



Planning Teaching & Learning

Teachers will need to ensure that they cover the National Curriculum Programmes of Study and so should teach ICT as a discrete subject. However, much of this learning is more meaningful and can reinforce learning in other areas if placed in the context of another curriculum subject. Examples of cross curricular activities involving the use of spreadsheets and databases include:

Mathematics: Use a branching database to sort regular 2D shapes.

Science: Record information about minibeasts in a database.

Geography: Undertake a traffic survey and interpret a pictogram.

History: Create, search and sort a database about the wives of Henry VIII.

PSHE: Collect class based data on pupils' favourite foods, create charts and interpret the results.

Sample ICT schemes of work and ready made teaching resources for each year group are available to download at www.kenttrustweb.org.uk/kentict/kentict_theme_home.cfm



Ensuring Progression

To ensure pupils are meeting age appropriate expectations in ICT, teachers need to provide appropriate learning opportunities for them. The following statements can support teachers in this respect. Whilst the Kent ICT progressions are presented in year groups, it is important that teachers make judgements on what should be taught in which year group based on pupils' prior experience and ICT capability.

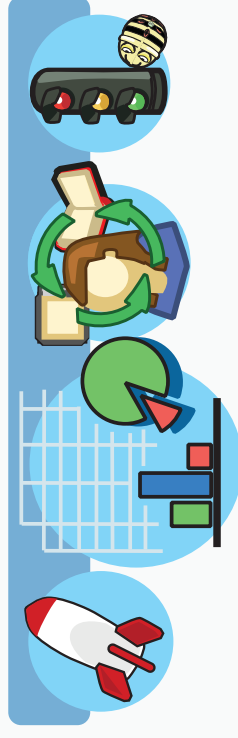
Most children will:

- Year 1:** Know that information exists in different forms, know we can collect information to find things out.
- Year 2:** Collect, organise and classify data. Create graphs and use these to answer questions.
- Year 3:** Identify and develop a means of collection, and collect appropriate data. Create graphs and use data to answer questions.
- Year 4:** In order to answer a question, collect, organise, classify and interpret data and develop a simple database.
- Year 5:** In order to solve a problem, use ICT to collect and process data and present their findings. Be able to create a database and compare graphical data.
- Year 6:** Generate, process, interpret, store and present data, understanding the need for accuracy.



Spreadsheets & Databases

A Guide for Primary Schools





Databases

Databases are used to store, sort and search for information, rather like record cards within a filing cabinet. Information is stored within **records** under headings known as **fields**. A database about famous people might include fields such as their name, date of birth, place of birth, occupation etc. Branching databases are used to sort or classify a group of objects. They use questions with yes/no answers to produce a database of items within a tree diagram. The first of these questions will divide the group of objects into two sub-groups e.g. does it have wings? and so on.

Example activities: Databases

2Investigate: Answer questions using a database on minibeasts e.g. which have six legs?

Information Magic: Use a class database to create charts and graphs about ourselves e.g. to show how many pupils in the class are girls / boys?

Information Workshop: Enter records in a database to record information about well known rivers or mountains.

Pick A Picture: Record pupils' gender, age, eye colour, pet etc.

Textease Database: Design a database and use it to sort and search for information about planets in the solar system.

Example activities: Branching Databases

2Simple Infant Video Toolkit: 2Question: Use a branching database to identify musical instruments.

Decisions: Enter questions into a branching database to sort into groups of living and non living things.

Flexitree: Create a branching database to sort a collection of everyday objects based on their material and the properties of those materials.

Textease Branch: Collect and organise data about dinosaurs within a branching base.

Example Resources for Databases

Foundation Stage	Pick A Picture
Key Stage 1	2Simple Infant Video Toolkit: 2Question, Textease Branch
Key Stage 2	2Investgate, Textease Branch, Decisions, Flexitree, Information Magic, Textease Database



Spreadsheets

Spreadsheets are used in the classroom to create tables, charts and graphs. By adding formula they can also be used to perform calculations. Key Stage 1 pupils should be introduced to data handling by creating pictograms e.g. using **2Count** and will later use simple graphing software such as **2Graph** to create a range of charts and graphs. In Key Stage 2 pupils use spreadsheets in order to enter multiple columns of data and/or to explore the use of formula.

A wide range of graphing software and spreadsheets are available for this purpose. The following are examples only and do not imply a recommendation. There are many other equally good products available. Those marked * are available free to download.

Example activities: Graphing Software

2Simple Infant Video Toolkit: 2Count: Discuss and interpret a pictogram showing how children came to school.

2Simple Infant Video Toolkit: 2Graph: Create a pictogram to show pupils' eye colour / favourite fruit. Import class photos where appropriate.

Handy Graph*: Collect and record class data about pupils' favourite foods.

Starting Graph: Use data collected by the class to create a bar chart to find out the most frequent weather this week.

Example activities: Spreadsheets

2Calculate: Conduct a survey about the local area using a questionnaire and enter data into a spreadsheet.

Microsoft Excel: Calculate the maximum area of a rectangle with a perimeter of 20 centimeters or plan a party within a particular budget.

Number Magic: Create a table and use pie charts to explore the nutritional value of pupils' weekly diet.

Textease Spreadsheet: Record the results of an experiment investigating friction and use the results to answer questions and test a hypothesis.

Example Resources for Spreadsheets

Foundation Stage	2Simple Infant Video Toolkit: 2Count
Key Stage 1	2Simple Infant Video Toolkit (2Count and 2Graph), Handy Graph, Starting Graph
Key Stage 2	2Calculate, Excel, Number Magic, Textease Spread sheet

