingdom.

**Mapping*** Use a wider range of maps (including digital), atlases and globes.
* Use maps and diagrams from a range of publications e.g. holiday brochures, leaflets, town plans.
* Use maps at more than one scale.
* Recognise that larger scale maps cover less area.
* Make and use simple route maps.
* Recognise patterns on maps and begin to explain what they show.
* Label maps with titles to show their purpose.
* Create maps of small areas with features in the correct place.
* Use plan views.
* Recognise some standard OS symbols.
* Link features on maps to photos and aerial views.
* Relate measurement on large scale maps to measurements outside.

**Fieldwork*** Use the eight points of a compass.
* Observe, measure and record the human and physical features in the local area using a range of methods including sketch maps, cameras and other digital devices.
* Make links between features observed in the environment to those on maps and aerial photos.

**Human and Physical Geography*** Describe and understand key aspects of physical geography and human geography, including: types of settlement and land use etc.

**Enquiry and Investigation*** Ask more searching questions including, ‘how?’ and ‘why? as well as, ‘where?’ and ‘what?’ when investigating places and processes.
 |

|  |
| --- |
| **Geography** |
| **Key Learning (contd.)** |
| **Communication** * Identify and describe geographical features, processes (changes), and patterns.
* Use geographical language relating to the physical and human processes.
* Communicate geographical information through a range of methods including sketch maps, plans, graphs and presentations.
* Express opinions and personal views about what they like and don’t like about specific geographical features and situations.

**Use of ICT/Technology*** Use the zoom facility on digital maps to locate places at different scales.
* Add a range of text and annotations to digital maps to explain features and places.
* Add photos to digital maps.
* Draw and follow routes on digital maps.
 |
| **Geography** |
| **Creative Learning Opportunities and Outcomes** |
| **Objectives*** The purpose of this unit is to enable pupils to investigate their local area using maps, aerial photos and satellite imagery.
* They should learn where they are in the world and describe a range of physical and human features of their locality.
* They should begin to realise that different types of maps e.g. Ordnance Survey, Google Maps, Bing Maps, Google Earth etc show different features in more/less detail. For example, their school will not always appear on Google Maps but will definitely feature on large scale Ordnance Survey maps such as Digimap for Schools ([here](http://digimapforschools.edina.ac.uk/)).

**Activities / key questions****Whole class*** Ask pupils to locate the UK on a world map then home in on the whole of the UK and ask in which country of the UK they live. Then at a progressively larger scale ask them to locate their county, town, village etc. Can they identify their neighbouring counties and towns? Can they then find their school on the map? This activity is particularly effective when using an online zoomable map e.g. Google/Bing maps or Google Earth.

**Paired/group*** On a large scale Ordnance Survey map pupils locate the school and where they live. (Use postcode search on a digital map). Answer questions such as: Can you see the road where you live? Can they follow their route to school? Are there any railway lines or parks or rivers? How is land used in the area? What other features can you see? Are the features natural (physical) or man-made? How can we tell what the distances on the map are?
* Look for standard Ordnance Survey symbols on the map and work out what they mean. Check with the Ordnance Survey website ([here](http://www.ordnancesurvey.co.uk/resources/maps-and-geographic-resources/map-symbols.html)).
* Use aerial photos or a satellite view (such as those in Google/Bing maps) to identify key features of their locality e.g. buildings, shops, parks houses, town centre etc.
* Use Google Earth to locate their school, neighbourhood, local features, different land uses etc. Switch between layers in Google earth e.g. roads/borders/photos to gain an appreciation of different information that can be represented on maps.
* What can looking at the maps tell pupils about the people that live there e.g. is there farm land? Is it in the middle of a city? How will this affect people’s lives in this area?
* Use historical maps to see what featured in their area fifty or one hundred years ago. How has land use changed?

**Fieldwork*** Walk through the neighbourhood and identify some of the physical and human features identified on the maps (including those linked with Ordnance Survey symbols) and aerial photos. Take photos and measurements. Use a compass. Example questions to investigate: What features are man-made (human)? Which are natural (physical)? Start to think about how humans affect the physical landscape. What is the land used for in their local area? How does this relate to people’s jobs and lives? What do the pupils think is special or different about their area? What don’t they like and why? What would they change if they could? How could they contribute to this change? Could link to a litter survey/recycling project. Compare their own locality with another e.g. town versus village; coast versus inland. Compare land use and features in each area.

**Paired / individual activities back in the classroom*** Annotate maps, label features.
* Add labels and their own photos to digital maps.
 |

|  |
| --- |
| **History** |
| **Key Learning** |
| **Chronology**Show their increasing knowledge and understanding of the past by:* making *some* links between and across periods, such as the differences between clothes, food, buildings or transport.
* identifying where some periods studied fit into a chronological framework by noting connections, trends and contrasts over time by placing selected maps into chronological order.

**Events, People and Changes**Be able to describe some of the main events, people and periods they have studied by:* understanding some significant aspects of history - expansion and changes in their local area.

**Communication*** Construct informed responses that involve thoughtful selection and organisation of relevant historical information.
* When doing this they should use specialist terms like settlement, Ordnance Survey map (and date, log book, marriage certificate, census) and vocabulary linked to chronology.
* Produce structured work that makes some connections, draws some contrasts, frame historically-valid questions involving thoughtful selection and organisation of relevant historical information using appropriate dates and terms.

**Enquiry, Interpretation and Using Sources*** Understand some of the methods of historical enquiry, and how evidence is used sources to make detailed observations, finding answers to questions about the past.
* Use some sources to start devising historically valid questions about change, cause, similarity and difference, and significance.
* Understand some of the methods of historical enquiry, how evidence is used to make historical claims.
* Use sources as a basis for research from which they will begin to use information as evidence to test hypotheses.
* Identify some of the different ways in which the past can be represented, and that different versions of the past such as an event may exist (artist’s pictures, museum displays, written sources).
* Understand how our knowledge of the past is constructed from a range of different sources and that different versions of past events may exist, giving some possible reasons for this.
 |

|  |
| --- |
| **History** |
| **Creative Learning Opportunities and Outcomes** |
| * Where do I live?
* Where is our local area and what is in it?
* Which are natural features and what has been built by people?
* What did our local area look like in the past at different times?
* What can we find out about our local area by examining a selection of three or four maps from:
* Gough c1360.
* Speed 1610.
* OS first edition c1845 or OS first edition 1890.
* OS maps 1910.
* OS maps (colour) 1950s.
* Modern Mario or Google maps.
* How can these maps be put into date order?
* What similarities, differences and developments can we find across the maps?
* Can we suggest possible reasons for this?
 | Using modern maps (paper and or digital) find their house and street, village, local town, county.Define 'local'. Using the maps, list the significant places, buildings, features within their designated local area.List the local features and places under natural/physical and man-made/human and explain reasons for their choices.Use historical maps, such as those on Old Maps of Lancashire ([here](http://www.lancashire.gov.uk/environment/oldmap/)) as a source for enquiry into their local region during different historical periods). List identified *basic details* (e.g. river/road) on each map as a whole class.In groups, pupils use one of the maps to compare to the modern digital map (Mario or Google). Compare side by side to identify *further detail*. Each group examines the modern local map with a designated local historical map. They list similarities on yellow post-it notes, and differences on green post-it notes. Possible reasons and suggestions as to why this might be can be put on pink post-it notes.Place the maps in chronological order and examine the yellow post-it notes.Are there any similarities between the maps? If so, what are they? Do these exist on the modern map? Why might these still exist on the modern map?What were the main differences between the maps? Are there any things that don’t exist on one map and have been developed on the later maps? What are they and why might they have been developed? Put these maps and research findings into chronological order and suggest possible reasons for developments, links and changes across periods. |

|  |
| --- |
| **History** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| * What other sources can we use to find out about our school in the past?
 | Make a display from the maps and detail the links and differences across them. Ensure that the dates are in the correct order. Use the internet to source more images from the local area to enrich the pupils work and timeline of historical maps.Using the OS map of 1845 or 1890 (on Mario maps historical layer ([here](http://mario.lancashire.gov.uk/agsmario/default.aspx))) look at the local area and locate a residential building that exists on both maps. Examine the school log book for a similar date to the map, and see if there are any children that lived at that building who attended the school. Find out about them, and how they got to school, what life would have been like for them. Use the records office or census information to search for relevant births, marriages or deaths to see what happened to the family. Is there a new school family that lives there now and how do they get to school? What are the differences (school and home life) between the two families then and now?  |

|  |
| --- |
| **Science** |
| **Key Learning** |
| **Electricity*** Identify common appliances that run on electricity.
* Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
* Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
* Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
* Recognise some common conductors and insulators, and associate metals with being good conductors.
* Know that electricity can be dangerous.
* Recognise electricity sources can be mains or battery.
* Know that batteries ‘push’ electricity round a circuit and can make bulbs, buzzers and motors work.
* Recognise that faults in circuits can be found by methodically testing connections.
* Know that drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until upper KS2).

***Notes and Guidance (Non-statutory)****Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; these will be introduced in Year Six.* ***Note:*** *Pupils might use the terms current and voltage, but these should not be introduced or defined formally at this stage. Pupils should be taught about precautions for working safely with electricity.* **Pupils Might Work Scientifically*** By observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.
 |

|  |
| --- |
| **Science** |
| **Creative Learning Opportunities and Outcomes** |
| **Thinking activity / Launch*** What if we had no electricity? Can the children come up with ten things they would miss in a power cut? Encourage the children to rank their choices from ‘most missed to least missed’. To provide an opportunity for more discussion and justification, encourage them to rank their ideas in a diamond shape rather than a straight line. Reword the question: What if we never had electricity again? How would they rank their choices now? Would they like to replace some of their ideas with new ones? Although this is a group activity, the children can summarise their reasons for the different rankings individually.

**Questioning / Thinking*** What do we use electricity for? Provide the children with a list of the letters A to Z. Can they make an A to Z list of things that use electricity (make it more difficult by specifying a particular location e.g. kitchen, school, etc)? How many of the letters can they find appropriate words for? Alternatively use short videos from Teachers Media - ([here](http://www.teachersmedia.co.uk/videos/how-electricity-is-used)) which shows electricity being used in different ways in a theatre or ([here](http://www.teachersmedia.co.uk/videos/things-that-use-electricity)) which shows electricity being used in different ways in the home. Whilst watching the video can the children collect a list of all the different uses of electricity? The A-Z writing frame can be used for them to collect their ideas on. Children could work in groups of four, two watching the theatre video and two watching the home video. They could then share their ideas and answer the question ‘Why is electricity so important?’ They could present their findings as a poster or an illustrated list.

**Sort / Group / Classify / Compare*** Sort the A to Z list into things which use electricity for heating or cooling, for movement, for light, for sound. Do any objects use electricity for more than one function? Perhaps more able children could be encouraged to come up with their own criteria for sorting – do they arrive at the different uses for electricity independently?
* If you could only have six items in your home that use electricity, what six items would you choose and why. Rank the items in a triangle. Which item(s) do you think is (are) the most important and why?

**Research*** Search ‘Electrical safety KS2’ in an internet search engine to locate various organisations which provide useful resources to support this unit. Why do we need to be careful with electricity? Children could work in groups of six. Each pair could be given a different resource to explore for a set amount of time (each resource could be differentiated for the different pairs). Resources could include posters, a diagram identifying common dangers in the home, a video about electrical safety, books/text. Once the set amount of time has lapsed, the children can return to their ‘home’ group of six and share ideas to make a group leaflet. These could be distributed to other children in the school or perhaps even from another school.

**Modelling*** Visit the Teachers Media website ([here](http://www.teachersmedia.co.uk/videos/great-primary-lesson-ideas-electricity-activities)) for a video about modelling electrical circuits with lower KS2 children. The activities on Electric Rope and Pass the Squeeze, Floating Questions and Ball Buzzers are particularly useful for children in this age phase. The question ‘What do you think is inside the ball buzzer?’ is a great way to get children to use their creative thinking and their prior knowledge to begin to explain circuits and identify any misconceptions.
 |
|  **Science and technology in the world around us*** This unit provides an excellent opportunity for the children to explore ways of saving electricity around the home and school. They could design posters and find out why using less electricity helps the planet. Search ‘Energy Saving’ on the internet to find numerous organisations and companies providing information and resources.
* Other tasks could include:
* Investigate how a torch works. Does it matter which way around the batteries go? Try this with other devices that use batteries. Get the children to explain to younger children how to put batteries in devices properly. They could also tell other children about safety with mains electricity.
* Mains electricity v battery electricity – what things use mains electricity and what use batteries? What are the dangers of mains electricity? Design a poster to warn of the dangers of mains electricity. Challenge: Can the children say whether the device uses electricity to make heat, sound, movement or light?
* What if we had no electricity for a day, a week or a month? What would you miss and why? What things could you use, what would you not be able to use?
* Interview a real electrician to find out how they stay safe in their job.

**The junior apprentice electrician*** View the following Teachers Media video([here](http://www.teachersmedia.co.uk/series/lesson-planning-pack-electricity)) whichfeatures videos about teaching electricity in lower juniors, including:
* Things that use electricity (in the home).
* How electricity is used (in the theatre) - Which special effects could you make with your electricity components in the classroom?
* The Apprentice Electrician - complete timed tasks and solve a problem to gain their Junior Electrician’s Apprentice Certificate.
* To view the Apprentice Electrician video only, use this link ([here](http://www.teachersmedia.co.uk/videos/the-apprentice-electrician)). In this lesson the teacher describes how she uses the context of applying for an electrician apprentice certificate as a stimulus to assessing the children’s understanding from a lower junior electricity unit. Ideas from this lesson along with other challenges have been provided below. These can be adapted to suit the class, time available and the resources.

**Real outcome*** You are going to train as a Junior Apprentice Electrician but will be using bulbs and batteries rather than mains electricity. You have a series of challenges to complete. At the end of each challenge you will need to record what you have found out and hand this in to the ‘Apprentice Trainer’ (i.e. the teacher). If you have passed the task you will be given a stamp or sticker on your collector card. An award ceremony will take place at the end of the project where certificates will be presented. As part of the award ceremony you will need to reproduce one of the challenges as a table top exhibit to inform your audience about what you have found out and learned. They will visit your exhibition stand at the end of the ceremony. (You could replace this with the children designing/scripting/writing an assembly about what they have learned).
* The challenges are to be carried out over a few lessons to immerse the children in the learning.
* Each lesson you will be given a challenge to complete. Each challenge completed will be awarded a point towards achieving the Electrician’s Apprentice Certificate/Award. X points are required to achieve the certificate at the forthcoming award ceremony. Extra points can be gained by recording the circuits used to complete the tasks.
* Each group of four children is given a mini toolbox between them containing all the equipment for their problem solving tasks. It is their responsibility to keep their toolboxes tidy and check that all equipment is working at the end of each session. Extra points are awarded for maintaining a quality toolkit.
* The suggested challenges below will each require different amounts of time (they may not all need a whole lesson). After each task the children can draw their circuits in their ‘Junior Apprentice Electrician's Notepad’.
 |
| **Science** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| **Science challenge 1: Explore / Observe / First hand experiences*** Can you light the bulb? - Use the equipment to light the bulb (begin this activity being completely open ended - if children are struggling give them a photograph of the equipment they are to use e.g. two wires, bulb, bulb holder, battery/cell, battery holder, etc). Draw and label their circuit. What happens if you use two batteries?
* In pairs (or groups of four), each person makes a circuit. Whilst you are not looking someone else changes the circuit so that it doesn’t work. How quickly can the fault be found? Can you make the circuit work again? Try to think of a different fault each time. Be prepared to tell others how you stopped a circuit working.
* Extra challenge: Set a limit - What are the fewest items you need to make the bulb light? Can you light the bulb with one battery, one bulb and only one wire? How did you do it? (NB If children connect just a wire from one end of a battery to another without any other components they will create a short circuit. This will cause the wire to warm up creating a hazard. Warn the children against this).

**Science Challenge 2: Research*** What are the dangers of using electricity? Design a poster warning about the dangers of electricity. Ensure you include something about the dangers of water and electricity. Children could work in small groups of four or six. Each child or pair could be given a different resource to research for a maximum length of time. They would then return to their home group and share their findings to use to design their own poster. Different resources could include: safety video, variety of safety posters, ‘spot the dangers’ picture, reference books, etc.

**Science Challenge 3: Explore / Observe / First hand experiences*** What is inside a light bulb? Draw and label a large picture of a light bulb. How big can you draw it? Let the children use magnifying glasses and hand held microscopes to explore the details.

**Science Challenge 4: Explore / Observe / First hand experiences*** Can you make a motor turn? (Attach something to a motor so you can see it spin). How did you make the motor turn? Can you make a circuit with a motor and a bulb? Try the bulb and the motor in different places in the circuit. Does it make a difference?
* Challenge: Can you make a motor turn a different way? (Top tip: Attach the wires to the motor the opposite way or, even easier, turn the battery around). This helps children to learn that a battery/cell has two different ends.
* Challenge: Does turning the battery around affect a light bulb? What happens if you use two cells?

**Science Challenge 5: Does it work?** * Make two circuits, one that works and one that doesn’t. Photograph the two circuits. Join your photographs with those of other children to make a quiz game. Can other children say why your circuit does not work? At the end, make your collection of photographs into a large poster with a label to say something about each one.
 |
| **Science** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| **Science Challenge 6: Explore / Observe / First hand experiences*** Can you make a noise using the buzzer and other equipment in your tool kit? What happens if you use two cells?
* Can you turn the noise on and off? Imagine this is a doorbell buzzer - use two paperclips to make a switch for your doorbell.
* Challenge: Does it matter if you put a bulb before a switch in a circuit or after a switch? Test both and see if they are different in any way.
* Challenge: Can you make a switch out of anything else?
* Challenge: Will plastic covered paper clips make good switches?

**Science Challenge 7: Explore / Observe / First hand experiences*** Using masking tape, a 9-volt battery, buzzer, two lollipop sticks, aluminium foil, water, saltwater.
* A saltwater tester uses electricity to tell you if water is salty or not. Using these resources make a saltwater tester so that the buzzer will buzz to indicate the water is salty.
* Understanding the science for teachers: The buzzer buzzes in saltwater because the saltwater acts like an invisible wire to connect the circuit. That's because when you add salt to water, the salt molecules dissolve in the water and break into smaller parts called ions. The ions carry electricity through the water. Fresh water doesn't have these ions. So it's harder for the electricity to move through the water. It doesn't complete the circuit, and the buzzer doesn't buzz. What else besides saltwater will conduct electricity and make your buzzer buzz? Try sugar water, vinegar, or whatever else you can think of. *This can be found on the PBS Kids website* ([here](http://pbskids.org/zoom/activities/sci/saltwatertester.html))*.*

**Science challenge 8: Sort / Group / Compare / Classify*** Two minute challenge - Make a circuit with a bulb and a simple paperclip switch. The paperclip allows the electricity to travel through it. What else can you find in the classroom that allows the electricity to flow through it?
* Classify your objects as insulators or conductors (suggested conductors: cutlery, aluminium foil, ends of plastic paper clips, coins, pencil lead, etc).
* Extension challenge: Make a wire using aluminium foil and use it in your circuit. Does the light still work with short and longer pieces of foil? What is the longest piece of aluminium foil ‘wire’ you can use and still make the light work?

**Science Challenge 9: Set a limit (Assessment)*** What can you do in two minutes?
* You have…
* Two minutes to make a circuit with a bulb.
* Two minutes to make a circuit with a buzzer.
* Two minutes to make a circuit with two bulbs.
* Six minutes to make a circuit with a switch.
* After each mini challenge allow the children time to draw each circuit and write a couple of sentences to explain what happens each time. The time element is to add a bit of excitement and fun to the task – give extra time after each challenge for some children to support others if required.
 |

|  |
| --- |
| **Science** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| **Science Challenge 10: Create/ invent / design*** (This is an activity which could be added as an extension activity).
* You have shown you can design a circuit with a switch now see how many different switch designs can you come up with? Three points awarded for each different design. (Children could explore different switches obtained from an educational supplier – e.g. tilt switch, click on/click off switch, push on and hold/release to stop, simple slide switch, pressure pad, etc.) Provide a selection of resources: wires, battery, bulb, bulb holder, motor, buzzer, aluminium foil, paperclips, split pin paper fasteners, spring type wooden clothes peg, marbles, film canisters or similar small containers/boxes, insulation tape (a few ‘red herring’ resource options could also be included to add to the challenge).
* Each time encourage the children to draw their circuit and explain how it works.

**Switch 1*** Design a switch for a bedside lamp. You can switch the light on and it stays on until you switch it off. (NB - A simple paper clip switch would work here. Once it is on, you have to do something to turn it off again).

**Switch 2*** A hairdryer company is having complaints that teenagers using the hairdryers are putting them down on surfaces whilst they are switched on and this is causing the hairdryer’s motor to heat up and burn out. They are trialling a new design with a switch that has to be held on for the hair dryer to work (similar to lawn mower switches). Design a switch that would work in this way and present your ideas to the hairdryer company. (NB – a simple pressure pad would work for this with aluminium foil between a folded piece of card/plastic. It only works if pressed on but when you take your hand of it, it springs back open).

**Switch 3*** A company who makes camping stoves has heard of a number of incidents recently where camping stoves have been knocked over whilst they are still warm, setting fire to dry land and causing huge fires. They want to add a device to their stoves that signals a warning sound if the stove is knocked over. Design a switch that, when tilted, sets off an alarm. (NB – a simple tilt switch can be made with a metal ball bearing or a marble/modelling clay ball covered in aluminium foil in a card tube. When tilted one way it make a connection in the circuit, when tilting the other way it breaks the connection. The wires can be inserted in one end of the card board tube).
* Does it matter where a switch is in a circuit? (Explore / observe / first hand experiences).
* More able: design a circuit with a switch or switches that will change the direction of a motor.

**Science Challenge: Have a go/ Focused investigation*** Get the children to think of as many ‘What if questions to investigate, e.g. Does a knot in a wire stop a circuit working? What do you think? Have a go to find out? Is the electrolycra a better conductor than a wire?
 |
| **Science** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| **Real life outcome will enable children to transfer their learning from the ‘immersion stage’ into a context*** See Design Technology for guidance on the principles of ‘User Purpose Product.’
* The creator has sent a list of projects that you may want to include in the gadget:
* How many ways can you make a light work? (Be able to show a minimum of three different ways to make a light work. Tips – try one wire, no wire, bulb holder, no bulb holder, alternatives to wires).
* How to make a simple switch. (It must turn something on and keep it on until the switch is turned off).
* How to make a safety switch. This switch must only work when held on. If the operator lets go of the switch, the device stops working. Think of some real life scenarios for when this switch would be useful to add to your instruction booklet).
* How to make a tilt switch (This switch is useful as it can switch on a device if it is knocked over. Think of some real life scenarios for when this switch would be useful to add to your instruction booklet).
* How to make a conductor tester. (This section needs to show children how to test materials to see if they are good conductors of electricity or bad conductors. It will need an explanation of these terms along with information about making a conductor tester).
* What happens if you put more things in a circuit? Explore what happens if you have more than one object in a circuit. (Two bulbs, two batteries, a buzzer and bulb, two motors, a buzzer and a motor, etc. In your instructions be sure to say how two things in a circuit differ to only having one thing in a circuit. Choose four suggestions to include in the instruction manual).
* If you have any other suggestions for extra tasks to be included in the design you may add these. This will provide extra credits at the judging stage.
* At the end of the project, present your gadget with the circuit attached or then an annotated diagram of your gadget stating what has been added with a circuit diagram (non-standard) to show how it is put together.
* The final product or design must:
* be well presented with both accurate circuit pictures along with photographic images of the solutions described.
* provide a full list of the minimum resources required for each of the solutions and a circuit diagram clearly drawn to show how it is constructed.
* NB - Most of the tasks above are Explore / Observe / First hand experiences where children also have the opportunity to record their findings and Create / Invent / Design where they apply the learning with some degree of creativity. Activities linking to identifying insulators and conductors would be classed as Sort / group / compare / classify skill).

   |
| **Science** |
| **Creative Learning Opportunities and Outcomes (contd.)** |
| **Key questions*** What do we use electricity for?
* What if we had no electricity? / Could we survive without electricity?
* Why can electricity be dangerous?
* How can we make a light bulb work?
* Can you make a simple switch to turn a light on and off?
* Are all switches the same?
* Can we design different switches for different purposes?
* What materials allow electricity to flow through them?
* Why should we try not to waste electricity?
* Can you design a circuit for a particular purpose?
* Why does this circuit not work?

**Key vocabulary*** Circuit components: cell (battery), wire, bulb, bulb holder, buzzer, motor, switch (open/closed), circuit, electrical conductor, electrical insulator, connection, component, break.
* Electrical equipment: devices, appliances, mains electricity, safety.
* Connectivity terms: connection, mains, wire, break.
* Common materials: metal, wood, plastic, etc.
* Expressions for making suggestions: if, might, could.
* Comparative expressions: brighter, less bright (bulbs); faster, slower (motors), etc.

*Note words which have a different meaning in other contexts e.g. circuit, break, bulb.* |
| **Additional Curriculum Links** |
| **Subject** | **Key Learning** | **Creative Learning Opportunities and Outcomes** |
| **Mathematics** | **Number – multiplication and division*** Solve problems including positive integer scaling problems.

**Geometry – position and direction*** Describe positions on a square grid labelled with letters and numbers.

**Measures*** Compare durations of events (e.g. to calculate the time taken by particular events or tasks).
 | Linked to the geography learning opportunity *Mapping,* children to consider scaling when relating measurements on large scale maps to measurements outside. For example, when mapping the playground use an appropriate scale e.g. 1 cm representing 2m or 10m. Consider how scale is used appropriately when looking at distances on different scaled maps. Building on their learning from Year Two *The Place Where I Live,* children to describe different journeys that they make and consider how long they take, e.g., home to a friend’s/relative’s house, home to the sports centre/shops, home to a holiday destination? Can they estimate how far their journey is? Can they find their route on different scaled maps? Can they locate features of their journeys on the Ordnance Survey Street Atlas using the correct grid reference e.g. C4, H3?  |
| **PSHE** | * Understand about budgeting and the cost of bringing up a child.
* Explore the role of parents in making a home and recognise the love shown by parents for their children.
 | Research the cost of a new baby – how much does all the equipment cost? Discuss the unconditional love that a parent has for a child and how many parents ‘make sacrifices’ for their children. Why do people say ‘there’s no place like home?’ Talk about children who may not have a home or people who are homeless. Does society have a moral responsibility to provide basic needs such as shelter?  |

|  |
| --- |
| **Additional Curriculum Links** |
| **Subject** | **Key Learning** | **Creative Learning Opportunities and Outcomes** |
| **Computing** | **Images, Video and Animation****Skills*** Use a range of devices to capture still and moving images for a purpose. These could include digital cameras, video cameras, iPads, microscopes and webcams.
* Discuss and evaluate the quality of their own and others’ captured images and make decisions whether to keep, delete or change them.
* Independently download and save images and video onto a computer.
* Independently upload images and movies from digital cameras and other devices to a computer and save in a relevant location.
* Be able to ‘resize’ images (pixels, resolution, aspect ratio and dimensions).
* Be able to use basic tools in a software package to change images according to purpose.
* Import music, stills or video into video editing software for a specific project.
* Arrange, trim and cut clips to create a short film that conveys meaning.
* Add simple titles, credits and special effects, e.g. transitions.
* Storyboard, then use captured images to create a short animated sequence which communicates a specific idea.

**Knowledge and Understanding*** Understand that a digital image can be captured from different devices and it can be stored, developed and edited.
* Begin to understand how images from different sources (stills, video, graphics, animation) are used to enhance a presentation or communicate an idea.
* Begin to understand the meaning of ‘resizing’ i.e. the differences between pixel size, resolution and image dimensions and the need to maintain aspect ratios.
* Understand that planning is a vital part of the design process.
* Understand that evaluation and improvement are vital parts of the design process and ICT allows changes to be made quickly and efficiently.
 | This project allows pupils to use different types of media (e.g. images, movies, sounds and animations) in the same presentation. The pupils can manipulate and edit the media before they are used in a suitable authoring tool such as Microsoft Movie Maker, Apple iMovie, Microsoft PowerPoint, Microsoft Photostory or even to include some programming by using software such as Scratch. The pupils make a presentation on the topic ‘There’s No Place like Home’. The focus for the project could be the geographical or historical element of this topic or maybe both. Pupils can source movies and images and if teachers want to include sound then this can be accomplished by using a narration or music. Some software tools (e.g. MS PowerPoint, iMovie, MS Photostory and Scratch) allow the pupils to record narration directly into the presentation and this may be the easiest way of incorporating it. If the images need to be edited then tools that are commonly used by schools are Paint, Paint.net, and 2Paint. A more comprehensive list of software that is still relevant to these activities can be found in the software toolkit document that supports the Computing/ICT progressions. |
| **Additional Curriculum Links** |
| **Subject** | **Key Learning** | **Creative Learning Opportunities and Outcomes** |
| **Computing (contd.)** | * Understand the need for caution when using the Internet to search for images and what to do if they find unsuitable images (See school’s Acceptable Use Policy/AUP).
* Know how to take images appropriately and responsibly (See school’s Acceptable Use Policy/AUP).
* Understand that copyright exists on most digital images and video about the impact of choices and decisions in their work.
* Understand that images, sounds and text can be subject to copyright and abide by copyright rules when creating a presentation.
 | This work also has several areas of key learning that can be linked to the school’s eSafety work (e.g. linking to the school’s AUP in relation to the use of the images, sounds and movies from the Internet.) |
| **English** |
| **Key Learning** |
| **Unit** | **Folk Tales** | **Recount: Biography** |
| **Outcome** | * Innovation of The Lancashire Giant.
* Presentation of innovated narrative to an audience using props, images, actions etc.
 | * Biography of a regional/local hero.
 |
| **Possible Duration**  | * 3-4 weeks.
 | * 2-3 weeks.
 |
| **Key Learning****Reading**  | * Use prefixes to understand meanings e.g. '*un-*', '*dis-*', '*mis-*', '*re-*'.
* Listening to and discussing a range of fiction.
* Retelling a range of stories, including less familiar fairy stories, fables and folk tales e.g. Grimm’s Fairy Tales, Rudyard Kipling Just So Stories.
* Sequencing and discussing the main events in stories.
* Identifying and discussing themes e.g. good over evil, weak and strong, wise and foolish, mean and generous, rich and poor.
* Identifying and discussing conventions e.g. numbers three and seven in fairy tales, magical sentence repeated several times.
* Raising questions during the reading process to deepen understanding e.g. I wonder why the character...
 | * Listening to and discussing a range of biographies.
* Reading a range of biographies.
* Discussing the purpose of paragraphs.
* Identifying a key idea in a paragraph.
* Evaluating how specific information is organised within a non-fiction text e.g. text boxes, sub-headings, contents, bullet points, glossary, diagrams.
* Navigating texts in print and on screen.
 |
| **Key Learning****Writing**  | * Identify, select, generate and effectively use prepositions for where e.g. *above, below, beneath, within, outside, beyond.*
* Use inverted commas to punctuate direct speech (speech marks).
* Read and analyse narrative in order to plan and write their own versions.
* Create and develop plots based on a model.
* Discuss and propose changes with partners and in small groups.
* Use appropriate intonation, tone and volume to present their writing to a group or class.
 | * Explore and identify main and subordinate clauses in complex sentences.
* Explore, identify and create complex sentences using a range of conjunctions e.g.  *while, after, before.*
* Discussing and recording ideas for planning.
* Grouping related material into paragraphs.
* Using headings and sub headings to organise information.
 |
| **Suggested Texts**  | * Regional folk tales e.g. The Lancashire Giant – Espresso.
* The Three Wishes.
* The Old Lady who lived in a Vinegar Bottle.
* The Tin Forest by Helen Ward.
 | * Range of simple biographies including print and film versions.
* Stories from School Years - BBC Class Clips ([here](http://www.bbc.co.uk/learningzone/clips/stories-from-school-years/6885.html)).
 |
| **English** |
| **Folk Tales - Creative Learning Opportunities and Outcomes** |
| **Creating interest*** Share an image, object or key vocabulary linked to the theme e.g. giant, magic, castle. Play a warm up game to develop vocabulary banks e.g. Just a Minute, Ping Pong words, word association etc*.* Collate ideas onto a whole class vocabulary map/mind map.
 | **Learning outcomes** * Children will be able to generate appropriate vocabulary.
 |
| **Reading** **Grammar:** Warm ups throughout the reading phase - focus on inverted commas.**Reading and responding** * Listen to and/or read a folktale e.g. *The Lancashire Giant - Espresso.*
* Explore, discuss and sequence the main events.
* Use role play or speaking and listening approaches e.g. tell a story around a group using a magic microphone and speaking frame starters: *in the beginning, a little while later, before long*.
* Raise questions about the characters at different points across the tale and answer through small discussion and in writing e.g. *I wonder why Johnny… I wonder why Grandma…*
* Explore the use of speech and dialogue in the folktale; link to drama and model writing interchanges of speech in role with inverted commas.
* Identify, collect and explore the use of prepositions e.g. above, behind, forward, underneath.

**Reading and analysing** * Identify and discuss the theme in the folktale e.g. good over evil, weak and strong, wise and foolish, mean and generous, rich and poor and any convention e.g. numbers three and seven in fairy tales, magical sentence repeated several times.
* Analyse folktales, identify key features and create a checklist.
* Model chunking the plot into key events and create a whole class grid, story map or story board.
 | **Learning outcomes** * Children will be able to discuss and sequence events.
* Children will be able to raise and answer questions linked to characters.
* Children will be able to identify and use prepositions.
* Children will be able to identify themes and conventions in folk tales.
* Children will be able to identify the plot structure of a folktale.
* Children will be able to identify key features of folktales.
 |
| **Gathering content** **Grammar:** Warm ups throughout the gathering content phase - focus on prepositions.* Review the map/story board created together and model innovating characters and events as appropriate e.g. based on *The Lancashire Giant -* A girl wants to shrink to be tiny so she can squeeze into small places.
* Create a new story; develop further ideas and add key vocabulary.
* Children contribute to a whole class version and develop their own.
 | **Learning outcomes*** Children will be able to develop ideas for a new folktale and plot these within a story planner.
 |

|  |
| --- |
| **English** |
| **Folk Tales - Creative Learning Opportunities and Outcomes (contd.)** |
|  **Writing** * Use shared writing techniques to model a section at a time referring to each section of the plan. Focus on skills – prepositions and inverted commas for speech.
* Use AFL, marking and feedback to adjust shared writing focus daily.
 | **Learning outcomes*** Children will be able to write a folktale, with a series of events, which includes:
* prepositions.
* dialogue which is punctuated using inverted commas.
 |
| **Outcome** * Innovated outcome of a folk tale based on a model.
 |
| **Presentation** * Review an oral telling of a folk tale .e.g. *The Lancashire Giant – Espresso* to evaluate how the storyteller engages the audience.
* Perform own narrative or an aspect of narrative to an audience/record digitally, using intonation, expression.
 |

|  |
| --- |
| **English** |
| **Biography - Creative Learning Opportunities and Outcomes** |
| **Creating interest*** Show a film clip of famous people talking about their experiences or life events. Model sharing a key memory orally. Children select a key memory and tell a partner. Encourage the inclusion of detail, including thoughts and feelings, to engage the listener. Record key memory in writing, if desired.
 | **Learning outcomes** * Children will be able to describe an event including detail to engage the audience.
 |
| **Reading****Grammar:** Warm ups throughout the reading phase – focus on identifying main and subordinate clauses in complex sentences. **Reading and responding** * Read and view biographies in different forms, e.g. print, film and reading on screen e.g. famous authors, famous people relevant to the children’s interests.
* Model navigating texts to find answers to prepared questions.
* Raise and answer questions related to who, what, when.
* Provide fact card events from another biography text. Ask children to organise into a time line.
* Introduce time connective cards – *early on, as time went on* etc. Use these orally to link the events on the timeline.
* Introduce conjunctions – before, after, while, later. Use the events on the timeline to construct oral and written sentences using the conjunctions.
* Use a flow chart or text map to organise a short biography. Add notes of key events.
* Children to use the notes, time connectives and conjunctions to give an oral recount of the person’s life.

**Reading and analysing** * Box-up a biography to create a planning and writing frame.
* Discuss the purpose of paragraphs and identify key information in each paragraph.
* Identify and evaluate how specific information is organised within a biography e.g. sections with sub-headings, events in time order.
* Create a checklist of features.
 | **Learning outcomes** * Children will be able to discuss and sequence events.
* Children will be able to raise and answer research questions.
* Children will be able to orally recount a series of events using time connectives and conjunctions.
* Children will be able to identify the purpose of paragraphs.
* Children will be able to describe the common layout features of a biography.
* Children will know and understand the features of biography.
 |

|  |
| --- |
| **English** |
|  **Biography - Creative Learning Opportunities and Outcomes (contd.)** |
| **Gathering content** **Grammar:** Warm ups throughout the gathering content phase – focus conjunctions to create complex sentences e.g. while, after, before. * Select a local famous person as the focus for the whole class biography e.g. local Olympian, sports person, author, artist, performer, business man or business woman.
* If possible, use a visit or visitor and provide first-hand experience of interviewing and collecting biographical details.
* Explore information about the selected person, reading information in print, on screen and by using film clips. Discuss and record information, using sticky notes.
* Use the planning frame created and model grouping related material from sticky notes into paragraphs, using headings and sub headings to organise information.
 | **Learning outcomes*** Children will be able to use a range of sources conduct research for a biography.
* Children will be able to select and organise information into appropriate sections.
 |
| **Writing** * Use shared writing techniques to model a section at a time referring to each section of the plan. Focus on skills – time connectives, conjunctions and paragraphs. Children follow the modelling each day from the whole class focus.
* Use AFL, marking and feedback to adjust shared writing focus daily.
 | **Learning outcomes*** Children will be able to write a biography including:
* headings and sub headings.
* paragraphs.
* time connectives.
* conjunctions.
 |
| **Outcome** * Biography of a local person.
 |
| **Presentation** * Publish biography as a poster or booklet.
* Present the biography into an ICT outcome e.g. using Powerpoint, Photostory or iPad presentation.
* Convert the biography into a documentary and film using iPad or flip cameras.
 |