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## Using ICT

Three presentations covering:

**Computer Systems**  
**Inputs and Outputs**  
**Working Safely**



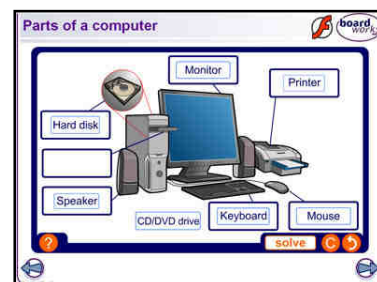
41 slides, featuring 15 Flash activities

### Computer Systems

11 slides, 3 Flash activities

By the end of the presentation, the students should:

- Understand what a **computer system** does.
- Learn about the different **functions** of a computer.
- Learn what the different parts of a computer are called and what they do.



## Inputs and Outputs

13 slides, 5 Flash activities

By the end of the presentation, the students should:

- Be able to identify **input** and **output peripherals**.
- Know some of the different **storage devices**.
- Know that different storage devices hold different amounts of data.



## Working Safely

17 slides, 7 Flash activities

By the end of the presentation, the students should:

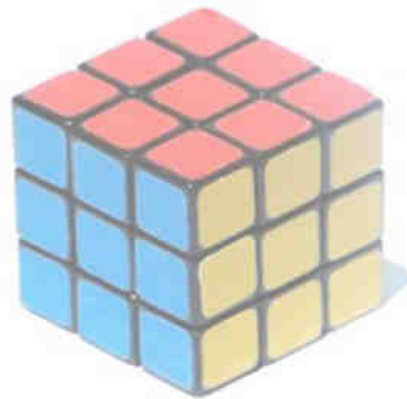
- Know how important **health and safety** is to technology.
- Appreciate how **common sense** can help protect our workspace.
- Learn some rules about how to keep **data safe**.
- Appreciate the importance of protecting our data, and ourselves, when using ICT.



## Successful Projects

One presentation covering:

The Project Cycle



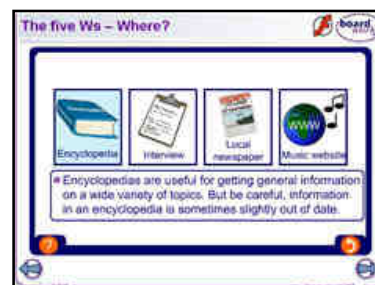
20 slides, featuring 10 Flash activities

### The Project Cycle

20 slides, 10 Flash activities

By the end of the presentation, the students should:

- Know how to **plan** a project well.
- Learn different ways of **organizing** projects.
- Be able to work within a **timescale**.
- Have the ability to **review** and **improve** their work.



## Finding and Recording Information

Four presentations covering:

Seeking Information – The Tools  
Searching Methods  
Extracting Relevant Information  
Noting Sources

56 slides, featuring 15 Flash activities

### Seeking Information – The Tools

15 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn how **resource centres** help us to find information about different topics.
- Know which questions to ask to find where the information we need is kept.
- Appreciate the importance **keywords** have when researching a topic.



## Boardworks KS3 ICT Version 3.0

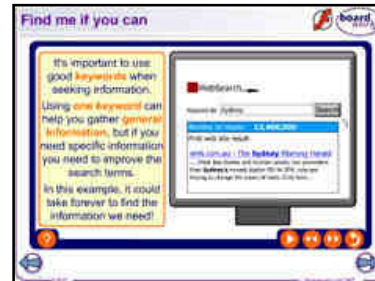


### Searching Methods

17 slides, 5 Flash activities

By the end of the presentation, the students should:

- Know how **search engines** help users to find information on topics.
- Understand the importance of **keywords** in a search.
- Learn effective **reading techniques** to help find the most **relevant information**.

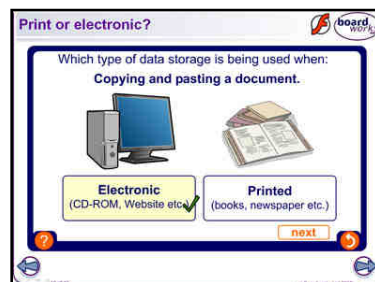


### Extracting Relevant Information

12 slides, 3 Flash activities

By the end of the presentation, the students should:

- Learn the difference between statements of **fact** and **opinions**.
- Learn how to tell if information is **accurate** and **reliable**.
- Understand the importance of **making copies** for reference purposes.
- Understand how to avoid **plagiarism** and why this is important.

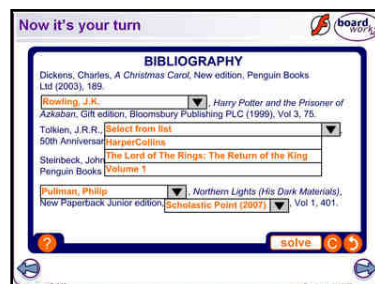


### Noting Sources

12 slides, 3 Flash activities

By the end of the presentation, the students should:

- Learn the correct way to **acknowledge direct quotes** from other people.
- Understand how to **construct a bibliography**.
- Discover how to **reference non-printed materials**.



## Communicating Information

Eleven presentations covering:

- Standard Documents
- Fonts
- Graphics and Images
- Putting a Document Together
- Introduction to Multimedia
- Interactive Presentations
- Introducing the World Wide Web
- Creating a Website
- HTML
- Publishing on the Web
- E-mail and Attachments

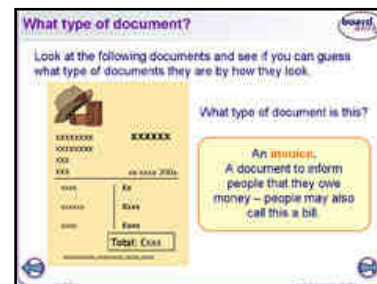
170 slides, featuring 43 Flash activities

### Standard Documents

23 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn what different documents we use and why we use them.
- Discover how **templates** are used to help create documents.
- Understand what is meant by **house style**, who uses it and why it is used.



## Boardworks KS3 ICT Version 3.0



### Fonts

12 slides, 3 Flash activities

By the end of the presentation, the students should:

- Learn about different types of font and why we use them in different situations.
- Understand about the **serif** and **sans serif** styles of font.
- Appreciate how different **styles** of font can be used to emphasize points.



### Graphics and Images

22 slides, 8 Flash activities

By the end of the presentation, the students should:

- Be able to identify the **purpose** of using graphics.
- Learn the difference between **bitmap** and **vector** graphics.
- Understand the ways in which an image can be **manipulated**.
- Know about the many **formats** images can be saved in.



### Putting a Document Together

18 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn how **orientation**, **size**, **margins**, **alignment** and **frames** affect documents.
- Understand how important it is to **preview** a document.
- Realize that checking your **SPG** (**S**pelling, **P**unctuation and **G**rammar) will help create a perfect final copy.



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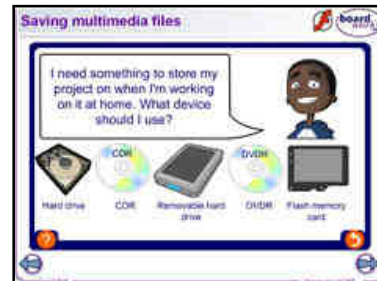


### Introduction to Multimedia

10 slides, 4 Flash activities

By the end of the presentation, the students should:

- See how **multimedia** can make learning more **interactive**.
- Know about the different types of multimedia and their associated devices.
- Understand how new devices have made multimedia more **accessible**.

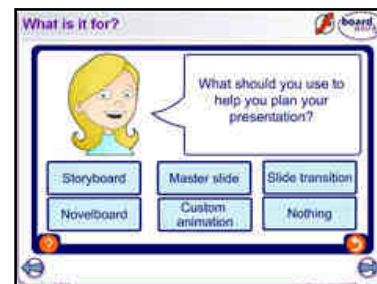


### Interactive Presentations

22 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn how a **storyboard** can help structure a presentation.
- Understand how **sound**, **animation** and **video** can be used to make a presentation **interactive**.
- Know the difference that exists between **linear** and **non-linear** presentations.



### Introducing the World Wide Web

11 slides, 2 Flash activities

By the end of the presentation, the students should:

- Learn what **protocols** are and how they are used in Internet communication.
- Understand what a website consists of.
- Know how websites are **accessed**.
- Appreciate that the Internet can have **positive** and **negative** impacts.



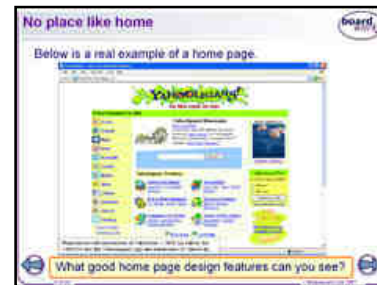


## Creating a Website

20 slides, 5 Flash activities

By the end of the presentation, the students should:

- Realize the importance of **site mapping** a website.
- Know what should be included on a website to create a **consistent style**.
- Be able to understand how using **multimedia** affects a website.
- Know how **testing a website** after creating it is essential to ensure functionality and quality.

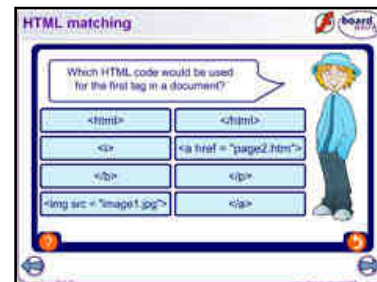


## HTML

12 slides, 3 Flash activities

By the end of the presentation, the students should:

- Be able to understand what **HTML** is and what it does.
- Know how **elements**, **container tags** and **empty tags** function within HTML language.
- Understand the difference between the **head** and **body** text of HTML.

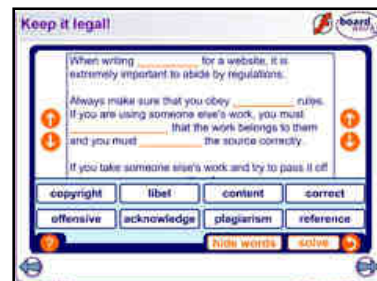


## Publishing on the Web

10 slides, 2 Flash activities

By the end of the presentation, the students should:

- Understand how Internet and intranet websites are **created**.
- Realize that the **author** is **responsible** for the **content** of a website.
- See why **maintaining** a website is important.



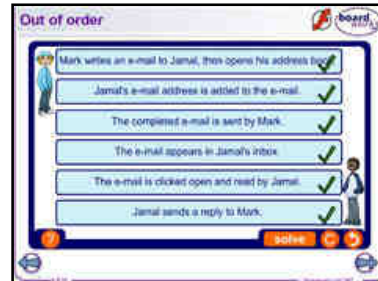


## **E-mail and Attachments**

*10 slides, 3 Flash activities*

By the end of the presentation, the students should:

- Look at the tools **web browsers** allow us to use.
- Understand about **e-mail** and how some of its **functions** operate.
- Appreciate the positives and negatives of e-mail communication.



## Modelling

Four presentations covering:  
Rules and Investigations  
Building a Model  
Interpreting Results  
Modelling with Spreadsheets




69 slides, featuring 21 Flash activities

### Rules and Investigations

20 slides, 8 Flash activities

By the end of the presentation, the students should:

- Learn what is meant by a **computer model**.
- Understand how spreadsheets can be used with various models to **record data**.
- Gain a basic understanding of how spreadsheets work.



Text labels

	Pets			
	Dogs	Cats	Snakes	Total
Jack	3	0	0	=B3+C3+D3
Ali	1	1	0	=B4+C4+D4
Diane	0	3	2	=B5+C5+D5
Ayesh	1	0	1	=B6+C6+D6
			Total	=E3+E4+E5+E6

A spreadsheet is more than just numbers in rows and columns.  
We need to have more information to understand the **autobase**.

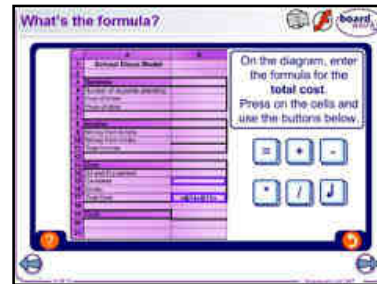


**Building a Model**

*19 slides, 5 Flash activities*

By the end of the presentation, the students should:

- See how different models are used for different purposes.
- Know the importance of **planning** a model correctly.
- Understand how to use **formulae**, **functions** and **formatting** in models.

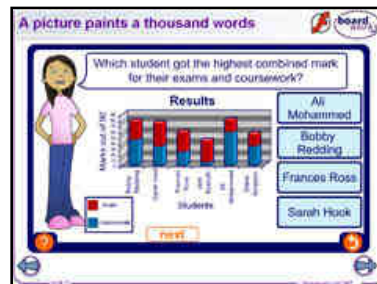


**Interpreting Results**

*17 slides, 5 Flash activities*

By the end of the presentation, the students should:

- Learn how to **interpret** and **present** information from models.
- Understand that different charts and graphs serve different purposes.
- Know how to **label** information correctly to show it clearly.

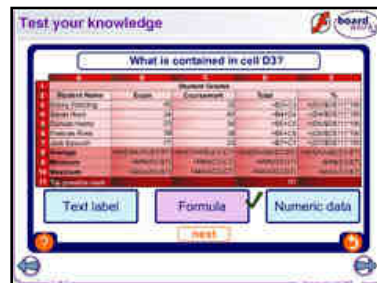


**Modelling with Spreadsheets**

*13 slides, 3 Flash activities*

By the end of the presentation, the students should:

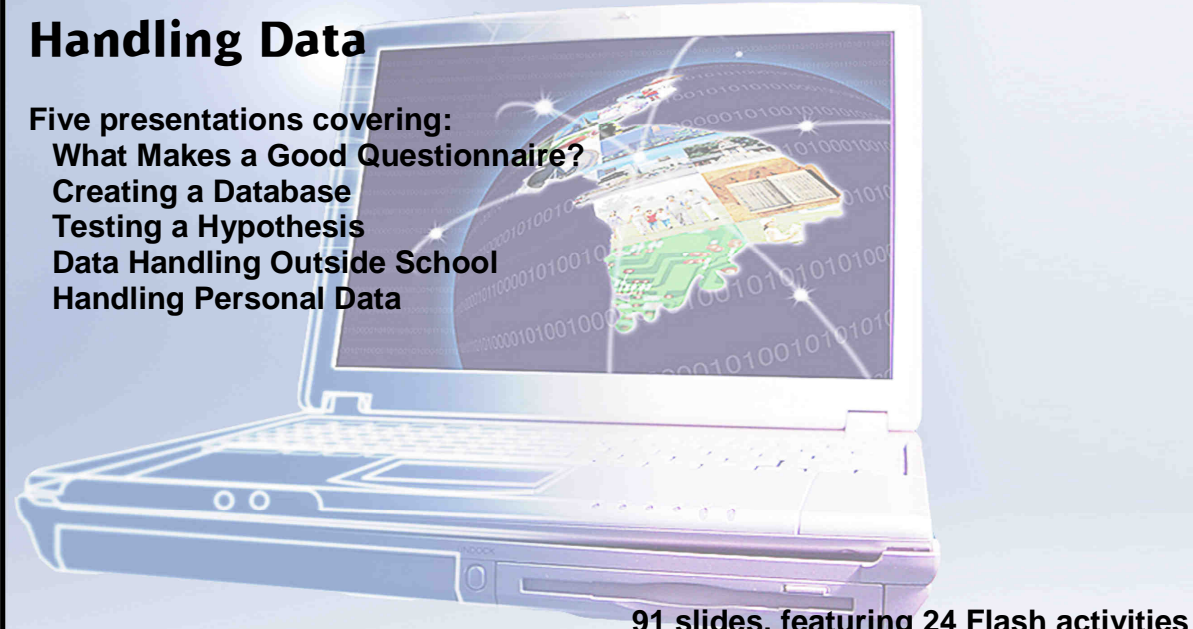
- Learn how to **format** data labels and numeric data.
- Understand how **formulae** and **functions** help simplify a spreadsheet.
- Be able to use **cell referencing** in spreadsheets.



## Handling Data

Five presentations covering:

- What Makes a Good Questionnaire?
- Creating a Database
- Testing a Hypothesis
- Data Handling Outside School
- Handling Personal Data



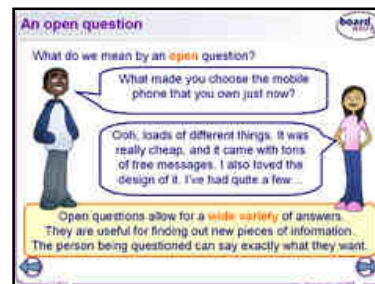
91 slides, featuring 24 Flash activities

### What Makes a Good Questionnaire?

21 slides, 5 Flash activities

By the end of the presentation, the students should:

- Learn what is meant by a **hypothesis**, or **theory**.
- Identify the different types of question that can be used to help test a hypothesis.
- Understand how **questionnaires** and **tallies** can help collect data to record the results of tests.



### Creating a Database

22 slides, 7 Flash activities

By the end of the presentation, the students should:

- Learn about how databases help us **organize data**.
- Understand how different **fields** help us understand and **arrange** data.
- Learn how we can **validate** and **verify** data to avoid making errors.



### Testing a Hypothesis

14 slides, 2 Flash activities

By the end of the presentation, the students should:

- Understand what a **hypothesis** is and when it is used.
- Know how to **carry out a test** to see if a hypothesis is correct.
- Understand the importance of the document you produce that **reports** your findings.

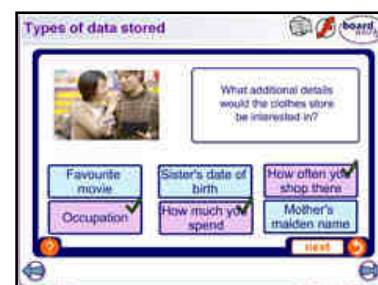


### Data Handling Outside School

17 slides, 6 Flash activities

By the end of the presentation, the students should:

- Understand how organizations **obtain data** about us and our lives.
- Learn how **barcodes**, **EPOS** and **EFTPOS** can transfer data quickly and effectively.
- Realize the **advantages** and **disadvantages** of storing data electronically.



## Handling Personal Data

17 slides, 4 Flash activities

By the end of the presentation, the students should:

- Understand what the **Data Protection Act** is and who is covered by it.
- Realize how organizations can use the data they collect.
- Learn what can be done to **protect** data.
- Recognize the **dangers** of sharing personal information online.



## Control

Four presentations covering:  
Control Devices  
Flow Charts  
Procedures  
Creating a System

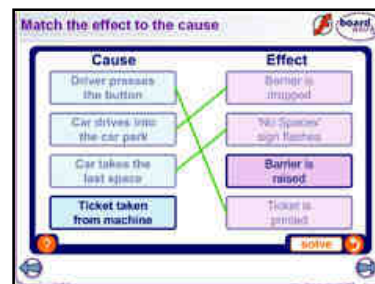
53 slides, featuring 17 Flash activities

### Control Devices

15 slides, 5 Flash activities

By the end of the presentation, the students should:

- Learn how computers can be used to control devices by means of **inputs** and **outputs**.
- Understand that **logic circuits** are used to help count signals from **sensors**.
- Appreciate how **causes** and **effects** are important in computer control.



## Flow Charts

17 slides, 6 Flash activities

By the end of the presentation, the students should:

- Know how flow charts are **structured**.
- Understand how flow charts are used in everyday life.
- Realize what needs to be considered when creating a flow chart.
- **Analyse** how successful, or not, a flow chart is.



## Procedures

12 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn what **procedures**, or **subroutines**, are and why they are used.
- See how procedures can be used to **simplify** programming.
- Understand how procedures help with the **testing** of programs.



## Creating a system

9 slides, 2 Flash activities

By the end of the presentation, the students should:

- Learn how to clearly write about system design.
- Be able to analyse and evaluate a system.
- Understand that computer systems need to be tested and reviewed.



## Measuring and Monitoring Data

Two presentations covering:

Data Logging  
Conducting the Experiment

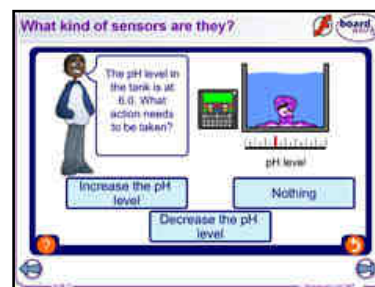
29 slides, featuring 10 Flash activities

### Data Logging

17 slides, 6 Flash activities

By the end of the presentation, the students should:

- Know how **sensors** affect our daily lives and how they work.
- Realize what different kinds of sensors do.
- Learn what happens to the data the sensors provide.
- Understand the difference between **analogue** and **digital** signals.



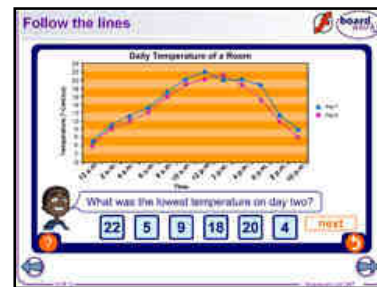


## Conducting the Experiment

12 slides, 4 Flash activities

By the end of the presentation, the students should:

- Learn how a **hypothesis** is an **integral** part of the process of conducting an experiment.
- Appreciate the **factors** that need to be **planned** before commencing the experiment.
- Know how to **present** and **interpret** the results of the experiment.



## Managing a Project

*Managing a Project* is designed to cover the key skills required when creating a system. It has been written to bridge the gap between KS3 and KS4. A case study is used as an example throughout the 12 presentations to make the project concepts easier to understand. The example project involves a fictional school which wishes to change its system of organizing a parents' evening. The interactive exercises throughout this product relate to this real-life example, enabling students to apply the skills and knowledge learnt to their own projects.

**Twelve presentations covering:**

**Life Cycle of a System**  
Identify  
Analyse  
Plan  
Success Criteria  
Research

**Design**  
Implement  
Test  
Review  
User Documentation  
Evaluate



**152 slides, featuring 32 Flash activities**

### Life Cycle of a System

*27 slides, 1 Flash activity*

By the end of the presentation, the students should:

- Understand the **processes** that should be followed when **developing a system**.
- Recognize the importance of **following these steps** to successfully develop a system.
- Be able to **evaluate** the work completed and look for possible future improvements.



## Identify

9 slides, 1 Flash activity

By the end of the presentation, the students should:

- Learn the importance of defining the problem at the beginning of a project.
- Identify whether ICT can help you solve the problem.
- Be able to write a short definition of the problem.

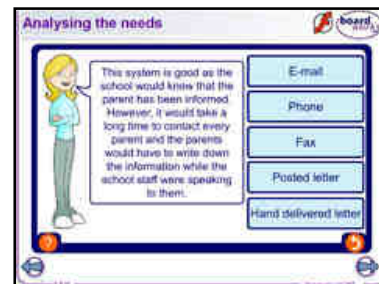


## Analyse

15 slides, 6 Flash activities

By the end of the presentation, the students should:

- Understand how **brainstorming** helps us to analyse the problem at hand.
- **Analyse** the current system to see how it operates.
- Look at the **pros and cons** of possible courses of action.
- Find out what **hardware** and **software** requirements are necessary to complete the project.

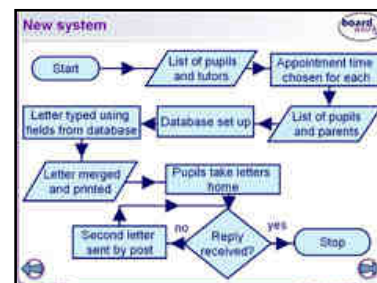


## Plan

7 slides, 2 Flash activities

By the end of the presentation, the students should:

- The importance of a **detailed plan** to a successful project.
- Know how to use a **flow chart** to help plan a solution.
- Be able to create a **Gantt chart** to ensure deadlines are met.



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### Success Criteria

12 slides, 2 Flash activities

By the end of the presentation, the students should:

- Establish the **problems** within an existing system.
- See how **success criteria** allow us to measure the improvement the new system has made.
- Create a **design specification** that meets the requirements of the new system.

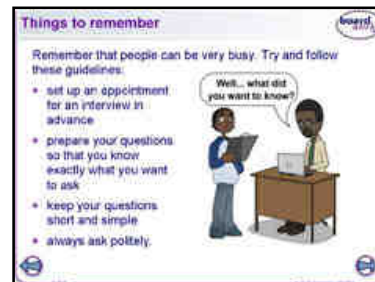


### Research

8 slides, 3 Flash activities

By the end of the presentation, the students should:

- Be able to use the most **appropriate source** to gather information.
- Know how important it is to plan carefully to **extract the correct information**.
- Understand the need to collect **relevant information**.

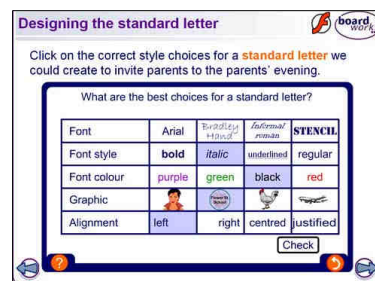


### Design

13 slides, 4 Flash activities

By the end of the presentation, the students should:

- Know what **drafts** are.
- Understand why drafts are used in the **design process**.
- Recognize that drafts can be changed, but should always be kept to show the **evolution** of the project.



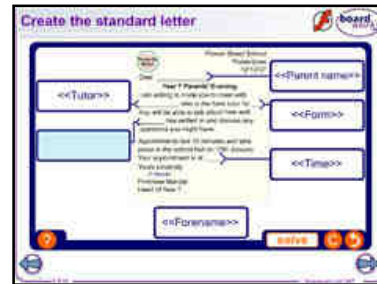


**Implement**

*10 slides, 4 Flash activities*

By the end of the presentation, the students should:

- Be able to follow the plan to **implement** the draft design.
- Know the importance of doing the work in the **correct order**.
- Be flexible, but **note any changes** to the design plan.
- Recognize the importance of checking for any **mistakes** and **errors**.

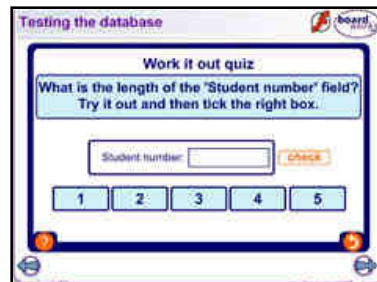


**Test**

*18 slides, 4 Flash activities*

By the end of the presentation, the students should:

- Understand the importance of **testing the system** to ensure it works correctly.
- Be aware of the need to test **normal**, **extreme** and **erroneous** data.
- Recognize the need to **test text** as well, by spellchecking and proofreading.

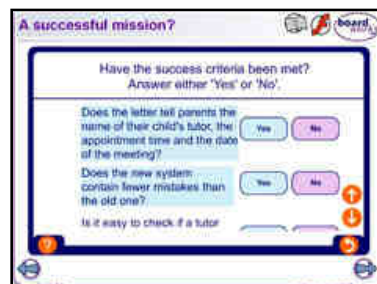


**Review**

*9 slides, 2 Flash activities*

By the end of the presentation, the students should:

- Learn how to **review** whether the result matches the success criteria.
- Understand the importance of **questioning** if the project could be **improved**.
- Know how to make any necessary changes.

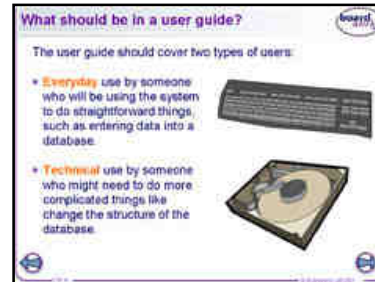


## User Documentation

14 slides, 1 Flash activity

By the end of the presentation, the students should:

- Learn about the need to provide **accurate** and appropriate **user documentation**.
- Know how to produce a user guide for **technical** and **everyday** users.
- Recognize the importance of **simplicity** and **clarity** in an informative document.



## Evaluate

10 slides, 2 Flash activities

By the end of the presentation, the students should:

- Know why the **evaluation process** is important.
- Be able to **compare** the final product to the original specification and the success criteria.
- Be able to **question** what could be done better, how it could be done and what might be done differently next time.

