

MathBase3

Installation

Before installing MathBase3, first uninstall any previous version by using Add or Remove Programs:

Start > Control Panel > Add or Remove Programs > MathBase3 School Edition

MathBase3 may be installed on Windows 95 or later. For stand-alone machines, navigate to **My Computer** and double click the CD, which will appear as MathBase3. Double click setup.exe (82KB Application) to begin the installation and follow the on-screen instructions.

By default, the MathBase3 program will be installed at the location **C:\Program Files\MathBase\MathBase3.exe**. Note that previous versions of MathBase3 may have been installed at **C:\Program Files\MathBase1\MathBase3.exe**.

The installation will create a MathBase3 shortcut on the start menu and the program can be accessed as follows: **Start > All Programs > MathBase > MathBase3**. To create a shortcut on the desktop, navigate to **C:\Program Files\MathBase\MathBase3.exe** and right-click, then click **Send To** then click **Desktop (create shortcut)**.

To install the software on Windows XP, you will have to log on using an account with administrator's privileges. This will install the program file as before at **C:\Program Files\MathBase\MathBase3.exe** but will only create a MathBase3 shortcut in the Start Menu of this account. Other accounts can access the program directly from **C:\Program Files\MathBase\MathBase3.exe** or they can right-click, then click **Send To** then click **Desktop (create shortcut)** to create a shortcut on their own desktop.

This MathBase3 installation is based on msi files. The actual msi file is **MathBase3.msi** and may be used to install MathBase3 on a **network** as required.

Introduction

This software is the second release (V1R2 / 2005) of MathBase3 and is essentially the same as the original but with some revisions and improvements. MathBase3 has two comprehensive programs that contain many teaching elements:

Program 1: Counting Money. Counting money in pounds and pence from 5p to £10. The representation of money on a calculator and spoken money amounts. Coins depicted as realistic photographic images or as simple graphic representations. Finding equivalent amounts of money and estimation.

Program 2: Telling Time. Representation of time using analogue and digital clocks. Time written in words and figures. Spoken time. The 24 hour clock and am/pm notation.

These instructions focus on program control rather than the educational use of these programs. The software is suited to both individual and whole class teaching and works well with an IWB (interactive whiteboard). Home user versions of the software are available, allowing pupils to extend their practice through homework.

Counting Money

The initial screen for the program **Counting Money** shows two large grids of 24 cells. The left grid consists of orange boxes with the caption **Coins**, the cells of the right grid show money amounts in pence. Cells are selected by pointing and left-clicking the mouse or by tapping in the case of an IWB, the keyboard is not used.

The basic game activity consists of selecting a cell from the left grid and matching it with a cell from the right grid - the match is always from left to right. When one of the orange boxes is selected a collection of coins appear, these are to be counted and then matched with the appropriate money amount on the right. In this way both selected cells are eliminated from the screen. The aim is to clear all the cells by matching. A new game may be started by clicking the **New** button.

Making faults

If the player makes an incorrect match, the caption **Try Again** together with the flashing caption **Click here to continue** appear above the right grid. Once clicked, the player is free to select a different money amount.

For each correct match, a pleasant percussion sound is made. The button **Zz..** replaces this sound with a piano note.

For each incorrect match, a fault is scored. Faults for the current game are displayed in yellow and are limited to ten. On the eleventh fault, the screen will freeze and show the flashing caption **Faults 11**. This caption must be clicked to start a new game.

Competing against the clock

The player can compete against the clock. MathBase uses a simple graphic timing device to which pupils of wide ranging age and ability can relate. When the **1min** button is clicked, a new game is started. At the same time, a green disc begins to form and will take one minute to complete. The aim is to make as many matches as possible before this disc completes.

If the player matches all cells before disc completion, the clock will stop, showing that all cells have been matched within the allowed time. If the disc completes before all cells are matched, the cells freeze and the player can count the remaining cells. The remaining number of cells becomes the basis of the next challenge. As the player continues to practice, becoming more proficient in the particular skill required, the number of remaining cells will gradually reduce until finally the player beats the clock!

The time taken for the disc to compete can be increased to 2, 3, 4 and 5 minutes. This is done by right-clicking on the **1min** button. When using an IWB, this can be achieved by tapping just to the right of the **1min** button.

Beating the clock, without faults, causes a short piece of music to play - to end this simply click **1min** again.

Changing the money amount

The top row of buttons are labelled with money amounts ranging from 5p to £10, these buttons control the maximum amount of money to be counted. The yellow button on the left initially reads **5 Coins** and is used to control the maximum number of coins allowed.

The black button on the left that reads **1p,10p,£1** indicates that the program will currently only show those coin denominations, when clicked it becomes yellow and reads **All Coins**, in this case coins of any denomination may appear.

As with other MathBase programs, resting the mouse pointer over a button for a few moments will reveal a descriptive 'tool tip' giving information about the button.

The blue button **Man** (Manual) means that cells in the left grid need to be selected manually using the mouse. However, when this button is clicked, it reads **Auto** (Automatic), in this case cells from the left matrix are selected automatically and at random after each correct match - this helps speed up the matching process.

The small coloured square in the bottom corner can be used to place coins randomly, in lines or in value order. Also, left-clicking coins will highlight them which can be a useful aid to counting.

Note that a game requires 18 correct matches. The small blue box at the bottom right indicates the number of matches that remain to be made. At the bottom of the screen various performance data are recorded as a simple aid to teacher monitoring.

Options for the left and right grids

Three buttons, just above each grid, provide various options. When not selected each button is blue with white lettering, reading either **Coins**, **Money** or **Spoken**. When selected these buttons become purple, green or yellow and display various captions, these are explained in the tables below.

Options for the left grid		
Button not selected	Button selected	Description
Coins	Real (purple)	Click an orange box to see a group of realistic coin images to be evaluated.
	Graphic (green)	Click a green box to see a group of bold graphic coins to be evaluated.
Money	Pence (purple)	Amounts written in pence. (Amounts also spoken).
	Pounds (green)	Amounts written in pounds. (Amounts also spoken).
	Calculator (yellow)	Amounts in pounds as decimals on a calculator display. (Amounts also spoken).
Spoken	Pence (purple)	Amounts spoken in pence.
	Pounds (green)	Amounts spoken in pounds.
	Calculator (yellow)	Amounts spoken in pounds as decimals.

Options for the right grid		
Button not selected	Button selected	Description
Coins	Real (purple)	Click a box to evaluate a group of coins. If the amount matches the left grid, click the green label " Correct " otherwise click the blue background to make the group disappear. Click a new box to evaluate a different group of coins.
	Graphic (green)	
Money	Pence (purple)	Money amounts will appear written in the required format. (Right-click to hear these amounts spoken).
	Pounds (green)	
	Calculator (yellow)	
Spoken	Pence (purple)	Left-click a box to hear an amount spoken in the required format. If this matches the left matrix, click the box again otherwise click a different box to hear a different amount. Only click the same box twice to confirm your selection.
	Pounds (green)	
	Calculator (yellow)	

Telling Time

The initial screen shows analogue clock faces in the left grid and written times in the right grid. Each game requires 18 correct matches, the clock faces appear six at a time.

The top row of buttons select the range of times to be displayed, this is initially set to **O'clock** i.e. whole hours. Clicking the button **Half Past** sets all times displayed to half past the hour.

Clicking the button **Quarter Past** sets all times to quarter past the hour, clicking this again sets the button to **Quarter To**, while clicking yet again sets the button to **Both** indicating that both quarter-past and quarter-to times are shown in the grids.

Left-clicking the **5 Past** button shows all clocks as 5 past the hour. Clicking this button again will show all clocks as 5 to the hour. Clicking yet again shows a mixture of **Both** 5 past and 5 to the hour.

Also note:

Right-clicking buttons on the top row allows several to be selected at once.

Double clicking the space above the **Mins Past** button will select all.

Options for the left and right grids

Five buttons, just above each grid provided various options. When not selected each button is blue with white lettering, reading either **Face**, **Digital**, **Spoken**, **Written** or **24 Hour**. When selected these buttons become purple, green or yellow and display various captions, these are explained in the tables below.

Options for the left grid		
Button not selected	Button selected	Description
Face	Small	Clock faces will remain small when selected. Placing the mouse pointer over the corners of a <u>selected</u> clock will reveal squares which when clicked animate the clock face (read the pop-up text for details).
	Large	Clock faces enlarge when <u>selected</u> making them easier to see.
Digital	0.00	Shows digital time such as 7.35
	00:00	Shows digital time in four figures such as 07:35
Spoken	Spoken	Spoken standard analogue time.
	Spoken	Spoken digital time.
Written	Figures	Written analogue time with numbers in figures e.g. 10 past 8
	Words	Written analogue time with numbers in words e.g. ten past eight
	Words	Written digital time in words e.g. eight ten
24 Hour	0000	24 hour time in four figures e.g. 2010
	00.00	24 hour time with hours and minutes separated e.g. 20.10
	Spoken	Spoken 24 hour time e.g. "twenty ten hours"

Options for the right grid		
Button not selected	Button selected	Description
Face	Small	Small clock faces are matched according to the time they display.
	Large	A large clock face appears. The hands can be moved forwards and backwards in increments of 1 minute, 5 minutes and 1 hour by clicking the appropriate buttons. Set this clock to match the time on the left. Confirm the time by clicking within the circle of the clock face. If am or pm appear click either to switch between them.
Digital	0.00	Shows digital time e.g. 7.35
	00:00	Shows four figure digital time e.g. 07:35
Spoken	Spoken	Spoken analogue time. If the time does not match that on the left, click another box. Only click a second time to confirm selection.
	Spoken	Spoken digital time. If the time does not match that on the left, click another box. Only click a second time to confirm selection.
Written	Figures	Written analogue time with numbers in figures e.g. 10 past 8
	Words	Written analogue time with numbers in words e.g. ten past eight.
	Words	Written digital time in words e.g. eight ten
24 Hour	0000	24 hour time in four figures e.g. 2010
	00.00	24 hour time with hours and minutes separated e.g. 20.10
	Spoken	Spoken 24 hour time e.g. " twenty ten hours ". If the time does not match that on the left, click another box. Only click a second time to confirm the selection.

When the 24 hour option is selected a yellow button appears on the left which reads either **Open** or **am/pm**. These two options can be switched by clicking the button.

If analogue clocks are displayed, clicking the small square at the bottom corner of the screen changes the numbering on the clock faces.

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These instructions focus on how to operate MathBase3. For further information on the educational rationale behind these programs see our web site

www.mathbase.co.uk