

Introduction to Thematic Unit

This ICL looks at movement from a very broad perspective. It is mainly based in the subject area of The World Around Us exploring all the strands of History, Geography and Science and Technology. There are also opportunities to explore aspects of Personal Development and Mutual Understanding.

In The World Around Us pupils are encouraged to explore the concepts of Interdependence, Place, Movement and Energy and Change Over Time. This unit most obviously addresses Movement and Energy but the other aspects also feature as well.

The Key Questions in this unit ask:

- *What makes animals move?*
... focusing on animal migration and in particular those animals who migrate to and from Northern Ireland.
- *How do we move?*
... focusing on the biology of human movement – muscles and bones working together.
- *What makes people travel?*
... taking a look at large scale movements of people now and in the past – invaders, those who left Ireland during the famine and new arrivals in Northern Ireland today. This section links with Personal Development and Mutual Understanding.
- *How do we travel, now and in the past?*
... looks at different methods of transport and how they have changed over time.
- *How do water, light and energy travel? How do forces affect movement? What is 'green energy'?*
... looks at the physics behind movement and at the rules for how light and sound travel.

Consolidating the Learning in this unit

This ICL draws on a huge amount of material as the subject of movement touches on almost every aspect of the World Around Us. Schools may choose to organise a visit

either to introduce this topic or as the culmination of pupil work. Suggestions include Castle Espie, The Transport museum at Cultra, W5. Alternatively, a visiting facilitator could organise activities at school. This can be arranged with Action Renewables, Sentinus or the Road Safety section of DOE. Other big activities include setting up a wildlife garden to feed birds and insects including migrating birds; carrying out a traffic survey and becoming an eco-school. Links and further information about these are found within the relevant sections of this ICL.

Unit 1: What makes animals move?

Introduction to this Unit

This unit encourages the pupils to think about how animals interact with their environment, why they move and where do they move to. It looks at the reasons for the movement of a number of species and investigates the origination and destination of animals' migratory journeys. Pupils will investigate the migration of animals in their locality and focus on the migratory habits of Brent Geese, Eels, Salmon and Starlings.

Learning Intentions

Pupils are learning:

- Some of the ways people conserve/affect the environment. (*Geography- Interdependence*)
- Local habitats. (*Geography Interdependence*)
- The relationship between animals and plants in a habitat. (*Science & Technology- Interdependence*)
- The main stages in the life cycle of some living things (Science & Technology- Interdependence)
- Weather in the local area compared to places that experience very different weather conditions. (*Geography- Place*)
- The range of means that animals move from one place to another. (*Geography - Movement & Energy*)
- Consequences of change from a global perspective. (*Geography - Change Over Time*)
- How animal behaviour is influenced by seasonal change. (*Science & Technology- Change Over Time*)
- Obvious changes that occur in lifecycles. (*Science & Technology- Change Over Time*)

By

- Observing migrating animals in their locality.
- Finding out about areas in the world to which these animals move.

- Looking at the lifecycles of migrating animals
- Exploring some of the possible reasons why animals migrate.
- Asking focused questions (Thinking, Problem-Solving, Decision-Making).

Why do animals need to move?

Watch the following clips:

- BBC Learning Zone CLIP 2301 Moving animals [*flash video*]
<http://www.bbc.co.uk/apps/iff/learningzone/clips/showrecord?Id=2301>
- BBC Learning Zone CLIP 112 What is Respiration [*flash video*]
<http://www.bbc.co.uk/apps/iff/learningzone/clips/showrecord?Id=112>

Explore with pupils how animals need to move to get food and get away from danger. Ask the pupils why animals need food for energy. Compare how plants and animals move and how they acquire energy. Discuss why plants do not need to move as they can make their own food in photosynthesis.

What about big animal journeys?

Apart from moving to eat and stay away from danger, some animals travel thousands of miles, discuss with pupils possible reasons for these long journeys. Introduce the topic MIGRATION, define the meaning for the children. Every winter in the UK local starling populations are boosted by birds from the continent. Watch the following clips and ask pupils to suggest possible reasons for this migration. If you live near Belfast, you can attend a starling watch organised by the Belfast City Council.

- RTE News: Starlings Storm Belfast Skies [*external link: Flash Video*]
<http://www.rte.ie/news/2008/1201/starlings.html>
- BBC News: Starlings Spectacular Show [*Flash Video*]
<http://news.bbc.co.uk/1/hi/england/7860322.stm>
- BBC News: 30, 000 to take part in Air Display [*article*]
http://news.bbc.co.uk/1/hi/northern_ireland/7747057.stm
- BBC Science: European Starling [*article*]
<http://www.bbc.co.uk/nature/wildfacts/factfiles/254.shtml>
- Belfast City Council starling watch [*article*]
<http://www.belfastcity.gov.uk/news/news.asp?id=1464>

For Teachers

BBC Northern Ireland
KS2 On The Move Thematic Unit

Why do Brent Geese migrate?

Use the following range of resources to investigate the reasons for the migration of the Brent Geese. Discuss the geese's migratory journey, how long is the journey, why do they travel so far, how do they know where to go, how do they know when to leave? Do all the geese survive the journey? Ask the children to draw the migratory route of the geese on a world map, plotting possible feeding points and hazards during the journey. Compare your results to the BBC Radio 4 World on the Move map (<http://www.bbc.co.uk/radio4/worldonthemove/species/brent-goose/>) Discuss what measures could be taken to ensure greater numbers of Geese survive the journey. If you are in County Down, you can visit the WWT Castle Espie Wetland Centre during the Winter to see the Brent Geese arrive.

- BBC Primary Focus-Strangford Lough: Brent Geese
- BBC TANDY: Natural Journeys- Brent Geese: clip 3 [*Flash audio*]
- BBC TANDY: Strangford Lough: Brent Geese [*Flash audio*]

http://www.bbc.co.uk/northernireland/forteachers/on_the_move/animal/why_do_brent_geese_migrate.shtml

- BBC TANDY: Natural Journeys- Brent Geese [*Teacher's notes and worksheets*] [*article*]
http://www.bbc.co.uk/northernireland/schools/4_11/today/journeys/autumn2004/index.shtml
- BBC TANDY: Strangford Lough [*Teacher's notes and worksheets*]
http://www.bbc.co.uk/northernireland/schools/4_11/today/geography/sum2000/index.shtml
- BBC News Plough man fined for shore damage [*article*]
http://news.bbc.co.uk/1/hi/northern_ireland/4632548.stm
- BBC Radio 4: World on the Move: Brent Geese [*Real Media audio*]
<http://www.bbc.co.uk/radio4/worldonthemove/programmes/programme-13/>
- BBC Radio 4: World on the Move: Brent Geese fact file [*article*]
<http://www.bbc.co.uk/radio4/worldonthemove/species/brent-goose/>
- WWT Castle Espie [*external link: article*]
<http://www.wwt.org.uk/gallery/118/visit/castleespie/.html>

Why do Eels migrate?

Use the following range of resources to investigate the reasons for the migration of the Eels. Discuss the eels' migratory journey, how long is the journey, why do they travel so far, how do they know where to go, how do they know when to leave? Ask the children to draw the migratory route of the eels on a world map. Ask them to listen to the audio clips and watch the news stories then draw a picture of how an eel looks at different stages of its life, for example, glass eel → yellow eel → and silver eel; these drawings could be matched to the appropriate location on the map showing where the animal is at that stage of its life. Discuss with the pupils possible reasons for these changes in appearance (main reason is camouflage). Watch the News stories, discuss with the children possible reasons for the need to introduce eels into the rivers. Ask the pupils to list the reasons why it is important to maintain eel levels in the rivers. Then ask the pupils to draw a food chain featuring the eel.

- BBC Tandy Natural Journeys- Eels: Glass eels
- BBC Tandy Natural Journeys- Eels: Eel Hazards
- BBC Tandy Natural Journeys- Eels: Eel lifecycle
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/animal/why_do_eels_migrate.shtml
- BBC Tandy: Natural Journeys- Eels [*Teacher's notes & worksheets*]
http://www.bbc.co.uk/northernireland/schools/4_11/today/journeys/autumn2004/pr02.shtml
- BBC Radio 4: World on the Move: Programme 15 [*Flash audio*]
<http://www.bbc.co.uk/radio4/worldonthemove/programmes/programme-15/>
- BBC Radio 4: World on the Move: European Eel fact file [*article*]
<http://www.bbc.co.uk/radio4/worldonthemove/species/european-eel/>
- BBC Radio 4: World on the Move: Eel Migration [*article & Flash audio*]
<http://www.bbc.co.uk/radio4/worldonthemove/reports/eels-in-earrings/>
- BBC News: Reserve eels topped up in Suffolk [*Flash video*]
<http://news.bbc.co.uk/1/hi/england/7400999.stm>
- BBC News: Rivers stocked with baby eels [*Flash Video*]
<http://news.bbc.co.uk/1/hi/england/7352875.stm>

Why do Salmon migrate?

Use the following range of resources to investigate the reasons for the migration of the Salmon. Discuss the Salmon's migratory journey, how long is the journey, why

do they travel so far, how do they know where to go, how do they know when to leave? Ask the children to draw the migratory route of the Salmon on a world map. Ask them to draw a picture of how a salmon looks at different stages of its life, from fry to kelt; (use the Salmon in the Classroom [[external link](#)] (http://www.snh.org.uk/Salmonintheclassroom/salmon_lifecycle.shtml) and [Recognition of Salmon](#) [[external link](#)] sites as references) these drawings could be matched to the appropriate location on the map showing where the animal is at that stage of its life. Discuss with the pupils possible reasons for these changes in appearance. Using a map of the local area identify rivers close to the school, find out if there are salmon in these rivers, autumn is the best time to see the species. Discuss the main threats to the Atlantic Salmon in Northern Ireland rivers (pollution & parasites) and what can be done to protect and preserve the species.

- BBC Tandy: Natural Journeys - Salmon: Lifecycle of the Salmon
- BBC Tandy: Natural Journeys - Salmon: Salmon migration
- BBC Primary Focus: Go with the Flow : Salmon
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/animal/why_d_o_salmon_migrate.shtml
- BBC Tandy: Natural Journeys - Salmon [*Teacher's notes & worksheets*]
http://www.bbc.co.uk/northernireland/schools/4_11/today/journeys/autumn2004/pr03.shtml
- BBC Radio 4: World on the Move Programme 23 (*Real Media audio*)
<http://www.bbc.co.uk/radio4/worldonthemove/programmes/programme-23/>
- BBC Radio 4: World on the Move: Salmon Factfile [*article*]
<http://www.bbc.co.uk/radio4/worldonthemove/species/atlantic-salmon/>
- BBC Nature's Great Events: Salmon vs Bear [*Flash Video*]
http://www.bbc.co.uk/naturesgreatevents/salmon_grizzlycatch.shtml
- Scottish National Heritage: Salmon in the Classroom [*external link: article*]
http://www.snh.org.uk/Salmonintheclassroom/salmon_lifecycle.shtml
- Atlantic Salmon Trust: Recognition of Salmon [*external article*]
http://www.atlanticsalmontrust.org/salmon_facts/recognition.html
- Habitas: Atlantic Slamon [*article*]
<http://www.habitas.org.uk/priority/species.asp?item=5006>

In the Garden

Set up a wildlife garden or area in the school grounds to attract birds and butterflies. Take pictures of the animals you find there and find out what parts of the world they may have travelled from. Superimpose pictures of animals onto a map of the world with an arrow showing their journey to Northern Ireland.

- BBC Radio 4: World on the Move: [Programme 18](#) (listen 0:24 → 6:45) [*Real media audio*]
<http://www.bbc.co.uk/radio4/worldonthemove/programmes/programme-18/>
- BBC Breathing Places Schools [*article*]
<http://www.bbc.co.uk/breathingplaces/schools/>
<http://www.bbc.co.uk/breathingplaces>
- BBC Wild About Your garden pocket guide [*PDF*]
http://downloads.bbc.co.uk/wildaboutyourgarden/images/get_wild_about_your_garden_pocketguide.pdf
- Take part in a wildlife survey BBC Breathing Places Surveys [*article*]
<http://www.bbc.co.uk/breathingplaces/doingthings/simple/surveys.shtml>

Team up with a school in another country to track migrating birds.

- BBC Radio 4 *World on the Move* support for schools [*article*]
<http://www.bbc.co.uk/worldclass/worldonthemove.shtml>
- Visit a local Ulster Wildlife Trust nature reserve [*external link: article*]
<http://www.ulsterwildlifetrust.org/Learning/Education+and+Awareness+Programmes>

Unit 2: How do we move?

Introduction to this Unit

This unit explores how our bodies work, how we move, the major organs in the body and the skeletal and muscular systems. Pupils are encouraged to think about how we use our muscles and bones to move and how we need energy to make these movements. Healthy eating and nutrition should be discussed with reference to keeping bones and muscles healthy and providing the energy to move.

Learning intentions

Pupils are learning:

- Where the major organs are located in the body. (*Science And Technology- Place*)
- That humans have skeletons to protect major organs, support their bodies and help them move. (*Science And Technology- Place*)
- Understanding the benefits of a healthy lifestyle (*PDMU- Personal Understanding & Health*)

By:

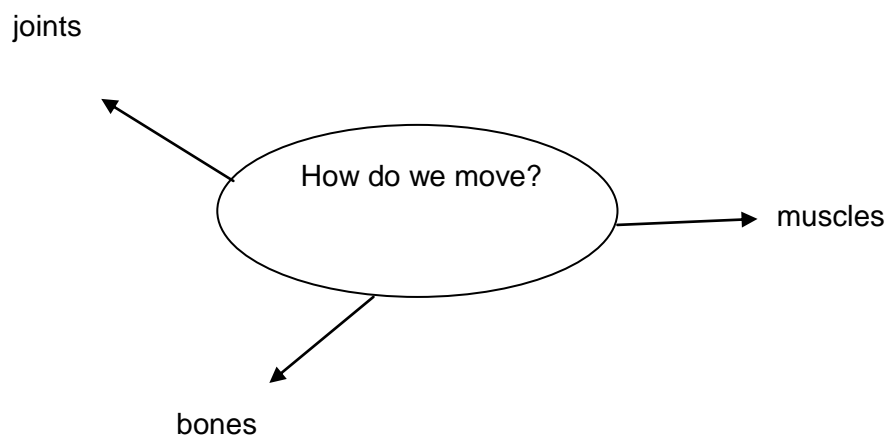
- Using key words such as muscle, bone, joint, skeleton
- Locating and naming the main parts of the skeleton.
- Understanding how muscles allow us to move.
- Exploring that we need energy to move.
- Discussing Healthy Eating and Nutrition
- Selecting information for a purpose (Managing Information).

How do bodies move?

Watch the following clips about how we move:

- BBC Learning Zone: Clip 2305 : Muscles needed for movement [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=2305>
- BBC Learning Zone: Clip 2306 Muscles needed in judo training [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=2306>
- BBC Learning Zone: Clip 2302; Skeletons [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=2302>

With pupils complete a mind map on the board to focus on the main ideas in the video clips above.



Writing the main question in the central circle, use arrows to the main reasons we can move. For each of these words, write down what pupils know about them. It may be helpful to watch the videos again.

Ask children to identify the main bones, joints and muscles in a human skeleton in the following online activities:

- BBC KS2 Bitesize: Science- Living Things Moving & growing [*Flash activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/activities/moving_growing.shtml
- BBC Science skeleton & muscle interactive activities. [*Flash activity*]
http://www.bbc.co.uk/science/humanbody/body/index_interactivebody.shtml

Where do we get the power to move?

The answer is energy from the food we eat. Ask pupils this question before and after watching the following video:

- BBC Learning Zone: Clip 266 – Energy values [*Flash video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?ld=266>

Ask the pupils to investigate the different types of food we eat and how food acts as a fuel for our bodies to help us grow and move. Ask the pupils to think about diet and whether diet affects our ability to move. Ask the children to explore the BBC It's Up to You website and identify what foods and nutrients make up a healthy balanced diet.

- BBC It's Up to You website [*articles & Flash activities*]
http://www.bbc.co.uk/northernireland/schools/4_11/uptoyou/index.shtml

Expert Corners

Set up information corners in the classroom, using reference books from the library, printouts from the internet etc; one each for **bones**, **muscles**, **joints** and **energy**.

Break class up into groups of four. Ask each pupil in the group to take an information corner and become an expert in that area. They can then go back to their original group and share what they have learned.

Invite a [medical student from QUB](#) [*external link*] to visit your primary school to raise awareness of health and lifestyle issues. Pupils could prepare questions for their visitor to find out more about how we move; how to have healthy bones and muscles etc.

- QUB - Queen's in the Community [*external link: article*]
http://www.qub.ac.uk/home/QueensintheCommunity/OutreachDirectory/ProjectDetails/?proj_cd=MEDIPS

Unit 3: What makes people travel?

This unit looks at the reasons why we travel. Pupils are encouraged to think about journeys they have made and then compare them to journeys people have made in the past. This unit looks at the movement of large groups of people to and from Northern Ireland. In particular the Vikings arrival in Ireland, the emigration of people during the Famine and contemporary immigration to Northern Ireland. Pupils will be encouraged to examine the causes and effects of the movement of these groups of people.

Learning Intentions

Pupils are learning:

- How we are interdependent with other parts of Europe. (*Geography- Interdependence*)
- How we might act on a local or global issue. (*Geography- Interdependence*)
- Comparisons between people and places. (*Geography-Place*)
- The effects of a lack of basic resources on a place and on people's lives (*Geography Place*)
- How change can create conflict through the exploration of a local issue. (*Geography-Change Over time*)
- The consequences of change through investigating global issues (*Geography-Change Over time*)
- Reason for and effects of historical events, for example, the Great Famine, invasions. (*History- Independence*)
- Places then and now and how our identity, way of life and culture has been shaped by influences from the local and wider world (*History - Place*)
- Movement of people in the past, for example, Vikings, Irish emigrants. (*History - Movement & Energy*)
- The impact of raiders and settlers in Ireland and elsewhere. How modes of transport have influenced settlements. (*History - Movement & Energy*)
- Voyages of exploration in the past, present and future. (*History - Movement & Energy*)

- Some of the characteristics of past societies and distinctive features of life in the past. (*History - Change over Time*)

Pupils should be enabled to explore:

- human rights and social responsibility. (PDMU - Mutual Understanding in the Local and Wider Community)
- causes of conflict and appropriate responses. (PDMU - Mutual Understanding in the Local and Wider Community)
- valuing and celebrating cultural difference and diversity. (PDMU - Mutual Understanding in the Local and Wider Community)

By

- Exploring some of the reasons for travelling for both short and long distances.
- Comparing the movement of groups of people to and from Northern Ireland now and in the past
- Investigating historical events in the past – and how they affect who and how we are today.
- Finding out about events that occurred in the past, using a range of information sources (Managing Information).
- Becoming aware of the challenges facing people when they move to a new environment.

How we travel

Encourage the pupils to think about how they travel and compare it to how people have travelled in the past. Use the following questions to stimulate discussion:

- Do you want to travel? Why?
- Where have you travelled during the past week? Why? How far did you go?
- Why have people travelled in the past? Can you think of any big groups of people who have travelled at a particular time? How do we know where they went? How can we find out about their journeys?
- Why have other people chosen to leave Northern Ireland?

Vikings - visitors or invaders?

What do we know about groups of people who have come to Northern Ireland in the past? Ask the pupils to discuss the difference between an invader and a visitor? Ask the pupils what they know about the Vikings, who they were, where did they come from and why did they come to Ireland? What happened when they arrived?

What do we know about them?

- BBC Education: [The Vikings](http://www.bbc.co.uk/schools/vikings) [article]
<http://www.bbc.co.uk/schools/vikings>
- BBC History: Vikings [article & Flash activities]
<http://www.bbc.co.uk/history/ancient/vikings>
- PBS The Vikings [external link: articles & video]
<http://www.pbs.org/wgbh/nova/vikings/>

Listen to the following programmes clips to find out about the Vikings in Ireland. Ask the pupils to research whether the Vikings left any evidence of their presence in Ireland through place names and surnames.

- BBC Tandy: Invaders [Flash activity & PDF]
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/invaders.shtml
- BBC TANDY: Raiders From the North: Who were the Vikings?
- BBC TANDY: Raiders From the North: Bangor Monastery
- BBC TANDY: Vikings in Ireland: Viking Raids
- BBC TANDY: Vikings in Ireland: Viking Names
- BBC TANDY: Raiders From the North: Interview with a Viking 1

- BBC TANDY: Raiders From the North: Interview with a Viking 2

http://www.bbc.co.uk/northernireland/forteachers/on_the_move/people/vikings_visitors_or_invaders.shtml

Viking long ships

Where did the Vikings come from? Ask the children to find out where the Vikings arrived in Ireland and where they came from and draw out their route on a map. What mode of transport did they use - how long would the journey have taken?

- BBC TANDY: Raiders From the North: Long ships
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/people/viking_long_ships.shtml
- BBC TANDY Viking Fact sheet
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/pdf/Viking_info.pdf
- BBC Learning Zone Clip 138 Longship design [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?id=138>
- BBC Learning Zone Clip 463 Viking long ships [*Flash Video*]
- <http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?id=463>
- BBC TANDY Build your own long ship [*PDF*]
- http://www.bbc.co.uk/northernireland/schools/4_11/tandy/pdf/longboat.pdf
- BBC Education The Vikings - Travel [*article*]
<http://www.bbc.co.uk/schools/vikings/travel/index.shtml>

Places to visit to find out more about the Vikings in Ireland

- NIEA Nendrum Monastic Site [*external link article & video*]
www.ehsni.gov.uk/places/monuments/nendrum.shtml
- Ulster Museum Viking exhibition [*external link article & video*]
<http://www.ulstermuseum.org.uk/the-collections/archaeology/early-medieval/vikings/>
- National Museum of Ireland Vikings in Ireland Exhibition
<http://www.museum.ie/en/exhibition/viking-ireland.aspx>

For Teachers

BBC Northern Ireland
KS2 On The Move Thematic Unit

Recent Visitors

Discuss with pupils reasons why people choose to travel to live in Northern Ireland? What challenges do they face? How can we make them feel welcome? Twenty-five different nationalities have registered to vote in Northern Ireland. One of the big challenges that these new arrivals face is learning a new language. Ask the class to research online and draw up a list of these twenty-five different nationalities and the possible languages they speak. Colour in these regions on a world map and estimate the distance they have travelled.

- BBC Topics: Immigration [*article & Flash video*]
<http://www.bbc.co.uk/topics/immigration>
- BBC News Special Report Destination UK [*article*]
http://news.bbc.co.uk/1/hi/in_depth/uk/2001/destination_uk/default.stm
- BBC News: Rise in Foreign Language pupils [*article*]
http://news.bbc.co.uk/1/hi/northern_ireland/7233403.stm
- BBC News: Immigrants could sway polls [*Windows Media video*]
http://news.bbc.co.uk/player/nol/newsid_6340000/newsid_6342400/6342441.stm?bw=bb&mp=wm&news=1&bbcws=1

Invite a person who has moved to Northern Ireland to speak to your class. Ask them to talk about their home country and their experience of Northern Ireland. Prepare a welcome pack for new arrivals to your community. What kind of information would be helpful to them?

Famine & Emigration

Ask the class what a famine is and what are the causes and effects of a famine. Research recent famines using the charity sites and news stories below. Ask the pupils how they would feel if this happened to them?

- BBC News: Famine in Africa [*article*]
http://news.bbc.co.uk/1/hi/in_depth/africa/2002/famine_in_africa/default.stm
- Oxfam - Emergencies [*external link: article*]
http://www.oxfam.org.uk/oxfam_in_action/emergencies/zimbabwe_cholera.html
- Trocaire Primary school resources [*external link: article*]
<http://www.trocaire.org/en/resources/primary-school>

- Save the Children- Research and Resources [*external link: article*]
<http://www.savethechildren.org.uk/en/44.htm>

Tell the pupils that 150 years ago Ireland had a famine. It is estimated that one million people died during the Famine and another two million emigrated abroad during eleven years during and after the famine. Ask the pupils to research the cause and effects of the Famine in Northern Ireland using the TANDY project: [Famine & Emigration](#). Ask the pupils to research the effects of the famine in their local area, is there any evidence remaining?

- BBC Tandy Famine Factsheet [*PDF*] contains useful facts and information on key aspects of the Famine.
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/pdf/info_on_famine_background_aut2006.pdf
- BBC TANDY project: Famine & Emigration [*article & Flash activities*]
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/projects/famine/

The New World

Many emigrants went to America. Discuss what the journey would have been like, what would have happened when they got there. Ask children to play the TANDY activities and read the emigrants' stories. Divide the class into two groups; ask one group to write diary entries for a child on the emigration ship and the other group to write a diary of their experience on reaching America. Arrange a visit to the Ulster American Folk Park for a more in-depth look at the story of Ulster emigration to America in the 18th and 19th centuries.

- BBC TANDY Famine & Emigration Explore the Ship [*Flash activity*]
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/projects/famine/flash/explore/explore.shtml
- BBC TANDY Famine & Emigration: Be a Captain [*Flash activity*]
http://www.bbc.co.uk/northernireland/schools/4_11/tandy/projects/famine/flash/captain/beacaptain.shtml
- Ulster American Folk Park: Emigrant stories [*external link: article*]
http://www.folkpark.com/childrens_corner/Emigrant_Stories
- Ulster American folk park school visits [*external link: article*]
http://www.folkpark.com/learning/for_teachers_and_leaders/

For Teachers

BBC Northern Ireland
KS2 On The Move Thematic Unit

Unit 4: How do we travel, now and in the past?

Introduction to this unit

This unit looks at how we travel and explores how transport has changed over the years. Pupils will be encouraged to compare how we travel and transport goods now and in the past, and look at the reasons for these changes. The effects of changes such as congestion and pollution will be explored and pupils will be encouraged to develop solutions to these problems.

Learning Intentions

Pupils are learning:

- Some of the ways people affect/conserves the environment both locally and globally. (*Geography- Interdependence*)
- How we might act on a local or global issue. (*Geography- Interdependence*)
- Comparisons between people and places in terms of transport. (*Geography- Place*)
- Occupations and measures to ensure the safe movement of people and goods on roads etc. (*Geography - Movement & Energy*)
- The range of transport used to move people from one place to another. (*Geography - Movement & Energy*)
- Travelling to school at different times of the year and in different types of weather. (*Geography- Change over time*)
- How change can create conflict through the exploration of a local issue, such as traffic congestion. (*Geography- Change over time*)
- Changes in technology over time and the impact of inventors and inventions. (*History Interdependence*)
- Places then and now and how our way of life has been shaped by influences from the local and wider world. (*History - Place*)
- Comparing an aspect of the community over a long period of time, for example, transport (*History - Change over Time*)
- Challenges and opportunities posed by new technology in transport. (*Science & Technology- Interdependence*)

- How knowledge in science supports technology inventions. (*Science & Technology- movement & Energy*)

By

- Weigh up the pros and cons of a variety of methods of transport (Thinking, Problem-Solving and Decision-Making).
- Thinking about the causes and effects of climate change.
- Understanding how transport has changed over the years; both in terms of better technology and how society has dealt with more traffic on the roads.
- Understanding how to stay safe when travelling.
- Becoming aware of areas and structures in their local community that were used for transport in the past, such as canals.
- Analysing local traffic by carrying out a survey (Using Mathematics).

Different ways of travelling

Ask pupils to list different means of transport: car, train, plane, bicycle, walking, bus etc

Watch and listen to the video and audio clips listed below. Divide the class into small groups, each group could do all modes of transport. For each mode of transport, use a 'PMI' grid, where P stands for plus (benefits), M for minus (downsides) and I for interesting points.

Mode of Transport:		
Plus:	Minus:	Interesting:

- BBC Learning Zone Clip 4720: Pros and cons of public transport [*Flash video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4720>
- BBC Learning Zone Clip 4719: [Transport in the city](#) [*Flash video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4719>
- BBC Learning Zone Clip 4723 Pros and cons of travelling by bikes [*Flash video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4723>
- BBC TANDY: Issues- Public Transport: Commuting
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/different_ways_of_travelling.shtml
- BBC Primary Focus: Think Local, Act Global : Cars and Engines
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/different_ways_of_travelling.shtml

Explore BBC Topics: [Car Travel](http://www.bbc.co.uk/topics/car_travel) (http://www.bbc.co.uk/topics/car_travel) and [Air Travel](http://www.bbc.co.uk/topics/air_travel) (http://www.bbc.co.uk/topics/air_travel) pages for news stories and programmes associated with travel.

Take feedback from each group in the class. As part of the debrief, work with pupils to decide their recommendations for transport in their area. Is there a 'best' means of transport?

How can we stay safe on the roads?

On average 37 children up to the age of 16 were killed or seriously injured on the roads in 2007. Discuss with the class the importance of road safety. Ask the pupils to make a list of precautions they would take to keep safe. Watch the [Tales of the road](http://talesoftheroad.direct.gov.uk/) [external link] (<http://talesoftheroad.direct.gov.uk/>) adverts or invite a [Road Safety expert](#) [external link] (<http://www.roadsafetyni.gov.uk/index/education/parentzone/parentzone-partnership.htm>) in to talk to the children to reinforce the dangers of the road. Ask the children to look through the resources listed below and ask them to add to the list of precautions. Ask the class to design posters illustrating these precautions to other school pupils.

- DFT Tales of the road [*external link: Flash animation*]
<http://talesoftheroad.direct.gov.uk/>
- Road Safety NI Visit and talk by road safety representative [*external link: article*]
<http://www.roadsafetyni.gov.uk/index/education/parentzone/parentzone-partnership.htm>
- CycleNI Find out and map local bike routes [*external link: article*]
<http://www.cycleni.com/national-cycle-network>
- DOE Road Safety Cycling Proficiency Scheme [*external link: article*]
<http://www.roadsafetyni.gov.uk/index/education/teacherzone.htm>
- DOE Child Pedestrian Training [*external link: article*]
<http://www.roadsafetyni.gov.uk/index/education/parentzone/parentzone-practicalchildpedestrian.htm>
- DOE Road Safety [Kid's zone](#) [*external link: article*]
<http://www.roadsafetyni.gov.uk/index/education/kidzone/kidzone-games.htm>

How has car use changed?

Discuss how often your pupils use a car to travel? How far do they travel on these journeys? Ask the pupils to fill in [Think local Act Global Worksheet 1](#) [PDF]. Show the

class the traffic survey video then using the resource sheet ask the class to complete a traffic survey in the local area.

- BBC Primary Focus: Think local/act global Worksheet 1 [PDF]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/pdf/pfocus_spr04_pr05_ws.pdf
- BBC Primary Focus: Think Global, Act Local :Traffic survey in Aughnacloy
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/how_has_car_use_changed.shtml
- Department for Transport KS2 Local Traffic Survey resource sheet [PDF]
http://www.databases.dft.gov.uk/primary/numeracy/year_5/local_traffic/resources/worksheet_lesson.pdf

Watch the following videos. Discuss how car usage has changed over the past 100 years. What has been the effect of this change - focussing on changes in the landscape, lifestyle and environment. What has been done to manage the effects? Is growth in car usage sustainable? What are the alternatives?

- BBC News History of model T Ford [Flash Video]
<http://news.bbc.co.uk/1/hi/world/americas/7522680.stm>
- BBC Primary Focus: Traffic Survey - Traffic congestion
- BBC Primary Focus: Traffic Survey- Traffic Control Care
- BBC Primary Focus: Traffic Survey- Effects of a Bypass
- BBC Primary Focus: Traffic Survey- Newry Traffic
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/how_has_car_use_changed.shtml
- BBC Learning Zone Clip 4735 Impact of car use [Flash Video]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4735>

Problems caused by traffic

Watch and listen to the clips below and look at the webpages. Ask the class to decide on their top three solutions to reducing the problems caused by traffic. For each of these three solutions, carry out a 'consider all factors (CAF)' activity. List the advantages, disadvantage and interesting aspects to each possible solution.

- BBC Learning Zone Clip 4725 Solutions to traffic congestion [Flash Video]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4725>

- BBC Learning Zone Clip 1578 Air pollution caused by traffic [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=1578>
- BBC Learning Zone Clip 1579 Improving air pollution across Europe [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=1579>
- BBC Primary Focus- Think Local, Act Global: Electric Cars
- BBC Primary Focus- Traffic Survey: Reduce Traffic
- BBC Primary Focus- Think Local, Act Global: Transport Alternatives
- BBC TANDY: Issues - Transport: Transport Solutions
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/problems_caused_by_traffic.shtml
- BBC TANDY: Issues: public transport Teacher notes & worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/today/issues/sum05/pr02.shtml
- Road service - Travelwise [*external link: article*]
<http://www.travelwiseni.co.uk/index/schools.htm>
- Ecoworld - transport [*external link: article*]
http://www.ecoworld.org.uk/eco_topics/transport/
- BBC Topics: Pollution [*articles & Flash video*]
<http://www.bbc.co.uk/topics/pollution>

What is community transport?

Ask the class what is community transport? Watch the following clip and ask pupils whether they think it could work in their area?

- BBC Learning Zone Clip 4731 Cars and community transport in rural areas [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=4731>

Use the 'throw the ball' activity to discuss different aspects of community transport with the class. Ask the pupils to stand in a circle and throw a ball to each other. When each person has the ball, ask them to make a comment about community transport: personal opinion, disadvantages, advantages, examples etc. Debrief afterwards, summing up what pupils said on the board.

What is climate change?

Discuss with the class what they know about climate change - What it is? What are its causes? How will it affect us? Explore the following resources. Ask the pupils to identify the possible causes of climate change, the effects of climate change and actions individuals could take to lessen/reverse the effects.

- BBC TANDY: Issues - Transport: Pollution
- BBC Primary Focus- Think Local, Act Global: Pollution and Climate Change
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/what_is_climate_change.shtml
- BBC Newsround: Climate Change [*article*]
http://news.bbc.co.uk/cbbcnews/hi/newsid_7370000/newsid_7374000/7374061.stm
- BBC Learning Zone Clip 1490: Evidence of Climate Change [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=1490>
- BBC Learning Zone Clip 1491: Causes of Climate Change [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=1491>
- BBC Topics: Climate Change [*article & Flash Video*]
http://www.bbc.co.uk/topics/climate_change
- Defra, UK - Environmental Protection - Climate change and energy [*external link: animation*]
<http://www.defra.gov.uk/environment/climatechange/research/google-earth/index.htm>
- Eco-world: Climate Change [*external link - article*]
http://www.ecoworld.org.uk/eco_topics/our_planet/climatechange.asp

Canals

A network of canals was built around the UK during the Industrial Revolution for the transport of raw materials. The growth of rail and road transport saw the use of canals go into decline. Recently canals have been redeveloped for the leisure and tourism industry. Now with increasing pollution and traffic congestion being attributed to road haulage, companies are looking at alternative means of transport. Watch the following clips about the canal network in Northern Ireland. Find out about how a canal near you was used in the past and if possible visit it to see a boat passing through a set of locks.

- BBC Primary Focus: Canals: Use of Canals
- BBC Primary Focus: Canals: Newry Canal
- BBC Primary Focus: Canals: Lagan Canal
- BBC Primary Focus: Canals: Ulster Canal
- BBC Primary Focus: Canals: Shannon-Erne Waterway
- BBC Primary Focus: Go with the Flow: Lisburn weir and Canal

http://www.bbc.co.uk/northernireland/forteachers/on_the_move/travel/canals.shtml

Watch the following clips about the rejuvenation of canals in England. Discuss with the class the possibilities of redeveloping the canal network in Northern Ireland. Compile a list of the pros and cons of such an initiative.

- BBC News Story Canal takes Freight off Roads [*Flash Video*]
<http://news.bbc.co.uk/1/hi/england/7940844.stm>
- BBC News Story Rivers ease Traffic [*Real Media Video*]
http://news.bbc.co.uk/player/nol/newsid_7230000/newsid_7235500/7235508.stm?bw=bb&mp=wm&news=1&bbcws=1
- BBC News Story: Canal Revamp opens up Freight options [*Real Media Video*]
http://news.bbc.co.uk/player/nol/newsid_4530000/newsid_4537000/4537047.stm?bw=bb&mp=wm&news=1&bbcws=1
- BBC News Story: Waterways have the Golden Touch [*Real Media Video*]
<http://news.bbc.co.uk/1/hi/sci/tech/7067362.stm>
- BBC News story: Waterways plan to unlock loughs [*article*]
http://news.bbc.co.uk/1/hi/northern_ireland/7439096.stm
- BBC Primary Focus: Canals: Teachers' notes and worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/geography/spring2003/pr03.shtml

Unit 5: How do water, light and energy travel? How do forces affect movement? What is 'green energy'?

Introduction to this Unit

This unit looks at the movement of water, light and energy. Forces and physical processes that affect objects in our surrounding will be investigated. Pupils are encouraged to consider all forms of water in their environment, its source, cycle, usage and conservation. The movement of light and sound is also examined and pupils are encouraged to undertake practical experiments to reinforce the learning outcomes. The final section looks at renewable sources of energy and their viability and usage.

Learning Intentions

Pupils are learning

- Some of the ways people affect/conserves the environment both locally and globally (*Geography - Interdependence*)
- The consequence of change through investigating global issues. (*Geography - Change Over Time*)
- Ways in which the use of natural resources through time has affected the local and global environment. (*History - Interdependence*)
- Technological change over time. (*History - Interdependence*)
- How forces can affect the movement and distance objects can travel. (*Science - Movement & Energy*)
- How sound travels and light shines through some materials. (*Science - Movement & Energy*)
- How knowledge in science supports technological inventions. (*Science - Movement & Energy*)
- The uses of energy in a variety of models and machines and ways in which energy is used to create movement. (*Science - Movement & Energy*)
- The formation of shadows and how they change. (*Science - Change over time*)

By

- Knowing the different stages in the journey of a river from source to sea.
- Understanding how our drinking water is collected and travels to our homes.
- Understanding that light travels in straight lines.
- Understanding that light travels faster than sound.
- Investigating ways of changing sound.
- Exploring how forces affect how something moves.
- Recognising different renewable sources of energy.
- Carrying out hands-on practical activities in science and technology, experimenting with different designs, actions and outcomes (Being Creative)

How does water travel?

Watch the journey of drinking water from the Mournes to Belfast and most of Co. Down.

- BBC Primary Focus: Water -Journey of water
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_does_water_travel.shtml

Using a plan of the school, identify all the sources of drinking water within the building. Ask the pupils to trace the journey of the water from the water mains to the taps. Then ask pupils to investigate the origin of the drinking water and using local Ordnance Survey maps to work out the route of the water and the distance it's travelled. Consolidate the concept by visiting a reservoir and/or a water processing plant.

- NI Water: Silent Valley visitor Centre [*External link: article*]
<http://www.niwater.com/thesilentvalley.asp>

Watch the following video clips that describe the upper, lower and middle stages and meanders of various rivers around Northern Ireland. Using an Ordnance Survey map, locate local water ways. At which stage of their journey are these local rivers? Are there any confluences? Draw a map to record all the rivers and streams in the local area.

- BBC Landscapes Unlocked: Rivers: Upper courses
- BBC Landscapes Unlocked: Rivers: Lower and middle courses
- BBC Landscapes Unlocked Clip: Rivers: Meanders
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/journey_of_water.shtml

These and other clips can be viewed with associated maps in the '[Landscapes Unlocked](#)' website

<http://www.bbc.co.uk/northernireland/landscapes/focus.shtml?theme=mountains>

Water Pollution

Cause & effect. Research how pollution can have a destructive effect on the environment. Find out what is and is not biodegradable. Children could write to their local council and ask for someone to come to their class to give a talk on recycling. Let others know about how dangerous litter can be to humans and animals alike. Design and display posters around the school. Could the RSPCA / RSPB help with research? Pupils can write to them to help find out more

- BBC Tandy - Rivers: The River Faughan
- BBC Tandy - Rivers: Locks' Agency
- BBC News Story: Slurry Pollution
- BBC News Story: Lough Neagh Pollution
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/water_pollution.shtml
- Eco-world Water facts [*external link: article*]
http://www.ecoworld.org.uk/eco_topics/water/

How does light travel?

Discuss the concept of light travelling, shadow and refraction. Ask the children to draw and annotate a diagram of how a shadow is formed. Then watch the following videos:

- BBC Learning Zone clip 219 How Light Travels [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=219>
- BBC Learning Zone clip 1625: [Light travels in straight lines](#) [Flash Video]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=1625>
- BBC Primary Focus: Light & Sound: Sun & Earth
- BBC Primary Focus: Light & Sound: Shadows & Light
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_does_light_travel.shtml
- BBC Learning Zone clip 2172 – Where do light and shadows come from? [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=2172>
- BBC Primary Focus: Light & Sound: Speed of Light & Sound
- BBC Primary Focus: Light & Sound: Refraction
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_does_light_travel.shtml
- BBC Primary Focus: Light & Sound: Teachers' notes and pupil worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/science/spring2003/pr03.shtml

Try these interactive activities:

- KS2 Bitesize - Physical processes How we see things [*Flash activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/activities/see_things.shtml
- KS2 Bitesize - Physical processes: Light and Dark [*Flash Activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/activities/light_dark.shtml
- KS2 Bitesize - Physical processes: Light & Shadow [*Flash Activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/activities/light_shadows.shtml

Now try these practical hands-on activities in the classroom. Before you start, describe the activity and ask the children what they expect to happen. At the end of each activity, ask them were they surprised with the results and how do they think it worked

- Exploratorium Make a pinhole camera [*external link: article*]
http://www.exploratorium.edu/science_explorer/pringles_pinhole.html
- Exploratorium Experiment with lenses [*external link: article*]
http://www.exploratorium.edu/science_explorer/pictures_from_light.html
- Exploratorium Make a periscope [*external link: article*]
http://www.exploratorium.edu/science_explorer/periscope.html
- Exploratorium Water based lens [*external link: article*]
http://www.exploratorium.edu/snacks/water_sphere_lens/index.html
- Exploratorium Making a cartoon [*external link: article*]
http://www.exploratorium.edu/science_explorer/flipstick.html

How does sound travel?

Discuss the concept of sound with the children. Listen to the different sections of the orchestra and ask the pupils to think about the sounds the different instruments make- are they high, low, loud, quiet? How are these different sounds made?

- BBC Musical Mysteries: Orchestra Factfiles [*Flash Activity*]
http://www.bbc.co.uk/northernireland/schools/4_11/music/mm/orchestra01.shtml

Then watch the following videos:

- BBC Primary Focus- Light & Sound: Sound Travelling in air
- BBC Primary Focus- Light & Sound: Sound Travelling in water
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_do_es_sound_travel.shtml
- BBC Learning Zone clip 12: Sound Travelling through solids [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=12>
- BBC Primary Focus- Light & Sound: Pitch
- BBC Primary Focus- Light & Sound: Sound waves
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_do_es_sound_travel.shtml
- BBC Primary Focus: Light & Sound: Teachers' notes and pupil worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/science/spring2003/pr03.shtml

Try this online activity:

- KS2 Bitesize - Physical processes Changing Sounds [*Flash Activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/physical_processes.shtml

Now try these practical hands-on activities in the classroom. Before you start, describe the activity and ask the children what they expect to happen. At the end of each activity ask them were they surprised with the results and how do they think it worked.

- Exploratorium Make an 'ear guitar'/string telephone [*external link: article*]
http://www.exploratorium.edu/science_explorer/ear_guitar.html
- Exploratorium Make some musical instruments [*external link: article*]
http://homepage.eircom.net/~kogrango/sound_experiments_musicalinstruments.html

How do forces affect how we move?

Encourage the pupils to discuss how objects move. Split the class into small groups. Give each group some toy cars and ask them how to make them move faster, slower or change direction. Then give each group a different surface i.e. sandpaper, mirror,

carpet etc and ask them to repeat the test. Discuss the findings then watch the following clips:

- BBC Primary Focus - Forces and Energy: Movement
 - BBC Primary Focus - Forces and Energy: Friction & Gravity
 - BBC Primary Focus - Forces and Energy: Friction & Resistance
 - BBC Primary Focus - Forces and Energy Rockets
 - BBC Primary Focus - Forces and Energy Levers
- http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/how_do_forces_affect_how_we_move.shtml
- BBC Learning Zone clip 2178: [How is Friction created](#) [*Flash Video*]
<http://www.bbc.co.uk/apps/ifi/learningzone/clips/showrecord?Id=2178>
 - BBC Primary Focus - Forces and Energy Teacher notes and pupil worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/science/spring2003/pr02.shtml

Try this online activity:

- KS2 Bitesize - Physical processes : Forces in Action [*Flash Activity*]
http://www.bbc.co.uk/schools/ks2bitesize/science/activities/forces_action.shtml
- KS2 Bitesize - Physical processes : Friction [*Flash Activity*]
<http://www.bbc.co.uk/schools/ks2bitesize/science/activities/friction.shtml>

Now try these practical hands-on activities in the classroom. Before you start, describe the activity and ask the children what they expect to happen. At the end of each activity ask them were they surprised with the results and how do they think it worked

- Science Museum of Minnesota : Friction [*external link: article*]
<http://www.bbc.co.uk/schools/ks2bitesize/science/activities/friction.shtml>
- Exploratorium Make a roto-coptor [*external link: article*]
http://www.exploratorium.edu/science_explorer/roto-copter.html
- Exploratorium Make flying paper hoops [*external link: article*]
http://www.exploratorium.edu/science_explorer/hoopster.html

Is green power possible?

This section looks more closely at renewable sources of energy. Discuss with the class why renewable energy is important. Do they know any types of renewable energy? Discuss the different types of renewable energy in the following website and try some of the Action Renewables activity sheets.

- Ecoworld - energy : Renewable Energy [*external link: PDF*]
http://www.ecoworld.org.uk/eco_topics/energy/
- Action Renewables activity sheets [*external link: PDF*]
<http://www.wiseuptorenewables.com/keystage2.asp>

Watch the following clips. Ask the class to think about how movement creates the renewable energy. Introduce the phrase 'kinetic energy'; moving water and wind have kinetic energy which can then be transferred into electrical energy.

- BBC Primary Focus- Green Power: Hydroelectric power
- BBC Primary Focus- Green Power: Water wheels
- BBC Primary Focus- Green Power: Wind power
- BBC Primary Focus- Green Power: Wind turbines
http://www.bbc.co.uk/northernireland/forteachers/on_the_move/water/is_green_power_possible.shtml
- BBC Primary Focus- Green Power teacher's notes & worksheets [*PDF*]
http://www.bbc.co.uk/northernireland/schools/4_11/pfocus/geography/spring2002/pr04.shtml

Arrange a visit to a local wind farm to see renewable energy in action or invite an expert in to discuss renewable energy with the class. If the class is enthusiastic about renewable energy discuss the possibility of becoming an eco-school.

- Visit a local wind farm [*external link: PDF*]
<http://www.berr.gov.uk/files/file17803.pdf>
- Invite Action Renewables to your school. [*external link: article*]
<http://www.wiseuptorenewables.com/Introduction.asp>
- Invite Sentinus to your school [*external link: article*]
<http://www.sentinus.co.uk/>
- Become an Eco-school [*external link: article*]
<http://www.eco-schools.org.uk/>

Other useful sites:

- W5 Science and discovery centre Belfast [*external link: article*]
<http://www.w5online.co.uk/site/default.asp?secid=home>
- Science Museum London [*external link: article*]
<http://www.sciencemuseum.org.uk/>