

# WorldWise Week 22-26 June 2015

## Making an Impact



## This year's theme is: Making an Impact

### What is WorldWise Week?

Welcome to the Geographical Association's WorldWise Week (WWW), which is one of a range of young people oriented activities that aims to promote engaging geography within schools and colleges. The activities develop young people's understanding of the concepts, processes and issues that are significant in the twenty first century. See <http://worldwise.geography.org.uk> for full details of the WorldWise activities, which include the **Local Quiz**, the **Online Quizzes**, the **My Places** area, and other activities. We hope you enjoy using this resource pack, which has teaching resources aimed at all ages from Early Years through to Post 16. 'Making an Impact' reflects this year's Presidential theme, and will help teachers to work with young people to consider how geography as a school subject contributes to their everyday lives and consider what makes geography an enabling subject, going beyond the classroom to ensure a geography for life. The dedicated primary resources this year focus on investigating the local area as well as an extra perspective for primary pupils, focussing on food miles. This year there is also a dedicated cross-curricular panel which looks at ideas for practical work to investigate the topic of place. You can use these resources either during the designated week in June, or at a time that is more convenient to you and your school to support geography.

### Where can WorldWise Week take you?

We hope you find this resource pack useful. We also welcome submissions of students' work showing their engagement with this year's theme (please email [rbuck@geography.org.uk](mailto:rbuck@geography.org.uk)). Entries or other feedback from the KS3/4 category can be used in support of your school's overall involvement in WorldWise, with a chance of being invited to take part in the 2016 WorldWise Challenge residential weekend (a membership only opportunity). This event is free-of-charge and provides stimulating up to date fieldwork activities for Y9-Y11 students and accompanying teachers and takes place in May each year. Find out more here: <http://geography.org.uk/news/worldwisechallenge2013>

### How can you use this year's WorldWise Week resource pack?

The suggested activities outlined in the following pages aim to inspire students to appreciate the value geography has to play as a school or academic discipline, whilst also giving them a strong understanding and perspective on real life problems and issues, processes and landscapes that they see and experience around them as well as being able to reflect on and clarify their own views, ideas, values, attitudes and experiences.

## Impact of food mile connections

### Primary

We all need food. Some of us grow our own fruit and vegetables, but the vast majority of our food comes from shops and, especially, supermarkets. As we increasingly rely on these for the food stuffs we want such demands pose two important areas of thought: the impact supermarkets and their 'price wars' have on farmers and producers and, secondly, as we demand foods out of season they have to be transported in, often by plane, hence the term 'food miles'. Considering these issues has a direct impact on children and the future shopping decisions they will make.

### Key Questions

- What foods do the children like?
- Where do they get their food from?
- Do they know where the food comes from?

### Activity One – Local food production

- Look at a local area map and plot where food is found, fish and chip shops etc.
- Take children out to find the places. Use *Roamer* to plot on large local map.
- Make a route around the area with the *Roamer* to collect food in a particular order.



### *How to involve parents/carers...*

- Children prepare a questionnaire about their shopping habits. Ask their family to fill in. Encourage questioning regarding ethical purchasing of products, shopping locally etc.
- Ask the parents to collect any food wrappers or labels for a week before commencing and bring them into school. On a large world map, in groups, children plot where the foods come from. Group foods into continents as practice to solidify the positions and names of them.
- Give prepared shopping list for children as homework. Note price, country of origin and where bought: i.e. supermarket, market, online. Depending on circumstances the children could do a 'pretend shop' not actually buying the goods, but finding them and noting price and where they are available.
- Collate the lists and then the children see what they can find out from them. Let the children think of criteria of how they can sort them, using ICT.

## Activity Two – Mapping foods in your supermarket

Here is a great possible starter for this activity:

<http://www.poetryinternationalweb.net/pi/site/poem/item/8484/auto/SHOPPING-TROLLEY>

Take a trolley around a supermarket and map its journey. This can be done with parents actually in a supermarket, using vocabulary such as left, right, beside, behind, next to etc. Alternatively the children could make their own map of a supermarket and a model trolley out of card and take it for journeys. Create routes, for friends to follow. Choose different types of food to collect, local ones, ones from different parts of the world etc. Children will think about the distances that the foods have travelled to be sold. Some points to consider:

- Some climates are suitable for certain crops such as bananas and coffee.
- Refrigeration, preservatives and fast transportation all mean that foods can survive long journeys.
- Heated greenhouses and other intensive methods enable countries to grow crops out of season, for example we can have strawberries all year round.
- Supermarkets say people want to have access to all kinds of foods all year round.

Pupils need to understand that transporting food over great distances creates a great deal of pollution, and that is one of the key problems with the global trade in food.

## Activity Three - Is there a way that the food miles can be reduced?

- Could people be encouraged to eat food that is in season?
- Are there any local markets, farm shops and vegetable box schemes?
- Can you grow your own fruit and vegetables in a garden or allotment?

### Follow up ideas:

- Producing posters promoting alternate ways of shopping.
- Develop an area in the school grounds to grow food, getting the parents to assist.
- Create a role play area in the class, of a market stall/farm shop.
- If possible, visit a farm shop/market/supermarket to look at the products. Talk to the shop owners about where their products are from.
- Write persuasive letters to supermarkets explaining their concern about the problems with global trade and ask them to stock locally produced food.
- Create data using information they have found.
- Possible debate or role play having people as sellers, shop keepers, buyers etc.
- Conscience alley "Should we stop buying foods that use a lot of air miles?"
- A giant whole school display where a world map could show pictures of foods, or actual labels, and where they come from.
- Class assembly making the rest of the school aware of the problems of food miles and how it can be reduced.



*Challenge* the children to plan a meal for an occasion, such as Sunday lunch, birthday or a celebration. Write a shopping list for their food and then children research how much it would cost and how far the ingredients have travelled. How much can they get that is produced locally? Add up the air miles and see who can get a meal with the lowest air miles. Present their challenge to the class.

*Challenge for KS1...* have food in a shopping bag for the children to pick out and discuss what is in there and where they think it has come from. Sort it into groups at the children's suggestions.

### **Links**

Institute of Science and Society: <http://www.i-sis.org.uk/FMAS.php> provides a wealth of information on food miles and issues of sustainability.

## Impacts of geography in the workplace connections

### Secondary and post-16

Perhaps one of the most important aspects of education is setting students up for the world of work, and how they see subjects as being important to the jobs they aspire to do. Geography has an obvious link to some jobs, and a subtle link to others. However, to truly have an impact on the young people we teach, we must make these job opportunities explicit. It is the skill sets and knowledge which are vital to the workplace (such as evaluating differing opinions, making choices and advisories, working as a team, understanding other cultures and others) and which we need to highlight and pass onto our students to show them how useful their learning is.

#### Key ideas

- Embed the job skills into lessons throughout their time in your classroom.
- Have a specific geography careers lesson or series of lessons.

#### Activity One – Town planning (KS3 – KS5)

When looking at topics such as *settlement*, *sustainability* or even *economic facilities*, you can get students to design a town with certain elements in mind. This can also work well on an individual or group basis, as they will have to continuously evaluate factors and give reasons for their decisions.



#### Activity Two – Farming and soils (KS5)

You could simply host classroom experiments where they work out what type of soil you have presented, but you could, for a longer project, grow plants in different soil types or even experiment with the number of stones to act as drainage.

#### Activity Three – Decision making exercises (KS3 – KS5)

Decision making exercises are a great way to develop work skills with a group of students. Initially you may have to provide roles for them, but it's a great way to get involved with *local issues* to *case studies*. You could get students to link about *environmental impacts* of a new factory in *China*, whether more social houses should be built, or even the impact of a new shopping centre.

#### Activity Four – Tourism (KS3)

When people talk of geography, they often think of travelling or the *tourism* industry. It may be possible to use this impression with classes, and have them complete a small project on one of the new countries that have to be studied at KS3. Can the students advise people where to go, when and why? Encourage them to think of the *weather and climate*, *local culture* and relevant *political advisories*.

#### Activity Five – Natural disasters (KS3 – KS5)

When looking at *natural disasters* or getting students to summarise their learning, they could try their hand at news reading. This could involve explaining the geography to the general public or placing the emphasis on reporting with empathy and understanding.

### **Activity Six – A ‘geography careers’ lesson (KS3 – KS5)**

Plan a ‘geography careers’ lesson or series of lessons, or you could even have a ‘Geography Job Fair’ where students pick a job and research the role of geography in that job. This could include finding out how many geography graduates there are doing a job, what skills and knowledge they would require, and if and how they get those from geography class? They could then share this information with the rest of their class or even another class. You might want to start the session by seeing how many jobs the class can name that require geography, and see if they can name a few more after the sessions. You might want to challenge them to find a job that has no link to geography and see if they can!

### **Activity Seven – Famous people with geography degrees (KS4 and KS5)**

Highlight the famous people with geography degrees. For example, Anita Roddick founder of the Body Shop, Prince William and Michael Jordan have studied for geography degrees according to the University of Florida. Non-famous geographers might also be inspirational to students in your class. You might even be able to use Skype in your classroom to ask them about their career paths.

### **Links**

Famous people with geography degrees: <http://geog.ufl.edu/everything-geography>

## Impacts of local area connections

### EYFS/primary

We must seek views and opinions from young people of all ages, abilities, gender, ethnic and socio-economic backgrounds about what interests and concerns them most. A discussion on the local area is a good place to start with the very youngest children as it is the most relevant to them and the area with which they will be most familiar. Make time to develop conversations seeking their views and perceptions about issues which interest or concern them.



### Key questions

- How does geography help me to understand and appreciate the world around me?
- What is the impact geography has on shaping me and my personal geographies?

### Activity One – Discussing thoughts and feelings about my local area

Most primary schools have a 'buddy system' where Reception class children have a Year 6 buddy. Why not use these to find out what younger children think and feel about their local area, by giving older children a role, acting as scribe to note down the viewpoints of the younger child as they engage in a one to one discussion? This will be less intimidating than a whole class discussion and will encourage all children to share their ideas and viewpoints.

### Activity Two – Comparing my local area with other places

It is useful to provide images and photographs to engage or initiate discussion and compare with the area in which they live. There are helpful resources and ideas on using images from the Geography Action Week 2003 materials or use the GA's *A Different View* manifesto [www.geography.org.uk/resources/adifferentview](http://www.geography.org.uk/resources/adifferentview) for inspiration. Act as scribe to capture their responses or ask the children to draw their responses as a way of recording their ideas.

### Activity Three – Using photos of the local area/landmarks

Use photographs of local landmarks, both beautiful and eye sores, human and physical features. Present children with emotion icons with which they can 'vote' for photographs which make them smile, feel sad or angry or confused where they have questions about. Discuss how things could be changed or they could take action to make a difference. For example, one school arranged for hedges to be cut for safer paths, initiated the building of a park and a new footpath.

### Activity Four – Local area fieldwork

Fieldwork experiences are essential for all children to engage with their world at a local or regional scale. Fine tuning their observational skills by encouraging them to use and record using the senses is a great starting point. Ask children to state what they like or dislike about an area. For suggestions on how to use a tried and tested method of recording these and annotated sketch maps facing in each of the compass directions, see 'Unfolding fieldwork' in the Spring 2014 edition of *Primary Geography* by Chris Trevor with Paula Owens. See: <http://www.geography.org.uk/Journals/Journals.asp?articleID=1139>

### **Activity Five – Memory maps of the local area**

Older children in school can be paired up with KS1 who are asked to draw a memory map of their local area. KS2 children can record responses and the conversations which evolve from the drawing of the map, and annotate with post-it notes. KS2 have an important role as ‘local heroes’ especially in a transition project. They can draw their own maps later, showing what they know or feel about the local area and the impact of geography on themselves.

### **Activity Six – Moving geography, a wider regional and global consideration (matchbox diaries)**

The ways in which geography can make a local impact on our children and their families could be explored by discussing our own personal geographies and the local impact geography made on our family’s decisions to move/relocate across the UK or from abroad. A great way to start would be to explore the story and issues in the beautifully illustrated *The Matchbox Diary* by Paul Fleischman (2013) which tells the story of a poor Italian family having to migrate to the USA, in order to find food and work. “There was a year with no rain. No wheat. No macaroni... A long time later a letter came back, with tickets to sail to America. When we left, my grandmother cried in the road.” All children could produce ‘A map of me’ showing where their grandparents, parents and they were born after research and label it with reasons why families moved to their current home. Make a school map showing where our global/school family community originates from.

### **Links**

[www.geography.org.uk/cpdevents/onlinecpd/globaldimension](http://www.geography.org.uk/cpdevents/onlinecpd/globaldimension) provides inspiration on moving from studying the local area to considering global issues.

## Impacts of transport connections

### Primary and secondary

Transport is something that every student will have an interest in as they grow up. Whether it's catching the bus to school, begging a lift from their parents to a friend's house or taking the train to their first university interview; the efficiency of public transport in particular will play a part in most of their lives. It is always engaging to carry out an enquiry into a local issue. This might be the building of a new by-pass or the construction of a new mini-roundabout, and with the election on the horizon, there is much information available about the different future policies on transport represented through the different political parties.

### Key questions

- How do you travel to school?
- How will I get around in the future?

### Activity One – Transport decisions facing the UK (KS2 – KS4)

The three images below relate to some of the biggest issues surrounding transport in the UK at the moment:

#### HS2 (rail line)



#### Electric cars



#### Heathrow expansion / London's next airport



Choose one of the issues shown above. Use the 5 Ws (David Leat, see links): Who, What, Why, How, Who decides, to generate questions about the topic. Research the topics using the websites indicated below or provide information about your own local issue.

### **HS2:**

The Campaign for the Protection of Rural England: <http://hs2maps.com>

The BBC News summary page: <http://www.bbc.co.uk/news/uk-16473296>

Birmingham's Chamber of commerce support for the scheme:

<http://www.insidermedia.com/insider/midlands/128563-blackett-outlines-hs2-impact>

### **Electric Cars:**

Ten reasons to buy an electric car:

<http://www.hybridcars.com/top-10-reasons-you-should-buy-an-electric-car-now>

Advantages and disadvantages of electric cars:

<http://www.conserve-energy-future.com/advantages-and-disadvantages-of-electric-cars.php>

### **London Airport:**

Proposals outlined:

<http://www.bbc.co.uk/news/magazine-23612511>

Why is more capacity needed?:

<http://www.irishtimes.com/business/transport-and-tourism/uk-airports-losing-business-due-to-heathrow-slots-committee-hears-1.2137598>

### **Activity Two – Transport fieldwork: what impact do roads and traffic have on an area? (KS2 – KS4)**

The 2013 Ofsted Geography subject-specific guidance states that outstanding achievement in geography is demonstrated when: *'Pupils are able to express well-balanced opinions, rooted in very good knowledge and understanding about current and contemporary issues in society and the environment.'* Transport issues provide the basis for classroom debates and the opportunity for students to practice their persuasive writing skills in the preparation of a newspaper article or TV current affairs programme. There is an important role for geography to play in informing and empowering young people to make sure they are part of the decisions that are being made about their future. Enquiries set up about transport issues which are immediately relevant to our students provide the opportunity to enhance their understanding of the world around them and which they live in.

Three ways in which transport routes affect the landscape could be investigated:

#### **a) Vehicles on the road give off gases and create dirt; do these cause problems?**

The Field Studies Council have suggestions of fieldwork designed to investigate air pollution from traffic:

*Air pollution:* <http://www.field-studies-council.org/documents/projects/bordercrossings/Air%20pollution.pdf>

*School run:* <http://www.field-studies-council.org/media/14491/Chapter%204.pdf>

**Question:** Which method of getting to school would you choose?

The aim of the activity is to look at the relative merits of two ways of getting to school. One involves a large vehicle, and the other walking or cycling. Pupils can be encouraged to speculate on the merits of the two options, and make observations about energy and fuel usage related to the two choices. Having discussed and evaluated the two options, pupils are asked to choose which they prefer, giving reasons to justify their choice.

## b) What is the impact of traffic noise in an area?

In 2014 there were 35.2 million vehicles on British roads.

- Use a portable device to record traffic noise at each of your survey sites.
- Assess the noise levels by comparing them with the table below.
- Prepare a recording of different noise levels to make your own noise scale.

### A Scale of Noise

Noise	Approximate decibel level	Description
rustling leaves	10	very faint
Ticking of a watch 1 cm from the ear	30	faint
normal conversation	60	moderate
emergency vehicle travelling quickly	90	loud
pneumatic drill	95	very loud
rock band using amplifiers	110 (+)	extremely loud
jet plane taking off	140	deafening

Compare your results to the maximum noise levels allowed in Australia:

Cars: 90 decibels

Motor bikes: 94 decibels

## c) The visual appearance of the transport route caused by the road and its traffic

- Take photos of your sample areas using a digital camera or your phone.
- Devise a questionnaire that you can ask people to gain their opinion on the effects of the road.

It would also be interesting to compare an environment where cars are not allowed, for example the Channel Island of Sark. How do people get around? How do they get their shopping home? Would this be a realistic option for other parts of the British Isles? If not, why not?

Fig 1 Sark Map



Fig 2 Transport in Sark



"Sark map" by Bohemian Arcade at English Wikipedia. Licensed under CC BY 3.0 via Wikimedia Commons: [http://commons.wikimedia.org/wiki/File:Sark\\_map.png#/media/File:Sark\\_map.png](http://commons.wikimedia.org/wiki/File:Sark_map.png#/media/File:Sark_map.png)

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## Links

Political party transport policies:

Green Party:

<https://www.greenparty.org.uk/we-stand-for/better-transport.html>

Labour Party:

[http://b3cdn.net/labouruk/89012f856521e93a4d\\_phm6bflfq.pdf](http://b3cdn.net/labouruk/89012f856521e93a4d_phm6bflfq.pdf)

Conservative Party:

<https://www.conservatives.com>

Liberal Democrats:

<http://www.libdems.org.uk/safeguarding-the-environment-with-five-green-laws>

*Thinking Through Geography*, David Leat (pub. Chris Kington Publishing): <http://www.geoworld.co.uk/>

## Impacts of travel connections

### Primary and secondary

Travel connects us to people and places, and is an important part of our everyday lives. It has impacts on us ranging from visiting friends and family to going on a trip out or on holiday. The activities below, drawn from the GA's Geography Manifesto *A Different View* (<http://www.geography.org.uk/resources/adifferentview>), will help students explore the impact of travel and the connectedness it brings on their and other people's lives through a range of discussion, group and individual research and presentation exercise. The focus will initially be regional or national, but the tasks equally well suit local fieldwork or discussion of students' own experiences.

### Key questions:

- What impact does your choice of transport have on you, others and the environment?
- Where might you experience different modes of transport and what are their impacts?
- How does travel affect us as individuals and communities?

### Activity One – Making connections (upper KS2 and KS3)

#### What the photo says:

This image, taken in 2007 on the station concourse at London's Waterloo station, is full of movement, energy, possibilities, transience... Here it is used as a basis for an enquiry in the children's local area, building on their everyday experiences, and helping them to realise that geography can be 'about them'. It will also help them to make connections between their own and other places, and encourage them to see places through the eyes of others.



#### a) Match the photo to the location (KS2)

In pairs, children examine the photo, look at the accompanying map(s) and discuss these questions:

- At which of these three stations do you think the photo was taken?
- Why do you think this?
- Which is most likely/least likely?
- Can you think of a reason why the least likely station might look like this?

Encourage use of geographical language and concepts; relationships between places; settlement type and size.

#### b) What is this place like? (KS2)

Imagine being in the station as:

- a seasoned commuter
- a newly arrived traveller
- waiting for someone
- an official
- a pickpocket.

How would these different people feel about/perceive this place? How would they use it? How, for them, is it connected to other places? How are the ways they use this place similar or different?

### c) An imaginative geographical journey around the United Kingdom (KS3)

Set the scene for the task. Explain to students that next week you will be standing on this station concourse, looking for the right train to catch to your first destination. Their task is to plan you a tour of the four capitals of the countries that constitute the United Kingdom, including estimating the cost of the trip (but you will arrange your own accommodation in each city). You need to spend at least one day in each city. To generate competition, you could offer a prize for the student, or group of students, who come up with the cheapest estimate. Using the internet, students investigate the means of completing the journey, producing a detailed itinerary, including locations, times, and costs. They could annotate such details onto Google Maps. There is also an opportunity for students to present their itinerary to the class. Depending on the ability of the class, you could adapt the task to offer more challenge; for example, setting a budget, or restricting travel to certain forms of transport.

### Activity Two – Who are they, where are they going, in control... or lost? (Foundation – KS4)

#### What the photo says:

The central figure in this image taken in 2008 is surrounded by people, and yet she looks quite alone and anxious as she tries to navigate this busy space, where she does not, apparently, 'belong'. You can use this evocative image of Grand Central Station, New York, to consider the idea of places being interconnected through travel and the impact of travel and transport on our quality of life and experience in the urban areas of the modern world. No man is an island: a constant flow of people, goods and ideas pass through all places, from your High Street to a busy Grand Central Station.



#### a) Who are the people around me? Where are they from and where might they be going? (KS2)

Carry out a survey of the class or parents/carers at home to explore these fundamental 'big questions' in geography. Get the students themselves to design the survey. It could include questions on:

- Where people travel from?
- How often people make that journey?
- What mode(s) of transport they use and why?
- How the mode(s) of transport impact on them/others?
- What the impact would be if the mode(s) of transport ceased to exist?

#### b) A distant locality (preferably somewhere that can be visited by train) (EYFS/KS1)

Display the photo on the interactive whiteboard. Start a discussion, using questions like:

- How many people can you see? Is it a busy or quiet place? (Children should notice that there are quite a few people in a small space and that therefore it is relatively busy)
- What do you think the people are doing? (Focus on the group of people and/or on individuals)
- What do you think the people might be looking at?
- What do you think the weather might be like in this place? (Relate to children's own experiences)
- Where do you think this place might be?

At this point tell the children where the photograph was taken and repeat some of the questions, to see if their ideas have changed. Continue the questioning as you think appropriate, including perhaps:

- Who has been to a station before? What did you do there?
- What else might you see at a station?
- Why do people go there?

- Our role play area is going to be a station, what will we need to include?

Look at photographs of different stations (particularly of the locality you are going to be studying) and note similarities and differences.

**c) In control, or lost? (KS3/KS4)**

Show the image to students. Ask them to talk about the central figure in the image.

- Where is she?
- Why is she there?
- Where is she heading?
- What is she thinking?

These points could be annotated on a handout of the photograph or within PowerPoint, as a whole class or individually. Some have suggested that some modes of transport are lonely. Ask students whether they feel this is true. The lyrics to Nova 77's song *Lonely Crowd* ([http://www.allthelyrics.com/lyrics/nova77/lonely\\_crowd-lyrics-1245669.html](http://www.allthelyrics.com/lyrics/nova77/lonely_crowd-lyrics-1245669.html)) could be a source of inspiration. Follow this by asking students what other characteristics they associate with transport and urban life: they can then discuss the positive impacts of transport and urban life on them.

## Impacts of weather connections

### Primary and secondary

The weather is something we all experience every day of our lives. Most of the time it is benign and we probably hardly even notice it or give it a second thought, but sometimes it is extreme and as a result it has a significant impact on our daily activities. The following activities will help students consider how the weather has an impact on their lives. They provide an opportunity to explore their connection with the weather at both a local scale (via fieldwork in the school grounds) and a national and international scale (by investigating how the weather we experience in the UK is influenced or controlled by weather events on the other side of the globe).

#### Key questions:

- How much are you aware of the weather around you at any given time or day?
- What affects do you think the weather can have you and your life?
- Why might other people, and people doing certain jobs be affected by the weather?

#### Activity One – Make your own Met Office weather station (KS2 and KS3)

Instructions from: <http://www.metoffice.gov.uk/education/kids/things-to-do/weather-station>

##### a) Rain gauge

What you will need:

- An empty plastic bottle (2 litre fizzy drink bottle would be ideal)
- Scissors
- Sticky tape
- Ruler
- Paper
- Pencil



What to do:

1. Cut around the plastic bottle about two thirds of the way up.
2. Turn the top part of the bottle upside down and place it inside the bottom part - fix it in place using the tape.
3. Make a scale in centimetres on a piece of tape, using a ruler, and fix it to the side of your bottle.
4. Find a place outside to put your rain gauge. It must be open and away from trees.
5. Dig a hole and bury your rain gauge so that the top is sticking out about 5 cm out of the ground. This will stop the rain gauge from blowing down on windy days.
6. Check the rain gauge every day at the same time, measure the amount of rain collected, and empty the bottle. Don't forget to write down the amount of rain collected in your weather diary.

## b) Wind vane

What you will need:

- A ruler
- A pen top
- A plastic fizzy drink bottle
- Card
- A knitting needle
- Matchsticks
- A cork
- Sand
- Blu-Tack (or similar)



What to do:

1. Draw an arrow 25 cm long on the card and cut it out.
2. Make another arrow by drawing around the first arrow and cutting it out.
3. Place the pen top between the arrows, in the centre facing down, and glue together.
4. Push four matchsticks into the long edge of the cork at right angles to each other.
5. Cut out four small squares of card and label with the four main points of the compass; N, E, S, W. Attach these to the end of each matchstick with Blu-tack.
6. Fill the bottle with sand.
7. Push the knitting needle into the cork and push the cork in the top of the bottle. Now balance the wind vane arrows on top of the needle.
8. Choose an open area, perhaps near your rain gauge, to place your wind vane. Ask an adult or use a compass to point the N label on the bottle towards North. The arrow always shows the direction the wind is blowing from.

## c) Stephenson screen for a thermometer

What you will need:

- A sturdy plastic or wooden box that can stand on its side
- White paint
- A thermometer
- Blu-Tack (or similar)

What to do:

1. Paint the outside of your box white and wait until it's dry.
2. Stick the thermometer to the back of the inside of the box using Blu-Tack.
3. Take the box outside and find a safe, shady place to keep it.
4. Stand the box on its side so that the thermometer is upright at the back of the box and protected from direct weather conditions.
5. Now you can take temperature readings at the same time every day.



#### d) Weather diary and discussion

You need a weather diary to record the measurements from your weather station at least once a day. The measurements must be done at the same times each day.

Met Office weather diary template (PDF): [http://www.metoffice.gov.uk/media/pdf/t/o/weather\\_diary.pdf](http://www.metoffice.gov.uk/media/pdf/t/o/weather_diary.pdf)

After a week's worth of recordings discuss as a class what you have discovered. Try to make links as to how the changing conditions impacted on you, what you did, how you felt, and anything you couldn't do because of the weather...

#### Activity Two – Why do changes in rainfall in Indonesia mean the UK has severe winter storms? (KS4 and KS5)

Ideas taken from: <http://www.geography.org.uk/resources/2014ukfloods/>

- Parts of the UK, particularly the south of England and south Wales, were battered by storms from December 2013 – February 2014.
- Prolonged rain, hurricane force winds and tidal surges caused widespread flooding, power cuts and major disruptions to transport.
- Some of the worst affected areas were Somerset, Devon, Dorset and Cornwall in the south west and the Thames Valley in the south east.
- The storms, responsible for the wettest December to January period since 1876, wind speeds up to 100mph and the destruction of homes and infrastructure, originated from the Atlantic.

But what caused this? What were the chain of events that caused the UK to have such a severe winter?

#### a) Investigating the causes

Get students to research and discuss the global perspective on the storms and floods. The article here could form a starting point: <http://www.metoffice.gov.uk/research/news/2014/uk-storms-and-floods>. It is now suggested that this was only part of the chain of events which led to the UK experience so many winter storms.

See if students can track back the following causal chain:

- Strong El Nino in the southern Pacific Ocean
- Unusual rainfall patterns in Indonesia
- More southerly looping Jet stream across South East Asia
- Strong Polar Vortex over Canada and the USA  
[http://en.wikipedia.org/wiki/2013%E2%80%9314\\_North\\_American\\_cold\\_wave](http://en.wikipedia.org/wiki/2013%E2%80%9314_North_American_cold_wave)
- Straighter and more powerful Jet Stream across the North Atlantic
- Increase in severity and frequency of winter storms impacting the UK  
[https://www.youtube.com/watch?v=3-76Z-zhPyQ&feature=c4-overview-vl&list=PLGVVqeJodR\\_ZBjt6us\\_zdzPw89ITnJvec](https://www.youtube.com/watch?v=3-76Z-zhPyQ&feature=c4-overview-vl&list=PLGVVqeJodR_ZBjt6us_zdzPw89ITnJvec)

Further information can be found at:

[http://www.metoffice.gov.uk/media/pdf/n/i/Recent\\_Storms\\_Briefing\\_Final\\_07023.pdf](http://www.metoffice.gov.uk/media/pdf/n/i/Recent_Storms_Briefing_Final_07023.pdf)

#### b) News report or blog

The report [http://www.metoffice.gov.uk/media/pdf/n/i/Recent\\_Storms\\_Briefing\\_Final\\_07023.pdf](http://www.metoffice.gov.uk/media/pdf/n/i/Recent_Storms_Briefing_Final_07023.pdf) could be used to create a news report, episode of a documentary series (e.g. BBC's Horizon), or a blog of no more than 200 words to explain/summarise the causes of the 2013-14 severe winter storms in the UK. The information gathering could be carried out using envoy groupings, information retrieval/memory recall, or snowball groupings. The key to the successfully completing the task is to extract key information and to present them concisely

## Links

Met Office (Education page): <http://www.metoffice.gov.uk/education/>

Case study of a school weather station: <http://www.geography.org.uk/resources/weatherstation/#top>

A wealth of other weather related resources (along with materials for many other topics) are available on the Geographical Association's website: <http://www.geography.org.uk/resources/>

## Impacts of place connections

### Cross-curricular

Place is a way of seeing, knowing and understanding the world. This overarching idea will drive the individual and group enquiry responses and exploration of this place can lead to a number of strands incorporating science (particularly aspects of biology), history, English and aspects of community and a schools provision of SMSC. The aim is to explore place with young people. This can be carried out in the context of the school grounds, a small area of the local community or a more distant place visited on a field excursion. *‘Geographical fieldwork can be used ‘to inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives’ (DfE, 2013)*

#### Key question:

- Whose place is it?

#### Activity

##### a) Introduction

*1. Key Questions:* This is in the context of exploring a local place with your students. What does/could this question mean? What other questions are useful? Ask the students to work in groups and brainstorm a list of enquiry questions. This encourages whole class and group discussion. Prompts for session responses (these prompts will need to be adapted to suit the age of the young people but are designed to encourage thinking about place and ownership in its widest sense – from minibeasts and vegetation to human impact and management). The final prompts should be laminated and laid out on table for groups to discuss. There should be a large sheet of paper on each table for groups to record their responses.



#### Consider:

- How do 'we' define the 'where'? How might 'others' define the where? This could involve questions about scale and boundary. Can you 'bound' a place? How local/global ought a response to be?
- Who needs to be considered? E.g. humans, other living things (minibeasts, vegetation etc., community groups. Ask them to think about the 'who/what lives here' question? This can lead to exploration/identification of other creatures and/or vegetation that make their home in the environment, either planned or encroaching onto the planned environment (weeds, vegetation successions, mosses etc.)
- Who works here? Different age groups? Different kinds of users?
- How do different users conceptualise and perceive place? What is the relationship between values and actions - what people do?
- Who makes decisions? What about future scenarios and sustainability? Is there an ideal answer? Will everyone have the same views? How do we manage a place into the future? Who decides? Why? Who benefits?
- Can you feel connected to a place without living there? What makes a special place? What about emotional engagement and how does this influence values?

- How might going outside change your questions/perceptions?

2. *What and How*: Ask the young people to identify what they might need to know, how they might find out etc., what tools they need...

3. *Active Fieldwork*: Everyone goes outside to do active enquiry. The degree of teacher control is within the choice of the individual teacher depending on their judgement of the ability and nature of the group. A choice of several techniques may be offered for the pupils to choose from and the pupils undertake the fieldwork tasks with their chosen tools and equipment. Data is collected and brought back to the classroom.

4. *Communication*: Back in class, groups work to devise a way of sharing their data and communicating learning and ideas.

5. *Think about it*: Each person in the group has these procedural tasks, using their data:

- Find data that contribute to answering the overarching question(s) and prepare a response, identifying further questions as appropriate
- Think about and articulate the relationships between the different kinds of data and how relevant they are (see 'Outcomes' below)

6. *Reflect*: Participants consider what they did, where and why. Why did people choose where to sample? Is this representative? How do we consider sampling techniques?

7. *Wider Context*: What jobs do people do that deal with these kinds of questions and issues? Who would you want to interview and why? (In job terms).

8. *What have we learnt?* Participants take their ideas and thoughts into follow up session.



## b) Outcomes

There may well be three groups of outcomes:

1. *Hard facts*: Outcomes that seek hard facts or core knowledge (cognitive) (e.g. 'What is the temperature here? Where is this place? What are people doing here?') The kinds of data which generate this type of outcome might include:

- Temperature (thermometer/data logger)
- Wind speed and direction (anemometer)
- Pressure (barometer)
- Moisture (whirling hygrometer)
- Precipitation
- Absolute geo- reference map and hand held device
- Cloud type and cover (identified using a key)
- Feature names and typologies (post-its/note pads) features, organisms etc.
- Slope angles (clinometers)

2. *Perspectives and values – others*: Outcomes that seek perspectives - values, opinions etc., contested, dynamic knowledge from different viewpoints (empathic) (e.g. What do people think about this place?)

- What is this place? Personal interpretation. How noisy? Nature of noise?
- How do we feel and why?

3. *Perspectives and values – personal*: Outcomes that convey a personal sense of place - feelings, descriptions, perceptions (emotive, affective) (e.g. How do I feel about this place?)



- Ideas will include ideal and natural habitats, human and physical processes, global influences.

### Links/Materials/Tools

a) Resources (in **bold** indicates ones that need laminating and making into sets):

- **Laminated activity card sets** for people to browse and select. Colour coded to indicate type of data collected re 'Outcomes' above i.e. Hard Facts, Values of others and personal values.
- Post it notes for additional ideas and data collection
- Paper, pens
- Fieldwork Notes handout per person
- Emoticons / worksheets
- Double sided tape on card strips to gather evidence of plant life / colours
- String and masking tape
- **Laminated tracing sheets**
- Questionnaires
- Environmental assessment scales
- **Paper maps at topographical level** of campus (one per group)
  - 1 x topographical
  - 1 x 10000
  - 1 x 25000

b) Tools:

- Each group to have access to a kit of resources
- iPads/tablets (one per group of 4 – 5)
- Access to Digimap for School (or equivalent) for the sessions
- Data loggers
- Compasses and GIS tech
- Cameras/phones
- Mini quadrants (e.g. tiny circle outlines that could be put on the ground, GIS referenced)
- Light meters

c) Apps:

- A selection of free apps for collecting data e.g. Fieldnotes
- FreezeFrame
- Audio recording App
- Mapping / GIS Apps
- App to gather emotional feelings at GIS points