ICT in Geography at Key Stages 1 & 2

Geography activities are intended to provoke and answer questions about the natural human worlds, using different scales of enquiry to view them from different perspectives. The National Curriculum orders for Geography develop knowledge of places and environments throughout the world, an understanding of maps, and a range of investigative and problem-solving skills both inside and outside the classroom. It focuses on understanding and resolving issues about the environment and sustainable development, and different societies and cultures and their interdependence. ICT plays an important part in all of these aspects.

The QCA Schemes of work
The QCA schemes of work identify six main areas of ICT activity that are required to support work in Geography.

- Use CD-ROMs and the Internet for research (KS1 & 2)
- Use graphing/spreadsheet/database programs to record, analyse and present data (KS1 & 2)
- Use a mapping or graphics program to draw maps (KS2)
- Use email to share information with another school (KS2)
- Use a word processor/desktop publishing program/multimedia program to present findings (KS2)
- Use a digital camera to record features during fieldwork (KS2)

The following paragraphs identify the Geography units where ICT is needed and give a brief description of how it is to be used.

Year 1
Unit 1 Around our school – the local area
Use a graphing program to produce a graph on how children come to school.
ICT Unit 1E Representing information pictorially: pictograms supports this unit.
Unit 2 How can we make our local area safer?
Use a graphing program to produce a graph on the number of cars parked in a street.
ICT Unit 1E Representing information pictorially: pictograms supports this unit.

Year 2
Unit 4 Going to the seaside
Use a database program to record data and produce graphs about different places the children have visited.
ICT Unit 2E Questions and Answers supports this unit.
Unit 17 Global eye (for more able children)
Use CD-ROMs to investigate the basic structure of the eye.
Use a graphing program to produce a graph of what is recycled in their homes.
ICT Unit 4D Collecting and presenting information: questionnaires and pie charts supports this unit.

Year 3
Unit 6 Investigating our local area
Use a database/graphing program to produce a simple graph or pie chart on the results of a survey on land use.
ICT Unit 4D Collecting and presenting information: questionnaires and pie charts supports this unit.
Unit 7 Weather around the world
Use a CD-ROM to research a chosen holiday destination.
Use a multimedia resource to identify similarities and differences between the locality and that of the chosen destination.
Use the Internet to find out about weather conditions for particular days at the chosen destination.

Year 4

Unit 8 Improving the environment

Use a graphing program to present findings on numbers of children at set points around the school at different times of the day.

Use a graphing program or spreadsheet to produce a cumulative graph to show the weight of rubbish collected in the classroom throughout the week.

Use a graphing program or spreadsheet to produce a cumulative graph to show the weight of rubbish collected in waste bins in the school grounds and rubbish that is not in the bins.

Use a word processor to write a report about the environment of the local area to send to the local authority.

ICT Units 4A Writing for different audiences and 4C Collecting and presenting information: questionnaires and pie charts support this unit.

Unit 9 Village settlers

Use a mapping or graphics program to draw a map of their own village.

ICT Unit 5A Graphical modelling supports this unit.

Unit 10 A village in India

Use CD-ROMs to locate the position of the UK, Europe, Asia, India and a village in India.

Use the Internet to gain up-to-date information about, and images of, India.

Unit 19 How and where do we spend our time?

Use a mapping or graphics program to produce maps of the locations where they spend time e.g. home, school, park, leisure centre, club.

Use a spreadsheet or graphing program to produce a graph on how they spend their time.

ICT Unit 4D Collecting and presenting information: questionnaires and pie charts supports this unit.

Year 5

Unit 11 Water

Use a spreadsheet to record the use of water at home and look for patterns.

ICT Unit 5D Introduction to spreadsheets supports this unit.

Unit 12 Should the high street be closed to traffic?

Use a graphing program or spreadsheet to produce graphs to represent data collected about traffic issues in the high street.

ICT Units 4D Collecting and presenting information: questionnaires and pie charts and 5D Introduction to spreadsheets support this unit.

Unit 20 Local traffic – an environmental issue

Use a word processor to present suggestions on how a local traffic issue may be resolved.

Year 6

Unit 14 Investigating rivers

Use a database program to record data, answer simple questions and graph changes to the features of a river such as height, depth, width and speed.

Use a CD-ROM or the Internet to find out further information about the river.

Use a desktop publishing program to produce a project on the river.

ICT Unit 6D Using the Internet to search large databases and to interpret information supports this unit.

Unit 15 The mountain environment

Use CD-ROMs and the Internet to investigate a mountain environment.

Use ICT where appropriate to present their findings.

Use the Internet to access weather data for their location.

ICT Unit 6D Using the Internet to search large databases and to interpret information supports this unit.

Years 3-6

Unit 16 What's in the news?

Use the Internet to provide local, national or international news items and photographs for a 'class newsboard.'

Use a word processor or desktop publishing program to write a report about a local issue.

ICT Unit 4A Writing for different audiences supports this unit.

Unit 18 Connecting ourselves to the world (specific use of ICT)

Use a spreadsheet to record incoming and outgoing faxes during one week.

Use a spreadsheet to record weather data for both the school and another school. Produce graphs and charts to show similarities and differences between the weather.

Use email to produce an electronic address book of friends in a twinned school.

Use a word processor or desktop publishing program to produce a guide of the locality that includes scanned maps and images.

Use email to send a letter to children in the twinned school with the guide of the locality as an attachment.

Use the Internet to locate websites used by travel agents to plan routes, bookmark the sites and print and save useful pages.

Use a database program to record data on flights and question it to check availability.
ICT Units 3A Combining text and graphics, 3E Email, 5D Introduction to spreadsheets and 6D Using the Internet to search large databases and to interpret information support this unit.

Years 3/4
Unit 21 How can we improve the area we can see from our window?
Use a word processor to produce text for a whole class display or class book that describes for a series of pictures from the book "Window" by Jeannie Baker the changes, land use and what it would feel like to be there.
Use a spreadsheet to classify, store, retrieve and sort data collected on an area they have explored and interpret the results.
ICT Units 4A Writing for different audiences and 5D Introduction to spreadsheets support this unit.

Years 5/6
Unit 23 Investigating coasts (Alternative to Unit 14)
Use the Internet to gather information on the Holbeck Hotel or a similar incident.
Use a word processor or desktop publishing program to produce a newspaper report based on the Holbeck Hotel or a similar incident.
Use the Internet to research and investigate coastal environments around the UK for a particular type of holiday.
Use a digital camera to record coastal features during fieldwork.
ICT Unit 6D Using the Internet to search large databases and to interpret information supports this unit.

Years 1-6
Unit 24 Passport to the world
Use the Internet to identify a variety of places and to recognise their features.
Use a database program to record findings, produce graphs and analyse findings of a survey on people's favourite holiday locations and reasons for their choice.
Use the Internet to collect weather data over a week on a chosen city.
ICT Units 3C Introduction to databases and 4D Collecting and presenting information: questionnaires and pie charts support this unit.
Unit 25 Geography and numbers
KS1
Use a graphing program to produce a block graph showing the results of a pedestrian traffic count in one corridor at different times during the school day.
Years 3 & 4
Use a database program to create a datafile and produce graphs on how pupils travel to school and how long their journeys take.
Years 5 & 6
Use a graphing program or spreadsheet to produce frequency tables and bar charts to show proportions of population within certain age groups.
ICT Units 1E Representing information graphically: pictograms, 3C Introduction to databases, 4D Collecting and presenting information: questionnaires and pie charts and 5D Introduction to spreadsheets support this unit.

Long term Planning
At KS1 & 2 the ICT units that support the Geography activities should be planned so they occur before them. In Year 2 some aspects of ICT Unit 4D Collecting and presenting information: questionnaires and pie charts should be covered to enable more able pupils to record, analyse and interpret data in Unit 17 Global Eye. In Year 3 some aspects of ICT Unit 4D Collecting and presenting information: questionnaires and pie charts should be covered to enable pupils to produce and interpret a pie chart.
In Year 4 ICT Unit 5A Graphical modelling should be covered to enable pupils to use a mapping or graphics program. In the units to be covered by more than one year group an activity that uses ICT could be done with the year group in which the supporting ICT unit is taught. If this is not appropriate, the ICT unit should be covered with the earlier year group that the activity is intended for.

Hardware
A digital camera is required to record features during fieldwork at KS2.

Assessment
At KS1 & 2 the ICT needed to support the Geography units will usually have been taught separately, and should be assessed during ICT lessons. When assessing Geography work that has involved ICT it is important to assess the achievement of Geography objectives and not ICT objectives. Some teachers may wish to combine teaching of ICT and Geography. In this case it is important to assess achievement of ICT and Geography objectives separately.

Key Stage 1 and 2 Software and Hardware for Geography Checklist

Key Stage 1

QCA Unit of Work	Application	Software
Unit 1 Around our school – the local area	Graphing program	
Unit 2 How can we make our local area safer?	Graphing program	
Unit 4 Going to the seaside	Database program	
Unit 17 Global Eye	Graphing program	

Key Stage 2

QCA Unit of Work	Application	Software
Unit 6 Investigating our local area	Database or graphing program	
Unit 7 Weather around the world	CD-ROMs Multimedia resource	
Unit 8 Improving the environment	Graphing program Word processor	
Unit 9 Village settlers	Mapping or graphics program	
Unit 10 A village in India	CD-ROMs	
Unit 19 How and where do we spend our time?	Mapping or graphics program Spreadsheet or graphing program	
Unit 11 Water	Spreadsheet	
Unit 12 Should the high street be closed to traffic?	Spreadsheet or graphing program	
Unit 20 Local traffic – an environmental issue	Word processor	
Unit 14 Investigating rivers	Database program CD-ROMs Desktop publishing program	
Unit 15 The mountain environment	CD-ROMs Internet	
Unit 16 What's in the news?	Internet Word processor	
Unit 18 Connecting ourselves to the world	Spreadsheet Internet and Email Word processor Database program	
Unit 21 How can we improve the area we can see from our window?	Word processor Spreadsheet	
Unit 23 Investigating coasts	Internet Word processor or desktop publishing program Digital camera	
Unit 24 Passport to the world	Internet Database program	
Unit 25 Geography and numbers	Graphing program Database program	