

HABITATS TRAIL

Keystage: 2

Location: Site

Devising keys for the main features of the sites.

Learning Outcomes

1. To identify similarities and differences between local environments and ways in which these affect animals and plants that are found there.
2. To use appropriate geographical vocabulary and fieldwork techniques (KS2- Geography 2a,b).
3. To use maps and plans at a range of scales (KS2- Geography 2c).
4. To identify habitats on the site, observe their key features and record their locations.

Equipment:

1. Base maps of site - see Appendix 2 (enough copies for one per child/group of children)
2. Clipboards
3. (Coloured) pencils

Pre-Visit

Using coloured pencils the pupils should create a colour key on the base map for the main vegetation types. They should also consider and add symbols that could be used for natural and/or man-made features e.g. stream, bridge etc.

Activity

1. Identify your location and the main boundaries and paths on the map. Show the children how to orientate their base map (so both map and child face in the same direction).
2. Walk slowly through the site, with the children adding appropriate symbols/colours from their key to their map. Additional symbols/keys can be devised and added for other features, natural/man-made identified.
3. Neat copies of the pupils' maps can be drawn up back at school.

Extensions:

- Could incorporate compass work at the orientate map stage.
- Look at different ways of shading maps, such as by colour or by pattern.
- Could record other information on the map including information necessary to make a model of the site (See Activity W4 - Sustainability for Real).
- Use Appendix 31, Park Features Comparison Sheet, to compare two different sites.
- Do with Activity M2 – Journey Sticks.

Skills:

- Mapping
- Creating and using keys
- Team work
- Habitat/vegetation recognition
- Recording information

Key Words:

- Key
- Scale
- Orientate
- Boundaries
- Vegetation

JOURNEY STICKS

Activity M2

Keystage: 2 (or 1 if using pipe-cleaners)

Location: Site

A creative and visual way to gather natural materials to record your trail around the park.



Equipment:

- Lengths of wool or pipe-cleaners
- Scissors
- Map (Appendix 2) or good knowledge of the route you are to walk

Learning Outcomes

- To be able to compare different ways to navigate and remember a route;
- To develop observational skills through recognising key features.
- To be able to recall an experience using their visual aid.

Activity

1. Discuss how we can find our way around different places – e.g. maps, compass, verbal directions, sat-nav. If we could not use these, what would help us to remember a route?
2. “The Native Americans used to decorate a stick to remind them of places they passed on their route, so they could tell others about it.
3. “On our route today we are going to make one of these ‘Journey Sticks’ to help us remember what we learn about different areas of the park.”
4. Explain that the children will need to find a stick off the ground (be clear how they must behave with a stick) and that they will be using lengths of wool (or pipe-cleaners for younger children) to secure items onto the stick at different stages of their journey.
5. Provide the adults with scissors and wool (or pipe-cleaners).
6. Once everyone is clear on what they are to do, ask them to find a stick.
7. Start your walk, stopping at key turning points and places of interest to gather natural items and attach them onto the stick using some wool/a pipe-cleaner. E.g. different leaves, plants representative of different habitats or features, cones, seeds, feathers, bark etc.
8. On completion of the walk, ask for volunteers to describe the journey using their sticks to help them. Highlight differences between stories of the same journey to demonstrate that the journey is a personal experience, with different people finding certain places or events more memorable or significant than others.

As an alternative, you could gather materials in bags en route, then make the journey sticks later, inside.

Extensions:

- Use with Activity M8 – History Trail, which includes hints for items to collect at each point.
- Write about your journeys, or a certain part of them.
- Evaluate how effective the journey stick is as a way of remembering and explaining a journey.
- Compare and contrast different ways of navigation and recording, with particular emphasis on their sustainability.

Skills:

- Habitat/vegetation recognition
- Recording information
- Observation
- Navigation

Key Words:

- Location
- Route
- Zones
- Boundaries
- Vegetation

SUSTAINABILITY FOR REAL

Activity M3

Keystage: 2

Location: Site and classroom

A useful way for pupils to pinpoint problems on the site and consider how it could be improved.

Learning Outcomes

1. To recognise how people can improve the environment or damage it, and how decisions about places and environments affect the future quality of people's lives (KS2- Geography 5a).
2. To develop decision making skills, for ideas to improve an area (KS2- Geography, 2g).
3. To recognise how and why people may seek to manage environments sustainably, and to identify opportunities for their own involvement (KS2- Geography 5b).

Equipment:

1. Base maps of site - see Appendix 2 (enough copies for one per child/group of children)
2. Clipboards and pencils
3. Human Impact Prompt Sheet (overleaf)
Then at school:
4. Enlarged (e.g. A2) map of the site mounted onto foam board/polystyrene
5. Cocktail/matchsticks
6. A4 scrap paper to make small flags
7. Glue/sellatape
8. Optional - Ready prepared cut out flags with ideas for improvements written on

Activity

1. Identify your location and the main boundaries and paths on the map. Show the children how to orientate their base map (so both map and children face in the same direction).
2. Instruct the pupils to walk around the site in their groups observing and recording any problems and writing potential improvements on their map. A colour coded key to show good/bad features may help. They could also take photographs with a digital camera.
3. Back at school, the pupils should make small flags using the scrap paper and cocktail/matchsticks. They should then write their suggestions for improvement onto these flags and stick them into the mounted map in the appropriate places.
4. Photographs could be used to create a display.

Extensions:

- Do the activity above giving each group of children a different role/user group. Ask them to look for problems specifically relating to their user group - For example: old people, parents with young children, disabled, teenagers, cyclists etc.
- Using materials such as polystyrene etc., the pupils could make a three-dimensional model of the site and stick their flags with potential improvements into it.
- See Human Impact Prompt Sheet for examples of problems which may face some of the sites.
- Ask the pupils to consider who could implement the suggested improvements and what the cost of this may be. Write letters to e.g. council etc. about your ideas.
- Ask the pupils to make a model of their school and grounds; this could be used as part of a consultation with pupils, parents, staff and other user groups, looking at a wide range of sustainability issues from road safety to vandalism hotspots.
- Use Appendix 31 – Parks Features Comparison Sheet to compare two or more sites.

Skills:

- Geog KS2
- Mapping
- Recording information
- Role play
- Creative thinking
- Model making
- Estimating costs
- Letter writing

Key Words:

- Sustainability
- Orientate
- Boundaries
- Human Impact
- Problems
- Improvements

HUMAN IMPACT PROMPT SHEET

For use with Activity M3 SUSTAINABILITY FOR REAL

Local groups (for a debating/role play activity)

- Industries/adjacent landowners
- Conservation group
- Parents with young children
- Older residents
- Teenagers/young people
- City Council
- School Staff and/or Students

Potential Threats/Negative Issues

- Development
 - Housing
 - Theme Park
 - Industrial use
 - Superstore
 - Road building
- Dog Faeces
- Vandalism - to natural/built feature - e.g. fire, graffiti
- Anti-social/threatening behaviour
- Cycling/trail bikes- damage to habitats/danger to other users
- Fly-tipping/litter/pollution
- Noise
- Hunting/Threats to Wildlife
- Volume of visitors - erosion/trampling
- Invasive species of plants (possibly introduced through garden waste)

Problems

- Poor access for disabled/pushchairs etc.
- Poorly signposted from main road
- Not easily accessed by public transport
- Steep slopes
- Muddy paths

Potential Improvements

- Install steps/boardwalks/bridges
- Surfaced paths
- Clear/thin invasive species
- Improved access points
- Interpretation/signage
- Circular walks
- Dog bins at entrances
- Safety fencing/handrails where appropriate
- Pond dipping platform (where practical)
- Bird/bat boxes
- Wildlife habitat piles
- 'No-go' areas to protect sensitive plants/endangered animals
- Recruit more people to the 'Friends of' group to help warden the site

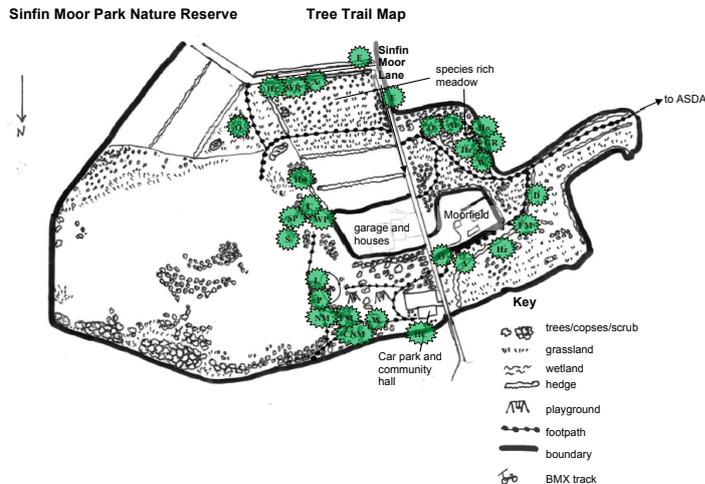
TREE TRAIL

Activity M4

Keystage: 1 or 2

Location: Site

Use the Tree Trail Map to discover the variety of trees and investigate their wonder. Link with the Tree Activities to create an interesting session with a clear tree focus.



Equipment:

1. Tree Hunt maps (Appendix 3)
2. Leaf Hunt sheets
3. (Appendix 3)
4. OR – 'Tree Hunt Leaflet' (Appendix 3)
5. Bags to collect leaves
6. Pencils
7. Clipboards
8. Leaf identification guides (Appendix 4)

Learning Outcomes

1. That a wide variety of trees grow in Sinfin Moor Park Nature Reserve.
2. That trees can be identified through their leaf shape, by matching them to a picture.
3. That maps and trails can provide a tool to help find certain features in an area.

Activity

Option 1 (For older/more capable children):

Pupils to have both map and leaf hunt sheets (or Tree Hunt Leaflet).

1. Identify your location and the main boundaries and paths on the map. Show the children how to orientate their base map (so both map and children face in the same direction).
2. Instruct the pupils to walk around the site in their groups (with supervision) to find the points where the various trees can be located.
3. At each point they should hunt for the relevant tree.
4. Once they have found it, they should collect a leaf (per group) and tick that tree off on their list.

Option 2 (For younger/less able children):

Pupils to have only the leaf hunt sheets. Leader to have the map.

1. Identify your location and the main boundaries and paths on the map.
2. Guide the pupils around the site to find the points where the various trees can be located.
3. At each point they should hunt for the relevant tree.
4. Once they have found it, they should collect a leaf (per group) and tick that tree off on their list.

Option 3 (For older/more capable children):

Pupils to have only the leaf hunt sheets (or to make it trickier, leaf identification branching keys). Leader to have the map.

1. Prior to the visit, familiarise yourself with the trail and select the trees you want the children to identify (if using keys, make sure they are on the key).
2. Identify your location and the main boundaries and paths on the map.
3. Guide the pupils around the site to find the trees you would like them to identify.
4. At each point, the children should identify the given tree using the leaf hunt sheets, or the leaf identification branching keys.
5. Once they have identified it, they should collect a leaf (per group) and tick that tree off on their list, or make a record of what they identified.

Extensions:

- Add in some of the Tree Activities to make your trail more varied.
- Look up some useful words for describing the shapes of leaves: pinnate; lobed; compound; elongated; oval; hand-shaped; toothed; hairy. Many of these will be mentioned on the branching identification keys.
- Research the trees you have found: Are they British (if not, where did they come from)? What wildlife do they support? Are they evergreen or deciduous? Broadleaved or coniferous (or both, in the case of Alder!)? What can you use the wood, leaves, flowers etc. for? Is there any interesting folklore?
- Do a full tree survey of the park, making a tally of the trees growing there. Present findings in graphs and identify any types of tree which are under-represented (this may not be a bad thing). Report any conclusions and recommendations back to the council or friends group.

Skills:

- Mapping
- Recording information
- Leaf identification
- Matching complex shapes

Key Words:

- Identification
- Orientate
- Location
- Variation
- Diversity
- Deciduous / Evergreen
- Broadleaved
- Coniferous

SURVIVAL HUNT

Location: Site

Keystage: 2 or 3

This activity encourages the pupils to work as a team to discover the resources which could be useful for survival if stranded out in the wilds! The route can include parts of the tree trail.

Learning Outcomes

1. That humans (and animals) need food for activity and growth and ultimately survival (KS2-Sc2, 2b).
2. That a variety of natural resources can be used for food and shelter, and that these vary seasonally.
3. That correct identification of edible plants is essential to avoid poisoning!

Equipment:

1. Clipboards and pencils (one per group)
2. Survival Hunt worksheets/checklists (one per group)
3. Tree Hunt Map and Leaf Hunt Sheets - Appendix 3
4. Tree identification guides - Appendix 4 (one per group)
5. Fungi identification guides - Appendix 5 (optional)
6. Bag to collect leaves in.

Activity

1. Prior to the activity, pre-walk the route to check the locations of the various resources. Use the Tree Hunt Map to help you. Gather example leaves etc. to show the pupils at school.
2. Discuss the key resources needed for survival. Write them on the board.
3. Divide the class into teams of 4-6 pupils. Encourage each team to think of a name. Give each team a clipboard, pencil, checklist and tree ID guide.
4. At the site, explain that they are going to walk a route looking for the resources on the worksheets. When they find each resource they should tick them off, remembering that some resources can be used in more than one section. In addition, for trees only, each group should take an example leaf from each tree, preferably off the ground.
5. Follow the route, along the path. Depending on ability, encourage pupils to find the plants themselves. Showing an example leaf will help them with this.
6. On returning to school, examine the tree leaves which have been found and find out which group has found the most resources (which has most ticks). Also discuss the questions requiring a written answer, such as 'other resources'. If possible provide an appropriate prize for the winning team.

Extensions:

- Make the session more practical and fun by starting with shelter building, then moving onto sourcing food and other resources. This could extend the session over a whole day.
- Encourage the use of all the senses (except taste!). The Smelly Cocktails activity can easily be incorporated.
- The pupils could use their survival knowledge to create a role-play about a survival story. This could be acted on site using shelters they have created etc.
- Consider the seasonal variations in resources available.

Skills:

- Observation – using all senses
- Reading factual information
- Listening to instructions/facts
- Cross-referencing

Key Words:

- Weaving
- Shelter
- Herb
- Different plant names
- Survival

Survival in the Wilds at Sinfin Moor Park Nature Reserve

TEAM NAME: _____

Imagine you are stranded in a wild place. For your survival you will need **food**, **water** and **shelter**. You will also need **fuel** to cook and keep warm. You may also consider how you are going to get home, so **transport** and communication may be important issues. Depending on how long you are stuck for, you may need some extra **clothing** or shoes and you may need some **tools** to help you in your daily tasks. Examples of natural resources to give you all these can be found on this site.

Use the hints below to find as many natural resources as you can from each section. Tick each box when you have found the resource shown in **bold type**, fill in any blanks and answer the questions. For trees, use the Tree Guides to identify them and collect a leaf from each relevant tree to prove you have found them. Pictures of other useful plants you may find are provided.

SHELTER

- Hazel** branches can be woven to make a shelter.
- Willow** branches can also be woven to make a shelter.
- Mud**, mixed with **leaves** could be used to waterproof the shelter.
- Leaves** could be laid over the shelter.

If there was not enough time to make a shelter, where would you choose to sleep for the night?

FOOD

From trees and shrubs:

- Elder** trees produce fruit and flowers which can be made into wines and jam containing lots of Vitamin C. The flowers can be eaten straight off the tree, and the young buds used in salads.
- Other **berries** such as those of the **cherry**, **hawthorn** and **rowan** can also be used for jelly preserves.
- Brambles** produce **blackberries** in late summer and early autumn.
- The young leaves of **Hawthorn** can be used for salads in April.
- The kernels (insides) of acorns from **oaks** can be chopped up and roasted. They are a bit like almonds. A warm drink can also be made as a substitute for coffee.
- Hazelnuts** can be harvested from mid September.
- Lime** leaves can be collected in high summer before the leaves roughen. Wash them well and remove stalks (apparently they make a good sandwich). In late June and July, the dried yellow flowers can be used to make a tea. This is sold in France as *Tilleul*.

FOOD

From other plants:

Nettles are a good source of Vitamin C. They can be used in soups and stews or cooked like spinach.

The young shoots of **Rosebay Willowherb** are very bitter, but are eaten like asparagus in parts of America and N. Europe.

Umbellifers are the Carrot Family. Many plants can be eaten (roots, shoots etc.) but you need to be able to identify them because some are *poisonous*.

Plantain often grows in grassland. Its leaves can be cooked and used like spinach.



FOOD

From animals:

The **ponds** provide homes for creatures which could be caught and used for food. These are:

(Remember this is not allowed, except by special licence!)

What other creatures live on the land, which in days gone by would have been a food source?

FOOD

From Fungi

Many **fungi** are edible. Autumn is an excellent time to spot fungi, but some are poisonous so **DO NOT TOUCH!** Unless you are with an expert, it is best not to risk eating these wild mushrooms.

Describe or sketch below any fungi you find.

CLOTHING

The fibres from **nettle** stems can be woven to make cloth.

Alder wood can be used to make clogs.



WATER

The _____ is a source of water.

FUEL

Fallen wood from trees

Hazel trees can be coppiced to provide firewood and to make charcoal.

Willow trees can be coppiced to provide firewood.

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| TOOLS | |
| <input type="checkbox"/> Elder wood could be used to make combs and wooden spoons. The stems can be hollowed into whistles which might be useful to gain the attention of a passer-by. <input type="checkbox"/> Silver birch branches can be used to make besom brooms and forest fire beaters. <input type="checkbox"/> Bows and arrows for hunting could be made from willow . | |
| TRANSPORT | OTHER - Write anything else you have found which might be useful on the back of this sheet. Explain why. |
| <input type="checkbox"/> Ash timber is useful for wheels. | |

Survival Tactics:

- Remain with your team at all times.
- Work together, reaching joint decisions.
- Divide your tasks fairly.
- Stay within sight and speaking/hearing distance of your adult leader.
- Stay away from the banks of the brook.
- Look after the wildlife – the nature reserve is their home.
- Don't eat anything you find, special preparation is normally required and you might not have the right thing!
- Don't put your fingers in your mouth/eyes.
- Wash your hands before eating.

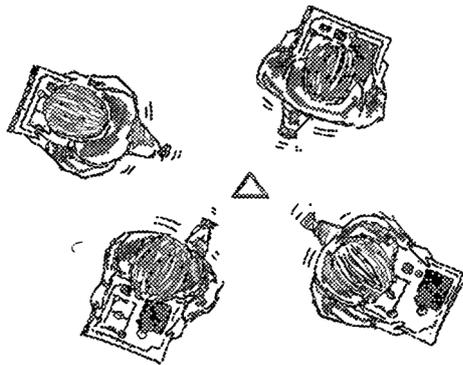
And finally, remember to stay quiet so you don't scare all the animals away!

ORIENTEERING STAR EXERCISE

Location: Site

Keystage: 2

Good for mixed ability groups. It familiarises pupils with an area and encourages them to maintain contact with the map. The site has a conventional orienteering trail, but this activity is for the more confined meadow area near the large pond/pumping station etc.



Equipment:

1. Markers with pictures and code letters – see Appendix 7 for masters to copy and laminate.
2. Copy of orienteering plan for the site – Appendix 6 (per pupil or pairs/threes).
3. Clipboards and Pencils.
4. Whistle.

Learning Outcomes

1. To use appropriate geographical vocabulary and fieldwork techniques (KS2- Geography 2a,b).
2. To use maps and plans at a range of scales (KS2- Geography 2c).

Preparation for activity

1. Hang the markers (controls) around the site as indicated by the map.
2. Provide pupils with a copy of the map and a pencil.
3. Explain the key and ensure maps are correctly set - i.e. What they can see lines up with what is on their map.

Activity

1. Number the children to indicate which control each one is to find first - e.g. No. 6 goes to control 6 first.
2. Pupils should record the control letter in the correct box on the map. **DO NOT** remove the controls.
3. Each child must return to the base (teacher) after finding each control.
4. Teacher checks the letter and continues to give the pupils numbers until they have visited every point. (Map must be set with pupil facing right direction each time.)
5. When they have found all letters, unscramble them to spell the word.

Extension:

1. Provide the pupils with scores for each control.
2. The purpose is to visit as many controls as possible within the time limit set (5-10mins) and record the pictures in the correct box. Controls can be visited in any order and they are to get as high a score as possible.
3. Start pupils on mass. They must decide which order to find the controls to get the highest score.
4. Either stop everyone after the set time limit (using the whistle), or deduct 5 points for every minute over the set time limit.

Skills:

- Orientation
- Setting a map
- Decision making
- Thinking sequence
- Scoring
- Geog KS2

Key Words:

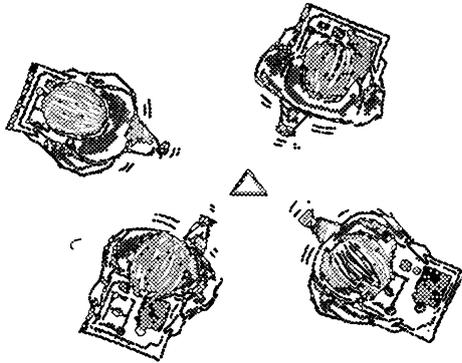
- Map contact
- Control
- Base
- Setting the map
- Orientate
- Score

ORIENTEERING 'POINT TO POINT'

Location: Site

Keystage: 1

The site has a conventional orienteering trail, but this activity is for the more confined meadow area near the large pond/pumping station etc.



Equipment:

1. 6-8 control markers or coloured tapes with matching wax crayons attached.
2. Orienteering map for the site. (Appendix 6)
3. Clipboards

Learning Outcomes

1. To remind the children that they should see the map as a picture.
2. To teach rotating the map so that one always faces the direction of travel.

Preparation

1. Mark all control sites on children's maps with red circles and number them.
2. Mark start/finish with a triangle.
3. Set out the control markers and crayons.
4. Try to identify an obvious feature to use as the main reference line for setting the map eg. wall, road, hedge, stream. Highlight this edge of the map.
5. Familiarise the pupils with the symbols on the map and if required do a practice exercise in the hall/classroom beforehand using PE equipment and a simple plan.

Activity

1. Start at the triangle, set the map using the coloured edge to help (lay it on the ground).
2. Find control no. 1 on the map. Walk around map until you are looking in the direction of the control as viewed from the start. Pick up the map. You are now facing along the route you want to follow. All go to 1.
3. At each control - Set the map
 - Find the next control (What is it?)
 - Walk around the map until you're facing the right way
 - Look – walk to marker
4. Send children around on own (or in pairs) in reverse control order, this time ask them to colour the circles with the wax crayon at each point.
5. Check each child has used the correct colour at each point.

Extensions:

- Once each child has visited all controls in the right order, send them round again. Change the order in which controls are visited each time. eg. 3,1,5,4,2.
- Draw the symbols from the map and write the name beside each to make a key.

Skills:

- Team work
- Orientation
- Setting the map
- Thinking sequence
- Symbol recognition
- Geog KS1

Key Words:

- Symbol
- Rotation
- Orientate
- Map contact
- Control
- Base
- Setting the map

HISTORY TRAIL

Keystage: 2 or 3

Location: Site

Identify evidence of past land use and compare it with the present day.



Photo Courtesy of Donald Barker (Taken from www.sinfin-derby.co.uk)

Equipment:

1. Clipboards and pencils (one per group)
2. History Trail Maps, with features to label - Appendix 8
3. History Trail Leader's Script - Appendix 8
4. History Trail Images – Appendix 9
5. Historical Maps - Appendix 10

Learning Outcomes

1. To find out about events, people and changes using an appropriate range of information including maps, text and pictures (KS2- History, 4a).
2. To investigate how an aspect in the local area has changed over a long period of time (KS2- History, 6 and 7).
3. To use appropriate geographical vocabulary and fieldwork techniques (KS2- Geography 2a,b).
4. To use maps and plans at a range of scales (KS2- Geography 2c).
5. To identify how and why places change (KS2- Geography 3e).

Activity

This activity can be done in smaller groups with an adult leading each group, or as a whole class/group. If as a whole class, it would be wise to put them into groups of four or five, each with a map and a laminated set of the History Trail Images.

1. Identify your location and the main boundaries and features on the maps. Show the children how to orientate their base map (so both map and child face in the same direction).
2. Walk slowly through the site, stopping at each of the points marked on the Historical Trail Leader's Map. At each point, the leader should read out the text and ensure each participant looks at any pictures or maps for that point.
3. Ask the participants to mark the features on the History Trail Maps. Alternatively, you could link this with Activity M2 - Journey Sticks, with pupils collecting an appropriate item at each point, to remind them of their 'journey through time and space'!

Extensions:

- Link with Activity T8, How Wide? How Old?, to see which trees would have been there in different periods in the past.
- Back in the classroom, compare modern and old maps of the area to mark the changes. See Appendix 10.
- Encourage the children to write about whether changes have been for the better or not. Role-play or persuasive writing activities would fit well with this, with children assuming a different person or group – e.g. developers, landscapers, landfill operators, residents etc.
- Do an internet search (try www.picturethepast.org.uk and www.sinfin-derby.co.uk) and/or visit the Local Studies Library to find more historical pictures of the area.

Skills:

- Observation – Looking for clues;
- Map reading/orientation;
- Listening to instructions/facts;
- Cross-referencing

Key Words:

- Evidence
- Demolished
- Landfill
- Developer
- Agriculture