

Activity: ICT & Orienteering

**ICT
Years
4/5/6**

ABOUT THE ACTIVITY

As with all of our activities, this is designed to complement the work done in school – it is not meant to offer total coverage.

What will take place – there are a choice of ICT related activities in this area.

- Using the Map Detectives software to reinforce the concept of how a map relates to the real world
- Using a laptop and spreadsheet software to collect and analyse the results from an actual orienteering activity the children do on site

WHERE THE ACTIVITY FITS IN:

To a visit to Beaumanor

- Orienteering is one of the outdoor activities which is popular with visiting groups

To the QCA schemes

- For ICT at KS 2 – Finding things out - 1b and 1c; Developing ideas and making things happen – 2a and 2c; Reviewing, modifying and evaluating work as it progresses – 4b and 4c; Breadth of study – 5a and 5c. The spreadsheet activity would also link directly to Unit 5D Introduction to spreadsheets in the ICT Scheme of Work
- For Geography at KS 2 – Geographical enquiry and skills – 1a, 2a, 2b, 2c and 2d; Knowledge and understanding of places - 3c; Breadth of study – 7a and 7c
- For PE at KS 2 – Outdoor and adventurous activities – 11a and 11b

ADAPTING THE ACTIVITY FOR A DIFFERENT AGE GROUP

- The spreadsheet activity would be suitable for a Year 5 group – Year 4 children could use a version of the spreadsheet with some of the formulae already entered for them. Year 6 children could get more involved in the modelling aspects of using a spreadsheet
- The Map Detectives activity has less scope for being adapted for different ages groups but weaker readers and younger children might require additional support from an adult in terms of reading the clues and applying reasoning skills to make choices and decisions.

PRIOR LEARNING

- None required in terms of ICT
- An understanding of compass direction

VOCABULARY

- Spreadsheet, cell, formula, sum, average, calculate, data, model
- Clue, map, map symbols, left, right, north, south, west, east, key, co-ordinate, suspect, direction, underground

RESOURCES

- Computer with appropriate software and printer
- Disc for pupils to take work back to school

EXPECTATIONS

At the end of this activity, due to age or ability

most children will:

- Understand what a spreadsheet will do and the language associated with it's use, at year 6 explore the effects of changes made
- Be able to relate the maps to images of the real world, make decisions based on the available evidence and identify the culprit

some children will not have

made so much progress and will:

- Enter data from the event onto a spreadsheet, at year 6 calculate totals
- Be able to make choices about which way to go on the map

some children will have

progressed further and will:

- Use the spreadsheet to perform calculations, at year 6 they should be able to make predictions about what will happen if the model is changed
- Be able to locate their position on different types of map and plan and formulate a reasoned argument for identifying the culprit

ICT POSSIBILITIES

- Use of digital cameras to record the orienteering event – images to be downloaded and taken back to school for use later

WORK BACK IN SCHOOL

- After the visit the children could
Take the spreadsheet data back to school on disc to do more work on – analysis, certificates, presentation etc.

RISK ASSESSMENT

In addition to the 'Group Visits - General Risk Assessment', the following specific risks have been identified

Hazard	Risk control
Groups in ICT room	No children should be left in the ICT room unsupervised by an adult.
Fire	On entry to the ICT suite, leaders are instructed in the fire procedure for the cellars and given a fire exit map and instructions.
Chair hazards in the ICT room	Children are told that they must not use the wheeled chairs to traverse the room.
Light from digital projector	All visitors should be positioned behind the light from the projector to avoid looking into the bright lamp
If taking a laptop outside to collect data	Care for the equipment guidelines to be given to the group

LEARNING OBJECTIVES	ACTIVITY	LEARNING OUTCOMES	POINTS TO NOTE
CHILDREN LEARN		CHILDREN	
<ul style="list-style-type: none"> Computers can perform calculations on data that is entered 	Calculations as to the average time, the minimum time taken and who took the longest.	<ul style="list-style-type: none"> Can associate the concept of formulae to functions of the spreadsheet 	Different versions of the spreadsheet could be made available – one including the formulae pre entered
<ul style="list-style-type: none"> Data is manipulated according to formulae 	What happens if you alter a persons time	<ul style="list-style-type: none"> The spreadsheet automatically re-calculates 	
<ul style="list-style-type: none"> Accuracy is important when entering data 	Check data entered for validity and accuracy	<ul style="list-style-type: none"> Check the result the spreadsheet offers is sensible 	Prompt experimentation of errors – what if you enter letter o instead of a zero?
<ul style="list-style-type: none"> The relationship between a map/plan and the real world and what some symbols a map mean 	Robbery scenarios	<ul style="list-style-type: none"> Children can navigate with a map to get to where they want to be 	
<ul style="list-style-type: none"> The importance of collecting data accurately in order to be able to draw conclusions 	Keeping track of the clues as they are collected	<ul style="list-style-type: none"> Children can make deduction based on evidence collected 	Some children may need a sheet to help them organise the evidence they collect