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# Introduction

*ICT for primary maths* is intended to be used as a flexible resource, fitting easily into any mathematics programme. Each CD features ready-to-go activities.

## The structure of the lessons

This book contains:

- a teacher page for each activity providing the core information that you need to deliver an ICT component to your mathematics lesson.
- resource sheets for some activities to guide the students through using the programs. Older students will be able to use the programs independently, but younger students might need help in loading and using programs.
- activity sheets for most of the lessons. These can be used in one of the following ways:
  - to give the students practice and /or allow them to record answers before working on-screen
  - to record answers and give questions for the students to tackle whilst using the computer as a tool
  - to give extension work to complete after working on-screen.

## Programs

Applications include multimedia, spreadsheets and branching databases. The CD provides ready-to-go activities based in both pre-loaded software and in applications that you are already using. This mixture offers the opportunity to introduce the students to new software and extend their skills in programs they are already familiar with.

## The Main program – HyperStudio®

The CD contains all the files needed to run HyperStudio and it can be installed quickly on to a single computer or network of computers. Once installed and loaded, click on 'Activities' to access all the HyperStudio activities and view the contents for all the programs. Activities include drag and drop work, multi-choice questions, and data

logging. From here you can also access the teaching activities (see below). You need to install Quicktime 3.0 or higher to run this. This can be installed from [www.apple.com/quicktime/download](http://www.apple.com/quicktime/download)

## Branching database

All the branching databases are available in HyperStudio.

## Spreadsheets

The spreadsheets require Microsoft Excel. To open the Excel spreadsheet programs follow these steps:

1. click on My computer
2. click on C drive
3. click on program files
4. click on ICT for Primary Maths Year 4
5. click on Excel files
6. select the worksheet by clicking on it

## Teaching Activities

Each CD includes different multimedia teaching tools appropriate for the year group. These are flexible tools for direct interactive maths teaching. They include clocks, number lines and squares, money and flip numbers for place value. No specific lesson activities are given with these as they can be used flexibly within any maths lesson, including projecting on to a white board.

## Installation

If you wish to evaluate the contents of the CD-ROM, please be advised that you may install the software on a single, stand-alone PC only and not on a server.

Once you have purchased the product on firm sale, you are entitled to network the software or use it concurrently on more than one machine.

If you decide not to keep the product after inspecting it, you are obliged to uninstall the software from the single PC. This can be done simply by going to the relevant maths ICT folder in Program Files and double-clicking on Unwise.exe

# Lesson Plan

Title

## File needed

Indicates the name and type of file needed for the activity. The files are either Main program (HyperStudio) or spreadsheets (Excel).

## Activity

A description of the CD activity.

## Ordering Numbers

Activity 1

### The activity

This activity involves dragging sections of a number line into place as an on-screen jigsaw puzzle. It has three levels, 1–10, 1–20 and 1–30. Working collaboratively, the students select the appropriate level and complete the number lines. The screens can be printed by pressing Ctrl and P.



## Learning objectives

Each lesson identifies the learning area.

### Learning objectives

- Order numbers and position them on a number line.

## Prior knowledge

Indicates maths and specific ICT knowledge that the students will need. It is assumed that the students have a basic knowledge of MS Windows including using a mouse to click and drag.

### Prior knowledge

- Familiarity with numerals to 20 and 30.

### Expected outcomes

- ◆ Most students will order numbers to 20.
- ▶ Some students will order numbers to 30.
- Some students will order numbers to 10.

## Expected outcomes

Shows expected outcomes for:

- ◆ most students
- ▶ more able students
- less able students

### Resources

'Ordering Numbers'  
'What's Wrong with the Order?'  
'What Comes After?' is an extra extension sheet.  
A number line or 100 square may be useful to support this activity.

### Vocabulary

order	beside
biggest	above
smallest	below
before	in front
after	behind
between	next to

### Answers

'What's Wrong with the Order?'	'What Comes After?'	
4. 6 and 3	1. 6	6. 2
5. 6 and 4	2. 7	7. 4
6. 6 and 5	3. 8	8. 2
7. 8 and 5	4. 9	9. 1
8. 8 and 5	5. 8	

## Resources

This includes 'resource sheets' and 'activity sheets'.

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## Answers

Answers are included if applicable. If answers are marked on-screen then these are not included. Only answers to extra questions or non-marked questions are given.

## Vocabulary

Key vocabulary has been suggested for the lesson.

# Money Problems Using a Spreadsheet

## The activity

The spreadsheet shows food and ride prices at a fair. The students use the spreadsheet to find out how much their choices of rides and foods will cost. If the students overspend, a negative balance will be displayed. The challenge asks students to compare a fixed price ticket with an unlimited ticket to work out which is better value.



## Learning objective

- Use all four operations to solve number problems about money in real life.

## Prior knowledge

- Entering data into a spreadsheet.

## Expected outcomes

- ◆ Most students will complete the spreadsheet and the challenge.
- ▶ Some students will additionally complete the extension sheet.
- Some students will only complete the first part of the activity.

## Resources

'A Day at the Fair'  
'How Much Did They Spend?' (extension sheet).

## Vocabulary

dollars	cost	amount
cents	change	
price	total	

## Answers

'A Day at the Fair'

**Challenge:** They would need to go on 10 rides to break even (at \$1 a go) or 11 rides for real value. More of the cheaper rides could be taken.

'How Much Did They Spend?'

**Challenge:** Caroline spent \$14.75. She had \$0.25 left. Peter spent \$7.80. He had \$12.20 left.

# A Day at the Fair

- Open Excel.
- Open the file Y4T1A1 and save it to your personal folder.

Caroline and Peter are going to the fair. Caroline has \$3.50 to spend and Peter has \$4.75 to spend. Use the spreadsheet to work out how Caroline and Peter can spend their money on rides and food.

- Put numbers into the boxes in front of the rides and the food to show how many rides or things to eat they each have. Make sure that Caroline and Peter do not spend too much or they will have to borrow money from a friend.
- Make it so that each of them spends exactly the pocket money that they have brought with them.
- Ask if you may print your answer.

If each of them had brought twice as much money, what could they do? You can change the amount in the boxes next to their names. Just type it in and press **Enter**.



## Challenge:

If the fairground sells each student a ticket for \$10 that lets them have as many rides as they want, how many of each of the rides would they have to go on before it was worth it? Remember, the \$10 ticket does not include food.

If you were Caroline or Peter would you buy the \$10 tickets or not? Why?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## How Much Did They Spend?

- Caroline and Peter liked the fair so much that they went four days in a row! Work out how much they spent each day. Then check your answers on the spreadsheet.

Start of the week:		Caroline \$15	Peter \$20	
Day	Caroline's activities	Cost	Peter's activities	Cost
Monday	2 iced buns	_____	2 donkey rides	_____
	3 swing boat rides	_____	1 doughnut	_____
	3 big wheel rides	_____		
Tuesday	3 dodgem rides	_____	1 dodgem ride	_____
	1 swing boat ride	_____	3 aeroplanes rides	_____
Wednesday	2 swing boat rides	_____	2 doughnuts	_____
	3 doughnuts	_____	1 big wheel ride	_____
	2 big wheel rides	_____	1 ice-cream	_____
Thursday	2 iced buns	_____	1 iced bun	_____
	1 big wheel ride	_____	1 swing boat ride	_____
	1 aeroplanes ride	_____	1 doughnut	_____
	1 ice-cream	_____		
		Total _____	Total _____	

### Challenge:

How much money did they each have left at the end of the week?

Price box					
Rides				Food	
Swing boats	\$0.50	Dodgems	\$0.80	Iced bun	\$0.25
Donkey rides	\$0.60	Aeroplanes	\$0.70	Doughnut	\$0.30
Big wheel	\$1.00			Ice-cream	\$0.75