

RM Maths Learning System

Teacher's Guide

Version 4.1

RM Maths Learning System Teacher's Guide Version 4.1.

PN 0KY-512

© Copyright, Research Machines plc, 1998–2002.
All Rights Reserved.

Although customers may make copies of this manual for their own use, you, as a customer, may make no other form of copy of any part of it without our written permission.

We have worked very hard and invested a lot of money to create a quality product. We therefore insist that you honour our copyright. This document is confidential and proprietary to Research Machines plc and may not be reproduced, published or disclosed to others without company authorisation. However, we want to encourage the use of our product and if you have any specific needs in this regard please contact us.

Microsoft is a registered trademark of Microsoft Corp. Other products mentioned in this book may be trademarks or registered trademarks of their relevant suppliers or manufacturers.

RM Maths Learning System is designed for use with Windows software produced by Microsoft Corporation, but is not otherwise associated with, or approved by, Microsoft Corporation.

Because our policy is to improve our products and services continually, we may make changes without notice. We have tried to keep the information in this manual completely accurate, but we cannot be held responsible for the consequences of any errors or omissions.

We would like to take this opportunity to thank all of the schools that were involved in our trials.

Your comments are of great value to us in improving our computer systems, publications and services.

Research Machines plc
New Mill House
183 Milton Park
Abingdon
Oxon. OX14 4SE

Telephone: 08709 200200
Website: www.rm.com

Contents

Introduction	1
About the RM Maths Learning System	1
How to Use this Guide	3
Further Information	4
Installing The RM Maths Learning System	5
Before You Start.....	5
Types of Installation	6
Standalone computer	6
Peer-to-peer workgroup (including RM SchoolShare System).....	7
Client-server network	8
Installation Instructions	9
Installing RM Maths on a standalone computer.....	9
Installing RM Maths on a peer-to-peer workgroup or network	12
RM Connect (including RM Connect Foundation and RM Primary Connect).....	14
Other client-server networks and peer-to-peer workgroups	16
Licensing the software.....	22
Upgrading To RM Maths Version 4.1	27
Before You Start.....	27
Upgrading RM Maths on a Standalone Computer	28
Upgrading RM Maths on a Network.....	31
RM Connect (including RM Connect Foundation and RM Primary Connect).....	32
RM SchoolShare	37
All other networks.....	41
Points to note.....	44
30 Minute Guided Tour	47
Set Yourself Up as an RM Maths User.....	48
Starting the Teacher's Program.....	48
The Teacher's Program screen.....	49

RM Maths Learning System Teacher's Guide

Set yourself up as a user	50
Closing the Teacher's Program	51
Run RM Maths and Do Some Activities.....	52
Starting RM Maths	52
The RM Maths Pupils' Logon screen.....	53
Work through some activities.....	54
Run the Teacher's Program to Check Your Progress	58
Getting The Most From The RM Maths Learning System	61
The Teacher's Role	61
Integrating RM Maths with Other Maths Teaching.....	62
Computer Location.....	63
Headphones	64
Using The Teacher's Program	65
Managing Users and Groups.....	66
Adding a group	68
Adding a user	70
Adding users electronically	74
Deleting a user	75
Deleting a group	75
Changing a user's details.....	75
Changing a user's icon	76
Moving a user to another group	77
Moving all users in a group to another group.....	78
Moving users from one computer to another.....	78
Monitoring Your Pupils' Progress.....	83
Printing pupil reports.....	84
Work time.....	87
Problem skills.....	90
Position in the course	93
Progress history	96
Session scores.....	98
Progress through the skills.....	100
Pupil's progress on the Numeracy page	102
Recording comments on a pupil.....	106
System Administration.....	107

Changing your school name	107
Changing your password	108
Changing Regional Settings.....	109
Backing up and restoring pupil data	110
How The RM Maths Learning System Works	113
Curriculum Design and Structure.....	113
Focus on Mental Methods.....	113
Curriculum Presentation	115
Help and Support.....	115
Skill Attainment.....	116
Progression.....	116
Regression	117
Success and Motivation.....	117
Confidence Setting.....	119
Problem Skills	120
Position Tests and Automatic Placement	121
Fast Track.....	123
Troubleshooting	125
Potential Problems.....	126
Technical.....	126
Network	129
Curriculum.....	130
Using RM Maths On A Network	133
General Points to Note	133
Backing up the Database.....	134
Broadcasting Across a Network	135
Listening for broadcast messages.....	135
Changing group	136
Logging off.....	136
RM Exchange File Format	139
Filename	139
Record Format.....	139
Field Definitions.....	140

RM Maths Learning System Teacher's Guide

Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks	143
Recommendations for RM Maths	144
Using The SIMS And Integris Utilities	147
SIMS and RM Maths	148
Import the RepGen Lite report definition into SIMS	148
Export the data onto floppy disk.....	148
Converting data to the RM Exchange format	149
Integris and RM Maths	150
Exporting Data for RM Maths.....	150
Importing RM Exchange Data into RM Maths	151
End User Licence Agreement	153
Logon Icons	157

Introduction

About the RM Maths Learning System

RM Maths is an Integrated Learning System intended for use by pupils of primary school age. It is recommended that each pupil uses the program for a short session every day if possible. It is designed to provide each pupil with a differentiated learning programme automatically, depending on his or her ability. Several independent studies have shown that pupils can make significant learning gains through regular use of Integrated Learning Systems.

With minimum familiarisation and teacher intervention, each pupil 'logs on' under his or her name, then works through a timed session of visually engaging maths screen activities, before handing over to the next pupil. Our research has shown that 15 minutes is the ideal session time – long enough for a pupil to settle and concentrate on their work, but without exceeding their attention span. No reading ability is assumed as full audio support is given. Most of the early activities are completed using the computer's mouse, with use of the keyboard increasing as the pupil progresses further into the curriculum. Pupils find RM Maths fun and are highly motivated to use the system.

Each pupil's work is monitored and recorded independently, and the pupil progresses to new and more difficult activities as they succeed. The program constantly adjusts the rate of progress; if a pupil starts to make more than just occasional mistakes, the rate of progress is slowed so that the pupil's perception is of constant success.

RM Maths Learning System Teacher's Guide

A number of animal characters make frequent appearances within the activities to help the pupils identify with the problems to be solved, and to maintain their interest.



Scuba



Snap



Squirt



Stripe



Swing

RM Maths Learning System is based on a maths curriculum containing over 1,800 different skills, all of which can appear in many variants, giving over 10,000 different screen activities. These activities provide comprehensive coverage of Number, Shape & Space and Handling Data. The curriculum is made up of many topics, and is delivered automatically by a sophisticated management system. In simple terms, a pupil progresses through these topics independently, but they are prevented from getting too far ahead in any one topic to ensure that prerequisite skills in other topics have been tackled first. A pupil is advanced to the next skill in a topic when they have got a skill 'right first time' several times in a row, much as a teacher might do. If they get an activity wrong, they temporarily regress to a related but simpler skill in the same topic, before returning to try the same skill again later.

The pupil is encouraged to attempt each activity, correcting their mistakes until they are happy with their answer. When a pupil gives an incorrect answer, they are given the opportunity to have further attempts, with help and support to guide them to the right answer and aid their understanding of the underlying mathematics. Use of headphones is important as much of the learning support is only available audibly.

RM Maths Learning System also includes a **Teacher's Program**. Although simple to use, this is a sophisticated management system used by the classroom teacher to register the pupils to use the system, monitor their progress through the curriculum and identify any problem areas.

How to Use this Guide

This guide is made up of the following sections:

- **Installing The RM Maths Learning System.** Work through this chapter first. It contains information and instructions on different types of installations.
- **Upgrading To RM Maths Version 4.1.** If you have RM Maths versions 1, 2 or 3, read this chapter for guidance on upgrading to the latest release.
- **30 Minute Guided Tour.** This chapter provides an introduction to the RM Maths Learning System and the Teacher's Program. After registering yourself as an RM Maths user, you will be guided through a short tutorial to familiarise yourself with some of the main RM Maths features. You can then check your progress by looking at some of the reports available in the Teacher's Program.
- **Getting The Most From The RM Maths Learning System.** This chapter contains information on 'good practice'. Much of this information has been gained through experience of using the software in schools. Subjects covered include the teacher's role and advice on the best location for computers.
- **Using The Teacher's Program.** This chapter describes the Teacher's Program and explains how to add users to the RM Maths system and monitor their progress. It also covers administrative tasks such as backing up the user data and changing the system password.
- **How The RM Maths Learning System Works.** If you are curious to find out more about how RM Maths works, you may find this chapter of interest.
- **Troubleshooting.** This chapter gives suggested solutions to problems you may encounter.
- **Using RM Maths On A Network.** This chapter provides additional information on using the RM Maths Learning System where the user database is shared by more than one computer.

Further Information

You may have been supplied with the following additional information:

- A fold-out chart showing an overview of the RM Maths Learning System's curriculum content and structure.
- The *Using RM ClassMate* manual. This covers the more advanced features of RM ClassMate. You should not need to refer to it for basic operation of RM Maths.
- A *Setting Up* card and *Safety and Comfort* guide. These are supplied with RM computer systems only. Refer to these when you unpack and set up your computer.

If you have problems installing or using the RM Maths Learning System:

- Visit www.rm.com/support, or
- Contact RM Support on 08709 202202 during office hours (Monday–Friday 8 a.m.–6 p.m.).

For information on RM products and services (including training courses on using the RM Maths Learning System), please call the RM Learning Solutions Sales Desk on 08709 086 700 or email us at rmls@rm.com.

Installing The RM Maths Learning System

Before You Start

This section assumes that you have already unpacked and set up your computer according to the manufacturer's instructions.

We recommend that you set aside at least 30 minutes per computer for installing this software. Please ensure that you have allocated enough time prior to commencing.

Important If your RM Maths Learning System was supplied with RM ClassMate software, then please install ClassMate first before continuing with this section. Refer to your *Using RM ClassMate* manual for more information.

Types of Installation

This section details the various installation options open to you and explains the advantages of each type of installation.

There are three types of installation:

1. Standalone computer
2. Peer-to-peer workgroup
3. Client–server network.

If you've already decided on the type of installation you require, skip this section and continue from the section entitled 'Installation Instructions' on page 9.

Standalone computer

You may want to install RM Maths on a standalone computer (one that is not linked or networked to any other computer). In this type of installation, the user database containing details of system usage, progress and problems, is held on the standalone computer and can only be accessed from this computer or exported onto floppy disk (or other removable media).

If you have several standalone computers, it is more difficult to produce reports comparing the progress of all pupils because their records are held on different computers. You will also have to back up the user database on each computer individually.

Important It is very important that you take regular backup copies of your user database (see 'Backing up and restoring pupil data' on page 110). This must be done for each computer in turn. This database contains the user details and progress records for each pupil on the system. Without this data, each pupil would have to start the learning program from scratch and you will have no historic records with which to produce reports. If you always retain a recent backup copy of the database, in the event of data loss you can revert to this backup copy.

Peer-to-peer workgroup (including RM SchoolShare System)

You may want to install the RM Maths Learning System on a computer belonging to a peer-to-peer workgroup, where computers are linked together and use Microsoft Networking for the purposes of sharing resources such as printers, files and the Internet.

The advantages of using a peer-to-peer workgroup are:

- The user database is held on only one computer and is accessible from any linked computer. This means that your pupils can run RM Maths, and you can run the Teacher's Program, from any computer in the workgroup.
- It's easy to review the progress of all pupils because the user records are held in one location.

The user database is *not* automatically backed up in any way. This means that should the computer that holds the user database fail for any reason, you will have to reinstall the software on every computer and restore the user database from the most recent backup floppy disk. However, backing up the user database is easier than on several standalone computers because there is only one copy of the user database.

Important We recommend you take weekly backups of your user database using a floppy disk or some other removable storage device such as a tape drive. See 'Backing up and restoring pupil data' on page 110 for details.

Client–server network

You may want to install the RM Maths Learning System on computers belonging to a client–server network (for example, RM Primary Network). This type of network holds one copy of the RM Maths program files and user database on the file server, and all other computers in the network load the program from, and save user records to, the server.

The advantages of using a client–server network are:

- As the server is usually in a protected location and inaccessible to unauthorised users, data is more secure.
- All program and data files can be easily and automatically backed up daily using the server's tape backup unit.
- The user database, containing details of system usage, progress and problems, is accessible from any computer in the network. This means that your pupils can run RM Maths, and you can run the Teacher's Program, from any computer on the network.
- It is easy to review the progress of all pupils because the user records are held in one location.
- It is easier to manage program maintenance and upgrades because there is only one copy of the program which is accessed by all computers.
- The workstations need less disk space to run the RM Maths program as the program files and user database are held on the server.

The advantage of using a peer-to-peer workgroup over a client–server network is that for small numbers of computers this option is much cheaper as they do not require a dedicated file server. However, you may be limited to a smaller number of machines in a peer-to-peer network by your operating system. For larger numbers of computers (for example, 10 or more), a client–server network usually provides a more manageable solution.

Installation Instructions

Installing RM Maths on a standalone computer

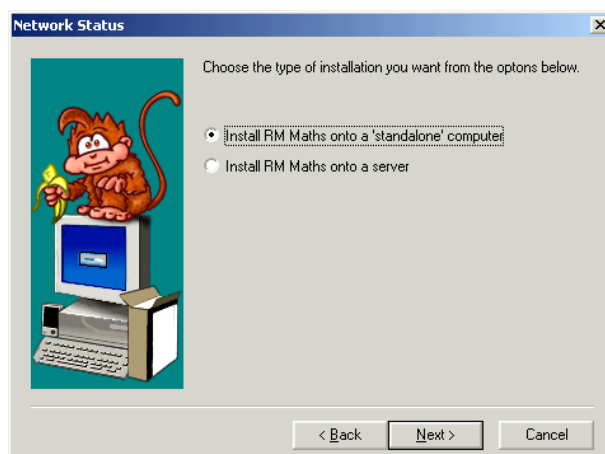
Note If your RM Maths Learning System was supplied with RM ClassMate software, this section assumes you have already installed ClassMate. You must be logged on as Manager before continuing with this installation. Refer to your *Using RM ClassMate* manual for guidance on how to do this.

1. Insert the RM Maths CD in your CD ROM drive. After a short time, the installation process will normally start automatically and load the setup screen.

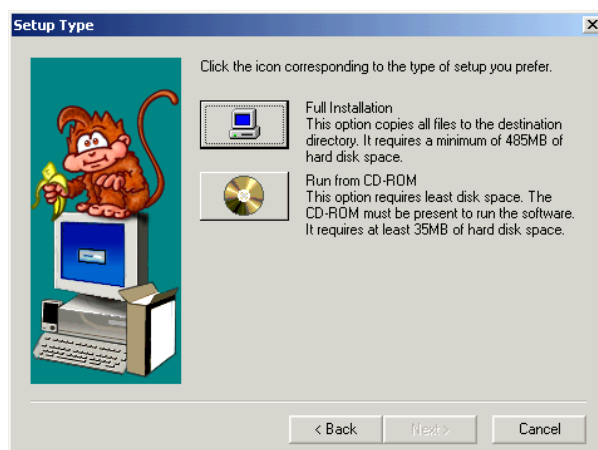
If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where 'd:' is the drive letter for your CD ROM drive). Click **OK** to run the installation program.

2. On the welcome screen, click the **Next** button to proceed with the installation.
3. You must accept the Software Licence Agreement to proceed with the installation process. Click **Yes** if you accept the terms of the agreement.
4. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

5. You are prompted for the type of installation. Select 'Install RM Maths onto a 'standalone' computer', then click the **Next** button.

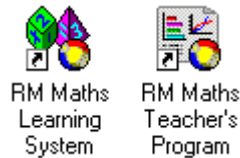


6. Now specify the required installation option – 'Full Installation' or 'Run from CD-ROM'. A full installation copies all required files to your hard disk and needs approximately 485MB disk space. Running the program from the CD only requires approximately 35MB disk space, but the CD must be present in your CD ROM drive whenever the program is run.



Installing The RM Maths Learning System

7. You can now choose where the files are to be installed. Unless you have a good reason not to, you are advised to click the **Next** button to accept the default location.
8. You can now choose which program group the new program icons will be created in. Unless you have a good reason not to, you are advised to click the **Next** button to accept the default program group.
9. If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.
10. The necessary files will now be copied to your hard drive. This may take several minutes for a full installation.
11. The installation is now complete. Two new program icons have appeared on your desktop:



If you performed a full installation, you should remove the CD and store it in the original RM Maths box for safekeeping.

Installing RM Maths on a peer-to-peer workgroup or network

To run RM Maths on a network or peer-to-peer workgroup you must have bought more than one software licence. You will need a software licence for every computer that you will use for RM Maths. Contact the RM Sales Desk for more details (see page 4).

Important Network installations can be complicated because network configurations are rarely the same, even when using the same network operating system. Unless you are experienced in performing such installations, we recommend you do not attempt to install RM Maths on a workgroup or network without the help of a qualified RM technician. Contact RM Support for details.

Important Ensure that the server is visible on the network before installing RM Maths. Refer to your operating system instructions on how to do this.

The following describes how to install the RM Maths Learning System on:

- RM networks, including RM Connect, RM Connect Foundation and RM Primary Network.
- Other client-server networks, such as Microsoft Windows NT or Novell Netware.
- Peer-to-peer workgroups running Windows 95, Windows 98, Windows 2000, Windows NT4 Workstation or Windows XP (see 'Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks' on page 143), with one computer nominated as the 'server'.

Installing The RM Maths Learning System

These installation notes assume that your network/workgroup is already fully operational and all stations are running Windows 95, Windows 98, Windows 2000, Windows NT4 Workstation or Windows XP. This document aims to provide general guidance on how to install RM Maths on any network – you may need to refer to the more detailed documentation provided with your particular type of network.

The installation process has four basic stages:

1. Prepare the server and stations.
2. Install RM Maths on the server.
3. Register the remaining stations to use RM Maths.
4. License the network for the number of concurrent user licences you have purchased, if you have not already done so in step 2.

These are described in more detail below. Refer to the appropriate section depending on which type of network you have.

Preparation

The RM Maths Learning System requires approximately 485MB disk space on your server. Check that you have sufficient free disk space.

With client-server networks, you will need to log on as Supervisor/Administrator to give you full access rights before you can install files on to the public area of the server. You also need to consider which user accounts RM Maths users will employ when they log on to the network. They will need read/write/delete/create access rights (sometimes known as ‘change permission’) to the RM Maths directory (and below) since they will create, modify and delete user data files as they use the product.

It is preferable to complete licensing during installation. To do this you need to be able to call RM Support. Please be prepared to do so.

RM Connect (including RM Connect Foundation and RM Primary Connect)

Note To install RM Maths on an RM Connect server you must log on as a user who has full administrative rights.

1. This must be done from the server. Insert the RM Maths CD in your CD ROM drive. After a short time, the installation process will normally start automatically.

If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where 'd:' is the drive letter for your CD ROM drive). Click **OK** to run the installation program.

2. You will then be asked if there is any version of RM Maths already installed on the server:

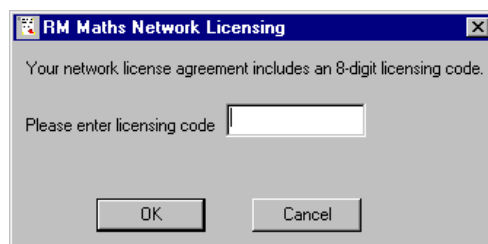


Select **No** and click the **Next** button.

3. At the following two welcome screens click the **Next** button.
4. You must accept the Software Licence Agreement to proceed with the installation process. Click **Yes** if you accept the terms of the agreement.

Installing The RM Maths Learning System

5. The software will now install onto the server. When this is complete click **Finish**. You will then see the following screen:



It is advisable to complete this licensing process now. However, if you wish to do this later click **Cancel**. You will only be able to use RM Maths and Teacher's Program on one station until it is correctly licensed. When you do return to license RM Maths you should follow the instructions for 'Licensing the software' on page 22. Otherwise continue with step 6.

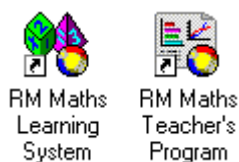
6. To license RM Maths now, contact RM Support on 08709 202202. Give them your school details and state the **total** number of RM Maths network user licences that you have purchased. This will be the number of **Licence Confirmation certificates** that you have received.
7. This information will be verified against our sales records and, if correct, you will be given an 8-digit code number. Make a note of this number.
8. Type this carefully at the above screen and click the **OK** button. There will be a short delay while the program registers the information.
9. If you typed your licence code in correctly, the licence program displays a message confirming that the RM Maths Learning System is licensed for the total number of concurrent user licences that you have purchased. Click the **OK** button to exit the licence program.

RM Maths is now licensed correctly on your RM Connect network. The software will limit the number of pupils who can run RM Maths sessions at any one time to the number of concurrent user licences that you have purchased.

RM Maths Learning System Teacher's Guide

To use RM Maths and Teacher's Program on your RM Connect network you must now correctly allocate the RM Maths package (called 'RMMaths') and shortcuts. Refer to your RM Connect documentation for further details.

- For your convenience the installation program has installed a topic called 'RMMaths'.
- If you have RM User Manager you can control which user is able to use RM Maths or Teacher's Program. To do so they must be a member of the 'RMMaths' topic. Only those in the 'RMMaths' topic will be able to use these applications.
- You may also wish to add the shortcuts to RM Maths and Teacher's Program to the appropriate desktops as well as the Programs menu. When logged on to a workstation as an administrator you will find the shortcuts in the RM Maths Learning System folder in All Shortcuts.



- Finally, if you have RM Application Wizard you can use it to allocate the package to the workstations that you will use for RM Maths and Teacher's Program. If you do not have RM Application Wizard you must go to each workstation and register 'RMMaths' as a new package.

You are now ready to run RM Maths on your network. Please continue with this Teacher's Guide. In particular, Appendix I contains useful information about networked use of RM Maths.

Other client-server networks and peer-to-peer workgroups

Important Ensure that your server name (its name in Network Neighborhood) does not have a space in it. E.g. 'My Server' is not valid, however, 'MyServer' is valid.

Installing The RM Maths Learning System

Important Ensure that the server's share in which you are intending to install RM Maths does not have a space in its name. E.g. '\\NWServer1\my share' is not valid, however '\\NWServer1\myshare' is valid.

Follow this basic procedure for all other types of network and workgroup:

1. If you are installing RM Maths on a **client-server network**, go to one of the stations in the network. If you are installing RM Maths on a **peer-to-peer workgroup** (including RM SchoolShare), go to the station you wish to use as the 'server' (which would usually be the station with the highest specification).

Note If using Microsoft® Windows XP, please refer to 'Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks' on page 143.

If necessary, log on as administrator/supervisor or otherwise ensure you have full access rights.

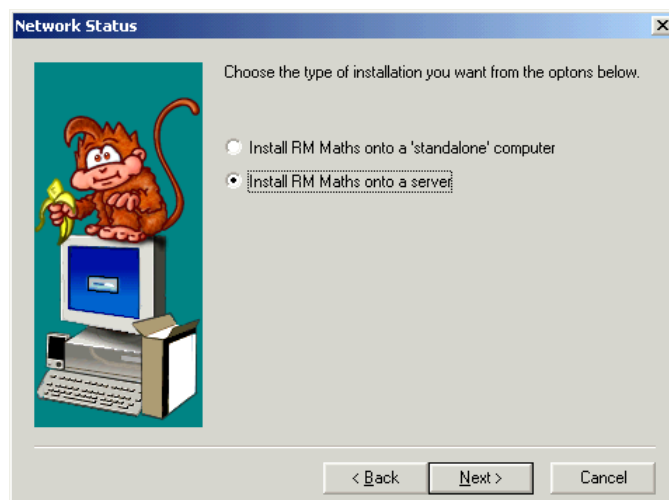
2. Insert the RM Maths CD in your CD ROM drive. After a short time the installation process will normally start automatically and load the setup screen.

If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where 'd:' is the drive letter of the CD ROM drive). Click **OK** to run the installation program.

Note If the station does not have a CD ROM drive you will need to share one fitted to the server or another station.

3. At the welcome screen, click the **Next** button.
4. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

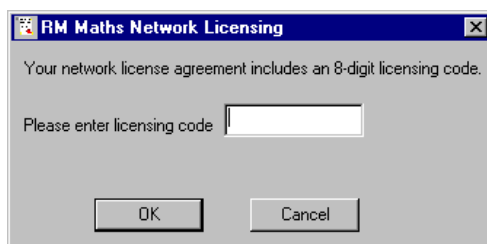
- When asked to select the type of installation, you will be installing to the server so click 'Install RM Maths onto a server'.



- Next you must specify where the files are to be installed. If you have a peer-to-peer workgroup we advise that you accept the default location and click the **Next** button. If you are installing onto a client-server network click **Browse...** to find the destination folder on the server that is to contain the shared program files. This will typically be in the server's public area. When you have found an appropriate location on the server click **OK** to accept it and then click the **Next** button.
- You can now choose which program group the new program icons will be created in. Unless you have a good reason not to, you are advised to click the **Next** button to accept the default program group.
- If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.

Installing The RM Maths Learning System

9. The software will now install onto the server. When this is complete click **Finish**. You will then see the following screen:

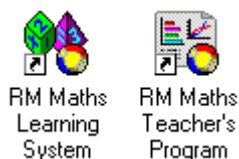


It is advisable to complete this process now. However, if you wish to do this later click **Cancel**. You will only be able to use RM Maths and Teacher's Program on one station until it is correctly licensed. When you do return to license RM Maths you should follow the instructions for 'Licensing the software' on page 22. Otherwise continue with step 10.

10. To license RM Maths now, contact RM Support on 08709 202202. Give them your school details and state the **total** number of RM Maths network user licences that you have purchased. This will be the number of **Licence Confirmation certificates** that you have received.
11. This information will be verified against our sales records and, if correct, you will be given an 8-digit code number. Make a note of this number.
12. Type this carefully at the above screen and click the **OK** button. There will be a short delay while the program registers the information.
13. If you typed your licence code in correctly, the licence program displays a message confirming that the RM Maths Learning System is licensed for the total number of concurrent user licences that you have purchased. Click the **OK** button to exit the licence program.

RM Maths Learning System Teacher's Guide

RM Maths is now licensed correctly on your network or workgroup. The software will limit the number of pupils who can run RM Maths sessions at any one time to the number of concurrent user licences that you have purchased. Two new program icons are added to the station's desktop:



You may need to refer to your own network administration documentation for guidance on how to allocate these RM Maths shortcuts to the appropriate user desktops.

Now go to each remaining workstation in the network or workgroup and complete the following steps. If you have not already done so, ensure that the RM Maths folder on the server is shared/available to all stations.

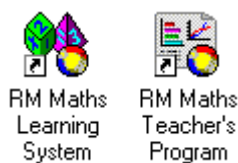
1. Log on as administrator so that you have full access. Using Windows Explorer browse to the master computer in Network Neighborhood and open the RM Maths folder. Open the Setup folder and double-click **Setup**. This will run the setup program.
2. At the Welcome screen click the **Next** button.
3. You must accept the Software Licence Agreement to proceed with the installation process. Click **Yes** if you accept the terms of the agreement.
4. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

Installing The RM Maths Learning System

5. If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.
6. The necessary files will now be installed on the workstation. Select **Finish** if prompted. You may also be asked to restart the workstation. Ensure that these six steps are repeated for all workstations that will be used for RM Maths and Teacher's Program.

Note The setup program can run concurrently on multiple workstations.

When you have finished, two new program icons are added to the station's desktop:



You may need to refer to your own network administration documentation for guidance on how to allocate these RM Maths shortcuts to the appropriate user desktops. For RM ClassMate users only, you will find a desktop has been created called 'Maths' which has the above shortcuts.

Licensing the software

By this stage, you should have installed RM Maths on your network and performed all necessary station configuration. You will not be able to run either RM Maths or Teacher's Program from any more than one station until you have licensed the product correctly. However, you can preview the product on one station before the network is properly licensed for the correct number of concurrent users.

- Locate all of the **Licence Confirmation certificates** and store them in the RM Maths box for safekeeping. **You should have one certificate for each user that will run RM Maths concurrently on the network or workgroup.**

The following describes how to license RM Maths for the correct number of concurrent users on your network. It should be followed when:

- You are licensing RM Maths on your network for the first time and did not do so during installation.
- You have been using RM Maths on your network for some time, you have just purchased some additional network user licences and you now need to change your RM Maths configuration to increase the maximum number of concurrent users that are allowed.

The process is as follows:

1. Contact RM Support on 08709 202202. Give them your school details and state the **total** number of RM Maths network user licences that you have purchased. (For example, if you already have a 10 station RM Maths network and have just purchased an additional 6 network user licences, then you should state that you have 16 licences altogether.) This will be the number of **Licence Confirmation certificates** that you have received altogether (if you bought a previous version of RM Maths you will have received Single User Licence Agreements instead of Licence Confirmation certificates).

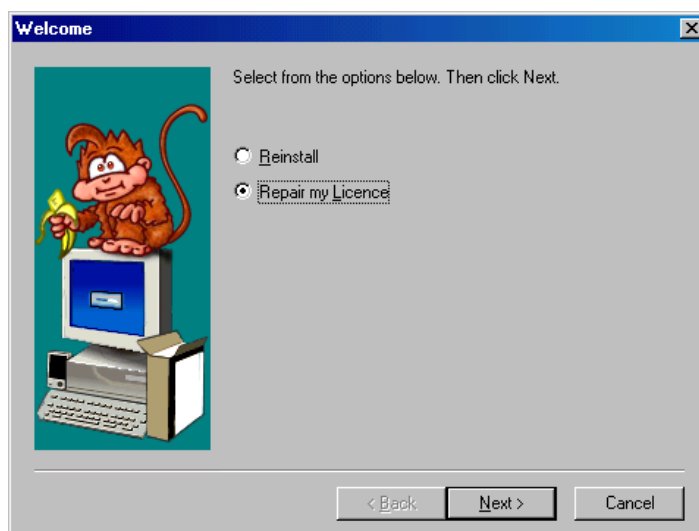
Installing The RM Maths Learning System

2. This information will be verified against our sales records and, if correct, you will be given an 8-digit code number. Make a note of this number.
3. If you are using an **RM Connect** network go to step 8. If not, log on at any RM Maths workstation as a network administrator or supervisor, or any user that will allow you to run programs from the Windows Start menu.
4. Insert the RM Maths CD into the station's CD ROM drive. Click the Windows **Start** button and select **Run**. Type: **d:\utils\license** (where 'd:' is the drive letter of the CD ROM drive) and click **OK** to run the licence program:



5. You are prompted for the 8-digit code that you were given in step 2. Type this in carefully and click the **OK** button. There will be a short delay while the program registers the information.
6. If you typed your licence code in correctly, the licence program displays a message confirming that the RM Maths Learning System is licensed for the total number of concurrent user licences that you have purchased. Click the **OK** button to exit the licence program.
7. Remove the RM Maths CD and store it safely in the RM Maths box in case you need to use it in the future. Licensing is now complete. The following steps are for **RM Connect** users only.

8. If you are using an RM Connect network, log on at the server and insert the RM Maths CD into the CD ROM drive. The following screen displays:



Select 'Repair my Licence'. You will be prompted for the 8-digit code that you were given in step 2. Type this in carefully and click the **OK** button. There will be a short delay while the program registers the information.

9. If you typed your licence code in correctly, the licence program displays a message confirming that the RM Maths Learning System is licensed for the total number of concurrent user licences that you have purchased. Click the **OK** button to exit the licence program.
10. Remove the RM Maths CD and store it safely in the RM Maths box in case you need to use it in the future. Licensing is complete.

RM Maths is now licensed correctly on your network. The software will limit the number of pupils who can run RM Maths sessions at any one time to the number of concurrent user licences that you have purchased.

Installing The RM Maths Learning System

You are now ready to run RM Maths on your network. Please continue with this Teacher's Guide. In particular, Appendix I contains useful information about networked use of RM Maths.

Upgrading To RM Maths Version 4.1

Read these notes for guidance on upgrading to the latest release of the RM Maths Learning System. These notes are intended for you if you have RM Maths versions 1, 2 or 3.

Before You Start

Please note these general points before starting the upgrade:

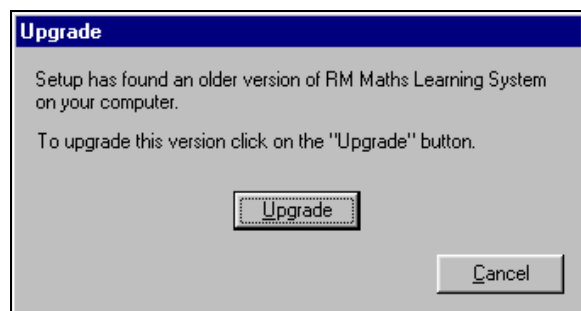
- It is important to make a back up copy of your RM Maths user database before you upgrade (see 'Backing up and restoring pupil data' on page 110). In the unlikely event of a problem occurring, you will then be sure that your valuable pupil history data is safe.
- Close all other programs which may be running in the background.
- Do **not** use the Add/Remove Program facility in Windows Control Panel to remove earlier RM Maths Versions. The upgrade process relies on finding the earlier version files in order to work properly.
- If you are upgrading RM Maths on an RM SchoolShare network you will need to enter a new licence code. To obtain the licence code, contact RM Support on 08709 202202.

Now refer to the appropriate section below depending on the type of RM Maths installation that you have.

Upgrading RM Maths on a Standalone Computer

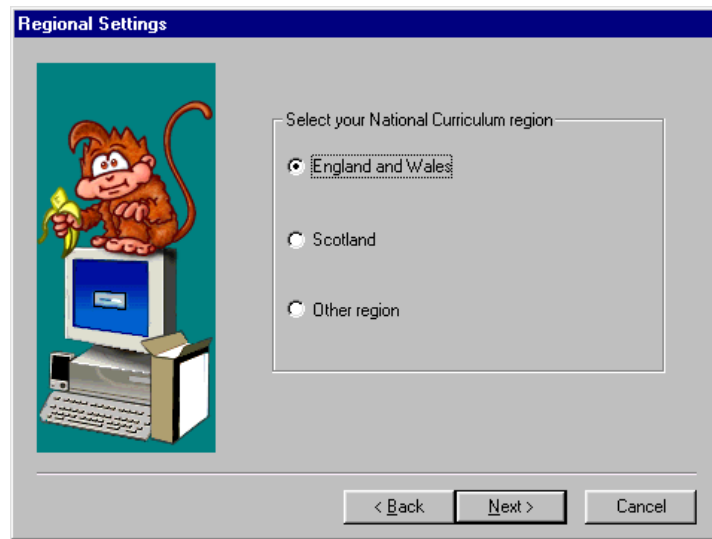
Note If your RM Maths Learning System was originally supplied with RM ClassMate software, you must be logged on as Manager before continuing with this upgrade. Refer to your Using RM ClassMate manual for guidance on how to do this.

1. Insert the RM Maths CD in your CD ROM drive. After a short time, the upgrade process will normally start automatically. If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where 'd:' is the drive letter for your CD ROM drive). The following screen is displayed:



2. Click **Upgrade** then click the **Next** button at the Welcome screen.
3. You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement.
4. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

5. The following screen is displayed:

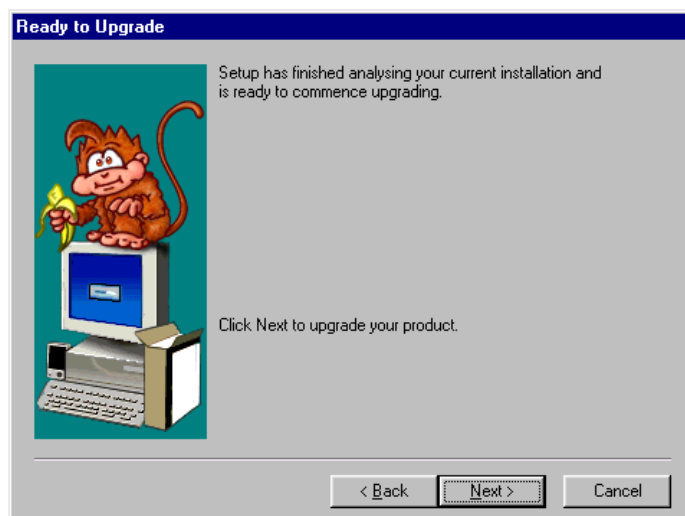


If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.

6. The upgrade program checks to see if your computer has enough room for the new version of RM Maths. You will need approximately 485MB of free space.

If there is not enough room to upgrade, a message appears informing you to clear some disk space. If this occurs you will have to abort the upgrade and delete some unwanted applications or files from the hard drive before you can try again.

7. If you have enough space on your computer to upgrade, the following screen is displayed:



8. Click the **Next** button to proceed with the upgrade.
9. The necessary files will now be copied to your hard drive. This may take several minutes for a full installation.
10. At the Upgrade Complete screen click **Finish** and re-boot the computer if prompted.

The upgrade process is now complete. If you normally run RM Maths from your hard drive, you should remove the CD ROM and store it in the original RM Maths box for safekeeping.

Upgrading RM Maths on a Network

This section describes how to upgrade the RM Maths Learning System on:

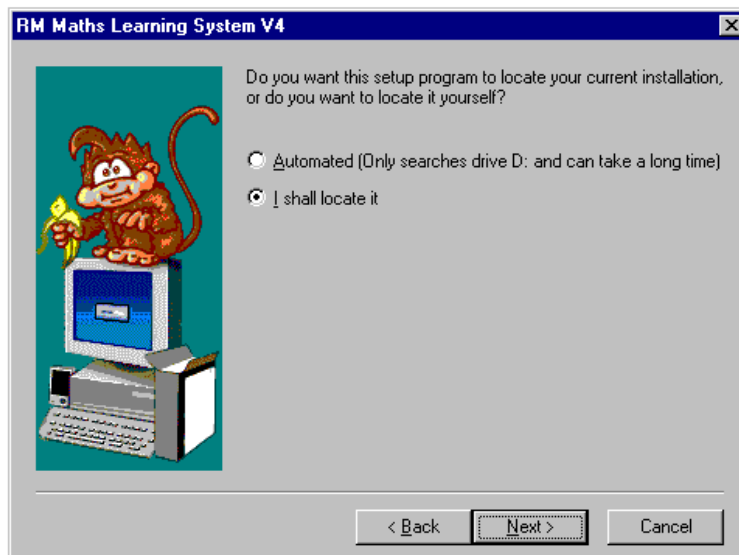
- RM networks, including RM Connect and RM Connect Foundation
- RM SchoolShare networks
- Other client–server networks such as Microsoft Windows NT or Novell Netware
- Peer-to-peer workgroups running Windows 95, Windows 98, Windows 2000, Windows NT4 Workstation or Windows XP (see ‘Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks’ on page 143), with one computer nominated as the ‘server’.

RM Connect (including RM Connect Foundation and RM Primary Connect)

1. If you have RM Application Wizard, go to any workstation. Using the RM Application Wizard, first de-allocate your existing RM Maths package(s) from all workstations.

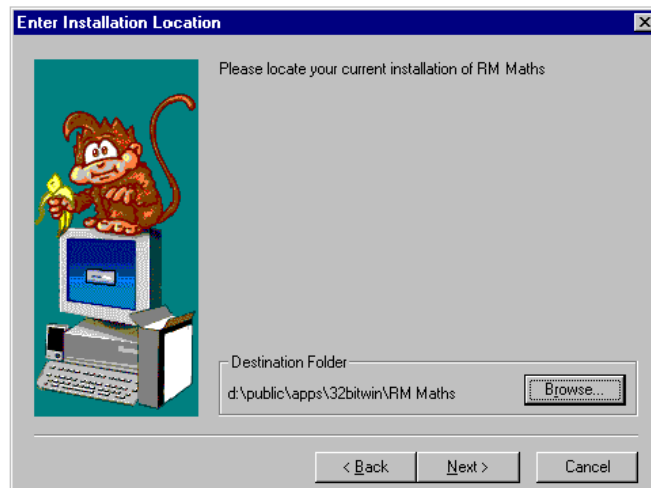
Otherwise proceed to the next step.

2. Insert the CD ROM into your server. If the setup program locates your current installation of RM Maths in the default location then the upgrade will proceed directly to step 5. If not, you will be taken through the following steps.
3. You will be asked if RM Maths is already installed on this server. Click **Yes** to continue with the upgrade.
4. The following screen will appear:



Upgrading To RM Maths Version 4.1

- Select **Automated** if you are not sure of the location of the current installation. When you click the **Next** button the setup program will search the d:\ drive of the server for the RM Maths software.
- Select **I shall locate it** if you know the location of the current installation. When you click the **Next** button the following screen will appear. Click **Browse...** and select the required folder.



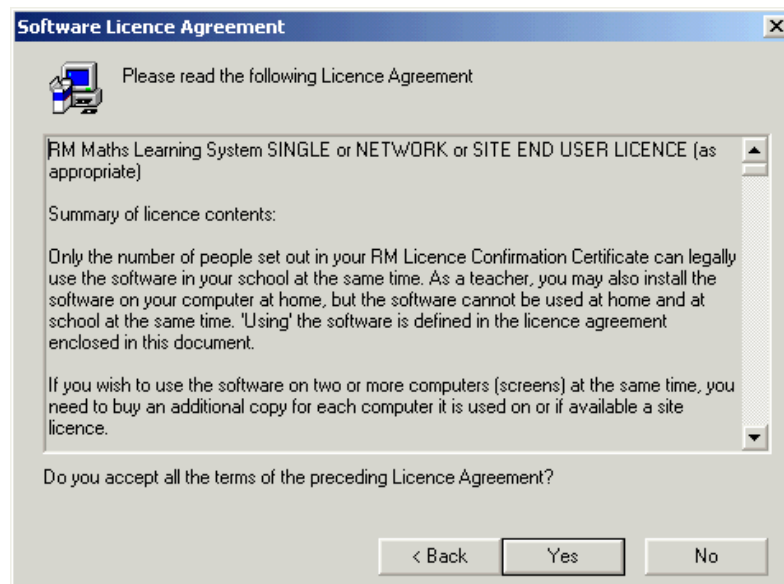
Once you have selected the correct folder, click the **Next** button to continue.

5. The following screen will then appear:



Click the **Next** button to continue.

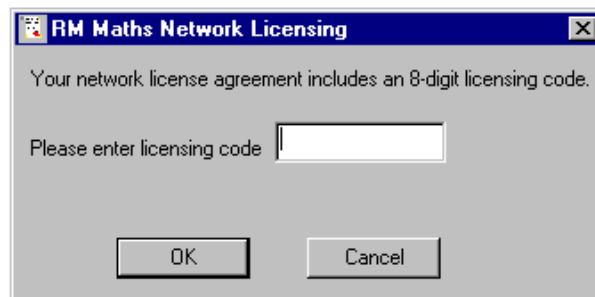
6. At the next welcome screen click the **Next** button.
7. A screen showing the Software Licence Agreement is then displayed.



Upgrading To RM Maths Version 4.1

You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement

8. Files will now be copied to your server. At the Setup Complete screen click **Finish** to continue.
9. At the Upgrade Complete screen click **Finish** and then wait for a few moments.
10. The setup program may ask you to re-enter your licensing code. If it does the following screen will appear:



You will need to enter your licensing code. Click **OK** and after a few moments the setup program will confirm how many users are licensed to run RM Maths at any one time.

Note If you do not have a licensing code, or have changed your existing number of RM Maths licences, please call RM Support on 08709 202202.

The upgrade is now complete. A new RM Maths package has been created and you must now allocate this to the required workstations.

RM Maths Learning System Teacher's Guide

11. If you have RM Application Wizard, go to any workstation and allocate the 'RMMaths' package to all the workstations you wish to run RM Maths software on.

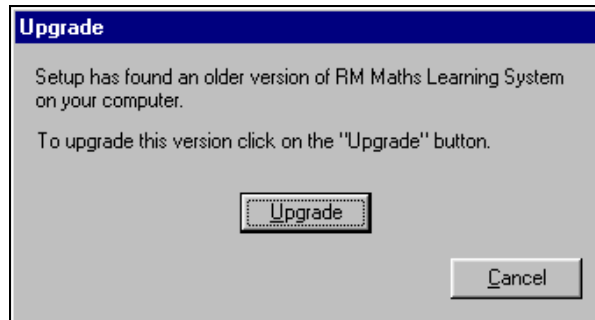
Note You will find shortcuts to RM Maths and Teacher's Program in the RM Maths Learning System folder in 'All Shortcuts'.

If you do not have Application Wizard, go to each workstation and register 'RMMaths' as a new package on each workstation.

Note Any user who will be using RM Maths Learning System or Teacher's Program must be an 'RMMaths' topic member. Refer to your Connect guide to find out how to do this.

RM SchoolShare

1. Go to the master computer. (If you are not sure which one this is, run the Teacher's Program on each computer and look at the Administration page. Close the Teacher's Program before continuing with the installation process.)
2. Insert the RM Maths CD in your CD ROM drive. After a short time, the upgrade process will normally start automatically. If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where 'd:' is the drive letter for your CD ROM drive). The following screen is displayed:



3. Click **Upgrade** then click the **Next** button at the Welcome screen.
4. You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement
5. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

6. The following screen is displayed:



If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.

7. Click the **Next** button to proceed with the upgrade. Files will now be copied to your computer.
8. At the Upgrade Complete screen click **Finish** and re-boot the computer if prompted.
9. You will now need to run License from the CD to complete the network licensing. Click the Windows **Start** button and select **Run**. Type: **d:\utils\license.exe** (where 'd:' is the drive letter for your CD ROM drive).

Upgrading To RM Maths Version 4.1



10. You will need to enter your licensing code. Click **OK** and after a few moments the setup program will confirm how many users are licensed to run RM Maths at any one time.

Note If you do not have a licensing code, or have changed your existing number of RM Maths licences, please call RM Support on 08709 202202.

11. The upgrade of the master computer is now complete. You will now use this to upgrade the other computers on the SchoolShare network.

Go to each remaining SchoolShare station and perform the following steps:

Important Ensure that your server name (its name in Network Neighborhood) does not have a space in it. E.g. 'My Server' is not valid, however, 'MyServer' is valid.

12. Using Windows Explorer browse to the master computer in Network Neighborhood and open the RM Maths folder. Open the Setup folder and double-click **Setup**.
13. At the Welcome screen click the **Next** button.
14. You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement
15. You will then be asked to check the date and time on the computer. Please ensure that this is correct before continuing. Click the **Next** button to continue.

RM Maths Learning System Teacher's Guide

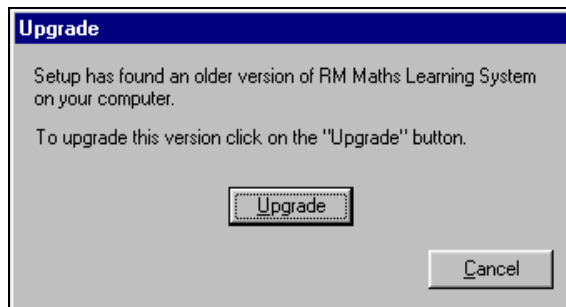
16. At the Regional settings choose the same setting you selected for the master computer in step 6. Then click the **Next** button and the files will be copied to the computer.
17. At the Installation Complete screen click **Finish** and re-boot the computer if prompted.
18. Ensure that steps 10 to 15 are repeated for all remaining stations.

Note The setup program can run concurrently on multiple workstations.

Important This new version of RM Maths no longer automatically replicates your user data to other computers on your network. You are therefore strongly advised to perform regular backups of your data. Please refer to the Teacher's Guide for further information on backing up data.

All other networks

1. Log on as administrator/supervisor to ensure that you have full access rights.
2. Go to any station on the network (we will call this the 'first' station).
3. Insert the RM Maths CD in your CD ROM drive. After a short time, the upgrade process will normally start automatically. If not, click the Windows **Start** button and select **Run**. Type: **d:\setup.exe** (where '**d:**' is the drive letter for your CD ROM drive). The following screen is displayed:



4. Click **Upgrade**, then click the **Next** button at the Welcome screen.
5. You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement
6. You are asked to confirm that the date and time are correct, and if not to correct them. It is very important that the system date is correct as the dates of sessions, problems and so on are stored within the files. Click the **Next** button.

7. The following screen is displayed:



If you are in England or Wales, you can choose to show progress reports in the Teacher's Program using National Curriculum levels. If you are in Scotland you can use the levels in the Guidelines on Mathematics 5–14 (Scotland). If you are outside England, Wales or Scotland, then 'Other region' should be selected. Click the **Next** button to continue.

Upgrading To RM Maths Version 4.1

8. Click the **Next** button to proceed with the upgrade. Files will now be copied to your computer.
9. At the Upgrade Complete screen click **Finish** and re-boot the computer if prompted.
10. At the Setup Complete screen click **Finish** and re-boot the computer if prompted.

Now repeat the following steps for each remaining station in the network/workgroup.

11. Using Windows Explorer browse to the master computer in Network Neighborhood and open the RM Maths folder. Open the Setup folder and double-click **Setup**.
12. At the Welcome screen click the **Next** button.
13. You must accept the Software Licence Agreement to proceed with the upgrade process. Click **Yes** if you accept the terms of the agreement
14. You will then be asked to check the date and time on the computer. Please ensure that this is correct before continuing. Click the **Next** button to continue.
15. At the Regional settings choose the same setting you selected for the master computer in step 7. Then click the **Next** button and the files will be copied to the computer.
16. At the Installation Complete screen click **Finish** and re-boot the computer if prompted.
17. Ensure that steps 11 to 16 are repeated for all remaining stations.

Note The setup program can run concurrently on multiple workstations.

Points to note

- If your previous standalone version of RM Maths was installed using the *run from CD ROM* option, but you want to run Version 4.1 from the hard drive:
 - Perform the upgrade to Version 4.1 as detailed in this document.
 - Re-install following the upgrade. This will give you the option to perform the full install to the hard drive. Instructions for the re-install are the same as for a first-time install and can be found in the 'Installation Instructions' on page 9.
- If you run RM Maths on the same day that you performed the upgrade, you may find that on the Logon screen some users appear to have completed a session that day (even if they have not). This is a by-product of the upgrade process and is to be expected. When you start RM Maths the next day the system will behave as normal.
- You are advised to upgrade all your earlier copies of RM Maths to RM Maths Version 4.1.
- If there is not enough hard disk space to upgrade, a message appears informing you to clear some disk space. If this occurs you will have to abort the upgrade and delete some unwanted applications or files from the hard drive before you can try again.
- If you normally run RM Maths from your hard drive, you should remove the CD and store it in the original RM Maths box for safekeeping when you have completed the upgrade process.
- Local resources are no longer supported as an installation option. If you have local resources installed by a previous version of RM Maths then they will be removed by the upgrade process.

Upgrading To RM Maths Version 4.1

- Users with RM SchoolShare networks should note that this new version of RM Maths no longer automatically replicates your user data to other computers on your network. You are therefore strongly advised to perform regular backups of your data. Please refer to 'Backing up and restoring pupil data' on page 110.
- If you experience any difficulties during the upgrade, please visit www.rm.com/support or contact RM Support on 08709 202202 during office hours (Monday–Friday 8 a.m.–6 p.m.).

CHAPTER 4

30 Minute Guided Tour

This section provides a quick introduction to using RM Maths and the Teacher's Program. In just 30 minutes you will:

1. Use the Teacher's Program to register yourself as an RM Maths user.
2. Perform a 15-minute session of RM Maths activities.
3. Use the Teacher's Program to monitor your progress.

Set Yourself Up as an RM Maths User

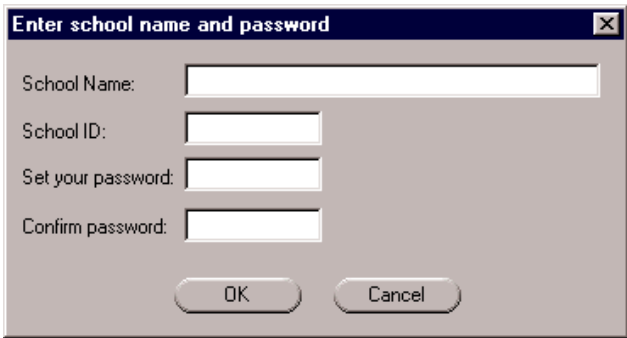
Before you can use RM Maths Learning System, you must set yourself up as a user with the Teacher's Program. Let's do this now.

Starting the Teacher's Program



1. To start the Teacher's Program, double-click the **RM Maths Teacher's Program** icon on your desktop.

The first time you use the Teacher's Program, you will be prompted to enter your school name, school ID and a password.



2. Type your school name as you would like it to appear on your RM Maths pupil reports. You can amend this later at any time if you wish.
3. Type your school ID. Ideally this is something which, in conjunction with your school name, uniquely identifies your school. You could enter your school's DfES number or simply your postcode.
4. Type a new password.

Note The password must be 5–10 characters in length. The password is not case-sensitive (that is, 'earth' and 'Earth' are regarded as identical passwords). It will appear as asterisks for security reasons. Make sure you keep a copy of your password in a safe place.

5. Carefully re-type the new password in **Confirm password**.
6. Click **OK**. The Teacher's Program screen appears.

The Teacher's Program screen

All of the teacher functions are performed from this screen. The pages at the top of the screen contain all the reports and configuration settings for users.

You must create a group before you can add users to the system. You can group pupils however you want (for example, by their class, year or room), but each pupil can only belong to one group. All the pupils held on the system are displayed in the 'Groups and Users' panel under the group to which they belong. When you open the Teacher's Program for the first time, the 'Groups and Users' panel will be empty.

The screenshot shows the 'RM Maths Teacher's Program' window. The 'Groups and Users' panel on the left is empty. The 'User Details' panel on the right contains the following fields and buttons:

- Group Name: [Text Field] Logon: [Dropdown] Add Group...
- Full Name: [Text Field] Add User
- Short Name: [Text Field]
- Gender: ☐ Male ☐ Female Move User...
- Adult User: ☐ Change Icon...
- Date of Birth: [Date Picker] Delete
- Show Score: ☐ Session Length: [Text Field] minutes Save
- Teacher's assessment of user's confidence: High ☐ Medium ☐ Low ☐ Cancel
- Progress Setting: Infant ☐ Junior ☐ Switch to Junior automatically ☐ Import...
- Fast Track: ☐ Export...
- Enable Automatic Placement: ☐
- Block Position: [Slider] [A B C D E F G H I J K L M N O P Q R S T U V W]

At the bottom of the window are 'Close' and 'Print...' buttons.

Set up a group

Now set up a group as follows:

1. From the Teacher's Program 'User Details' page, click **Add Group**.

The 'Add New Group' box appears:



2. Type in the name of the new group. Don't worry about what to call the group. You can change it later on if necessary, or even delete it once you have worked through this chapter.
3. Click **OK**.

The new group name appears in the 'Groups and Users' panel.

Set yourself up as a user

Now register yourself as a user:

1. Select the group you just created in the 'Groups and Users' panel of the Teacher's Program 'User Details' page.
2. Click **Add User**.
3. Type your full name in the **Full Name** box.
4. Select the correct **Gender** radio button.
5. Click the **Adult User** tick box. (Putting a tick in this box just means you don't have to enter your date of birth.)
6. Click the **Save** button.

7. When you add pupils in future it is advisable that they complete an **automatic position test** to assess their ability (this is explained in detail in 'Position Tests and Automatic Placement' on page 121). For your first session this is not required so click the box next to **Enable Automatic Placement** to **remove** the tick. This will mean that your first session will show typical lessons rather than the ability assessment activities.
8. Your name appears in the 'Groups and Users' panel under the group you created.

The screenshot shows the 'RM Maths Teacher's Program' window. On the left, the 'Groups and Users' panel lists 'Mrs Smith's Test Group' with a red cross icon and 'Sue Green' below it. The main area is the 'User Details' tab, which contains the following fields and controls:

- Group Name:** Mrs Smith's Test Group
- Logon:** Icons & Names (dropdown menu)
- Full Name:** Sue Green
- Short Name:** Sue
- Gender:** Male (radio button), Female (radio button, selected)
- Adult User:** ☒
- Date of Birth:** [calendar icon] [calendar icon]
- Show Score:** ☒
- Session Length:** 15 minutes
- Teacher's assessment of user's confidence:** High (radio button), Medium (radio button, selected), Low (radio button)
- Progress Setting:** Infant (radio button, selected), Junior (radio button), Switch to Junior automatically (checkbox), Fast Track (checkbox)
- Enable Automatic Placement:** ☐ This user will start a placement test in their next session.
- Block Position:** A B C D E F G H I J K L M N O P Q R S T U V W (checkboxes, A is selected)

Buttons on the right side include: Add Group..., Add User, Move User..., Change Icon..., Delete, Save, Cancel, Import..., and Export... At the bottom are Close and Print... buttons.

Closing the Teacher's Program



Now close the 'Teacher's Program' by either clicking the **Close** button, or clicking on the 'close program' box at the top right of the screen.

Run RM Maths and Do Some Activities

You are now ready to try out RM Maths. Before you start, make sure your headphones are plugged in to the back of your computer in the socket marked SPK, OUT or PHONES. The socket may alternatively be labelled with a picture of some headphones. It is important that headphones are used as much of the program's learning support is audio only.

Important If you have a multimedia monitor, you may be able to plug your headphones into an audio socket on the front of the monitor. Do *not* plug the headphones into the socket on the front panel of your CD ROM drive – this is for listening to audio CDs only.

You may want to use a headphone splitter or extension lead to prevent damage to the computer or headphones if a pupil gets up from the computer and forgets to remove the headphones.

Starting RM Maths

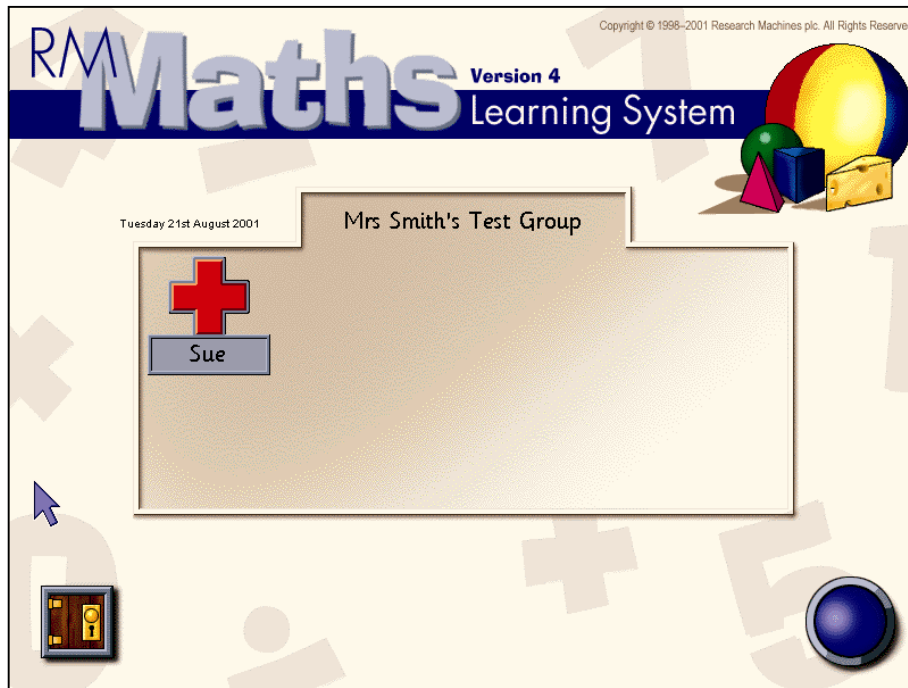


To start RM Maths, double-click the **RM Maths Learning System** icon on your desktop.

You will see the RM Maths startup screen while the program loads. The RM Maths Pupils' Logon screen is then displayed.

The RM Maths Pupils' Logon screen

The first time you see this screen it will only contain your name, as you have only created one user.



To start an RM Maths session:

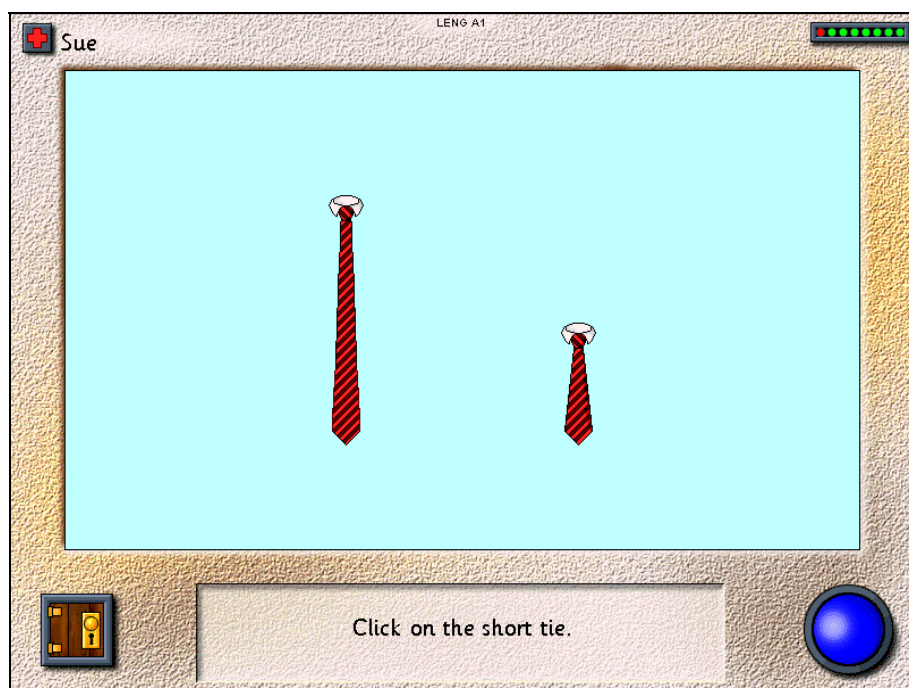
1. Click your **name button**.
2. Click the big **blue button** at the bottom right-hand corner of the screen.

Work through some activities

Now let's work through a 15-minute activity session.

You will see a variety of tutorials and maths activities from the very beginning of the curriculum. The tutorials explain how to complete activities and are not marked (they are covered in detail in 'Success and Motivation' on page 117). Try getting some activities right and others wrong to see what happens.

RM Maths is very easy to use. The activities you see may be different to the one shown below because RM Maths provides a path through the curriculum that is different for each user.





In the example activity shown, you would use the left button of the mouse to click the screen objects to select them.



When you've completed an activity, click the big blue button in the bottom corner of the screen. This causes your answer to be assessed. You can modify your answer freely before this button is pressed.

The mouse pointer changes according to the task required by the activity:



When you are over an object on which you can click, the mouse pointer changes to a blue pointing finger. Some skills require you to move an object to another place (i.e. 'pick up' an object by clicking on it and move it to another place by clicking on that place). The pointer changes to a blue pointing finger when you are over an object to be picked up, or when the object is in a position where it can be put down.



While you are moving an object, the mouse pointer changes to a transparent hand.



Some skills require you to 'paint' an object. The mouse pointer changes to a paintbrush. (If you make a mistake in a painting activity, use the pot of white paint to correct your mistake.)



When an activity requires you to draw a line, the mouse pointer changes to a pencil.

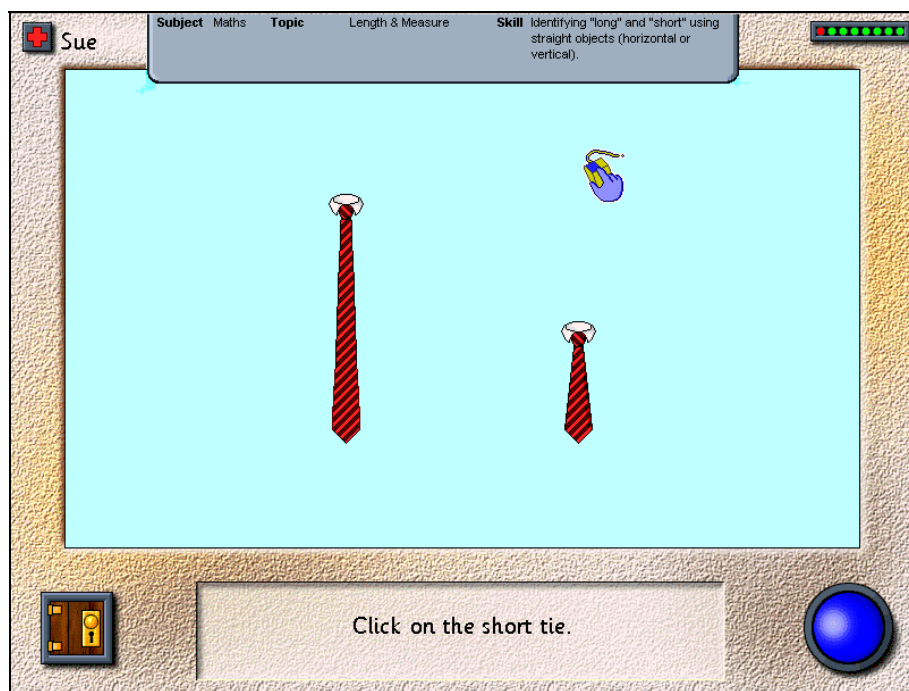


At each screen you will hear an audio instruction, which is repeated periodically if nothing is pressed. To hear the audio instruction again, click the instruction text at the bottom of the screen. A headphones symbol appears and the instruction is repeated.

LENG A1

At the top of the screen is the unique code for the current skill. It comprises a topic abbreviation, a letter and a number. For example, LENG A1 means the activity is in the Length topic, is in curriculum block A and is the first skill in that block. Refer to the accompanying RM Maths curriculum structure chart to see a summary of the maths skills in each block.

Click this code to reveal a drop-down box containing more information about this activity.



Click anywhere to remove this box. Note the mouse pointer has changed to remind you to 'click to move on'.



At the top right of the screen, a timer denotes the amount of time you've been working on this session. At the beginning of the session, the timer looks like this.



Halfway through the session, the timer looks like this.



As you get near to the end of your session, you will notice the timer shows you've nearly finished a session.



You can end a session at any time by clicking the **exit door** in the bottom left-hand corner of the screen. This feature is provided so that sessions may be legitimately interrupted for playtime, lunchtime, assembly and so on. It is password-protected to prevent pupils from exiting the program without supervision.

Note If the RM Maths system is left unattended, then after 3 minutes of inactivity (i.e. no mouse or key clicks) the current session is automatically closed.

Your session time is set to 15 minutes. Once this time has expired, your session will end after you've completed the activity you are currently working on and you will be returned to the Pupils' Logon screen.



Your name will then show a 'face' signifying that you have completed your session for today. If you try to run a subsequent session today, you will need to type the password. This feature ensures that some pupils do not get extra sessions whilst others miss out.



Now let's leave RM Maths by clicking the **exit door** and typing your password.

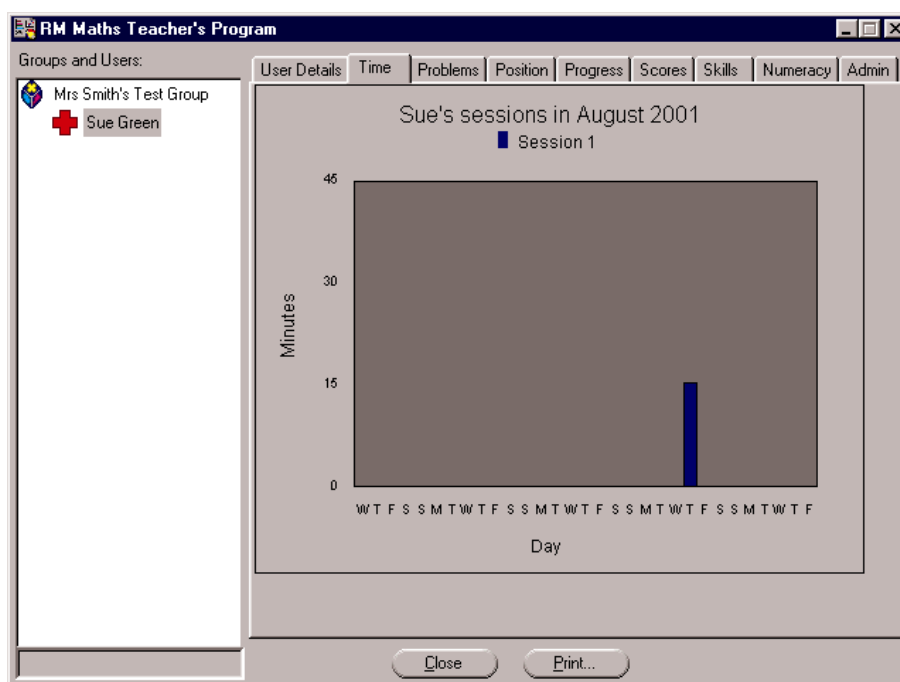
Run the Teacher's Program to Check Your Progress

The Teacher's Program enables you to generate reports on pupil usage, progress and any problems identified by the system. Let's run it now to find out how you did in your first session.

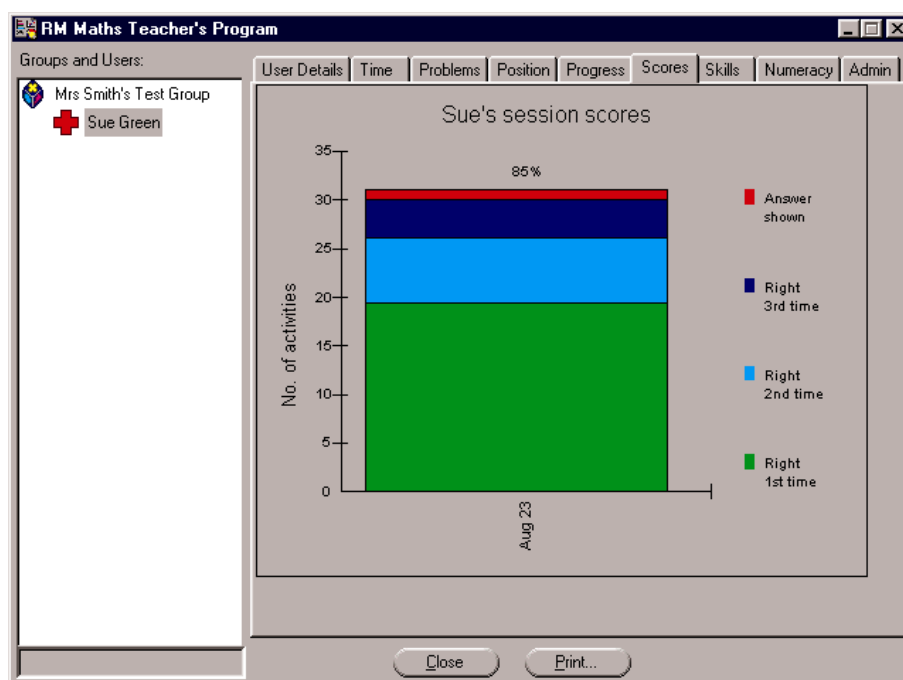


Start the Teacher's Program by double-clicking on the **RM Maths Teacher's Program** icon on your desktop. Enter your password (this is the password you specified the first time you ran the Teacher's Program), and click **OK**. You can now look at a few charts to see how you performed. As you are the only registered user, and you've only completed one session, you can only look at a few of the charts. For more information on all the charts the system can produce, see 'Using The Teacher's Program' on page 65.

On the Teacher's Program screen, click the 'Time' page to see a chart showing that you've completed one session. You should see a blue bar on today's date.



Click the 'Scores' page to see the scores for your first session.



This report shows you how many activities you completed in your 15-minute session (the height of the bar). The bar is colour coded to show the proportion of activities you answered correctly on your first/second/third attempt, and the activities for which you had to be shown the answer. The score for each session is shown over each bar.



Close the Teacher's Program by either clicking the **Close** button, or clicking the 'close program' box at the top right of the screen.

Now that you've had a quick tour of RM Maths and seen how you can use the Teacher's Program, you are ready to start setting up your groups and adding your pupils as system users. See 'Managing Users and Groups' on page 66 for more information.

Getting The Most From The RM Maths Learning System

This section includes lots of useful information we have gained from our experiences of using the software in schools.

The Teacher's Role

The classroom teacher's most important contribution to the success of the product is to:

- Use the Teacher's Program reasonably frequently (at least once a week) to check that the pupils are spending the required amount of time using the program and to see whether they are having any problems. The Teacher's Program details individual pupil problem areas. This information can be used to improve teaching in the classroom. This can take the form of helping individuals or groups, or teaching the class as a whole. By acting on the information retrieved from the Teacher's Program, the effectiveness of the product is significantly increased.
- Ensure that the pupils selected to use the software perform a 15-minute daily session. Although occasional missed sessions are not a cause for concern, try to keep the number of missed sessions to a minimum. The trials show that an average of 4 sessions a week produces the best learning gains. The program is designed to be used by one pupil at a time, rather than in pairs or larger groups.

The program has a number of features to help you to get as many pupils as possible on the computer each day.



Once a pupil has completed their session for today, a 'face' appears in the centre of their short name button. This enables you to tell at a glance who has had a session that day. Note that this marker will also appear if you end a pupil's session prematurely.

If a pupil tries to run a subsequent session after already completing his/her session for that day, they will be prompted for the RM Maths password ensuring they cannot run another session without your knowledge. The order in which the pupils use the computer does not matter. However, most schools find that the pupils prefer to adopt a standard routine. To maximise the available time, you may want to run the first session during class registration.

Different teachers choose to integrate the use of the system into their daily routine in different ways. However, a common pattern is that it can take up to a month before most teachers and pupils learn to accept it as part of the classroom routine – so it is worth persevering!

Integrating RM Maths with Other Maths Teaching

The system works by ensuring that pupils work on several topics in each session. This ensures that a wide range of topics are practised and fresh in pupils' minds. This approach is different to that of normal classroom teaching, where the focus of a maths session would normally be on a specific topic or skill.

Some teachers have initially been concerned that the pupils' work in RM Maths is not synchronised with their class teaching or other maths scheme. However, they have soon realised that RM Maths is designed to work independently and, because a range of topics are kept 'simmering' in pupils' minds, the pupils are in fact more likely to understand new material introduced by the teacher. The pupil profiles produced by RM Maths can also be extremely useful in helping the teacher split the pupils into differentiated groups as part of their whole-class teaching.

Getting The Most From The RM Maths Learning System

Teachers in England and Wales can get reports of their pupils' progress in terms of the National Numeracy Framework objectives. Teachers in Scotland can get reports in terms of the attainment targets in the Guidelines for Mathematics 5–14 (Scotland). These reports can be used to inform their teaching strategy and lesson plans, or to support the professional assessments of their pupils.

Classrooms equipped with large monitors or electronic whiteboards can allow the teacher to select individual RM Maths activities. These activities can be used to tackle common areas of difficulty or to support the planned teaching objective for that lesson.

Computer Location

Our experiences in trial schools have highlighted the importance of the computer position. We understand that lack of space is an issue in many classrooms and you may not be able to position the computers as we suggest. However, if at all possible, try to adopt these recommendations:

- Site the computer in the classroom under your supervision. If a pupil works in the classroom then they are more likely to consider using the computer as an important part of their maths work, and therefore be more focused and keen to do their best. Pupils working in corridors without supervision may feel that their work is not valued by you and not give their best. However, if the pupils are already used to working outside the classroom (perhaps in an adjoining room) then this may not cause any such problems.
- Site it out of the way of any busy areas (i.e. not in a busy corridor or next to a door which is in constant use).
- Position the computer monitor against a wall to avoid distraction.
- Avoid positioning the computer next to your desk where a pupil may be put off by other pupils visiting you.

- If you have more than one computer, try to ensure that they are not sited side by side where pupils can be distracted, either by the person next to them or by the activity on the other screen. If you don't have the room to site computers well away from each other, a suitable alternative is to position the computers back to back, with pupils facing each other.
- Position the computer and monitor so that all cables are tucked well out of the way. Plastic 'cable ties' offer a simple and inexpensive way of keeping all the cables tidy.
- Try to locate the computer so that other pupils cannot easily see the screen. They will want to watch it if they can.

Headphones

It is very important for the pupils to keep using headphones with the system. Pupils may sometimes try to work without headphones thinking they do not need them, especially once their reading skills allow them to understand the instruction text at the bottom of the screen. **If they do this, they will not get the full benefit from the system.** The audio instructions and prompts support the learning process and reinforce what has been learnt. Much of the help that is built into every activity is delivered only using audio messages.

Remind the pupils to take the headphones off at the end of their session.

We recommend using closed-back headphones rather than open headphones so the pupil is less distracted by classroom noise.

CHAPTER 6

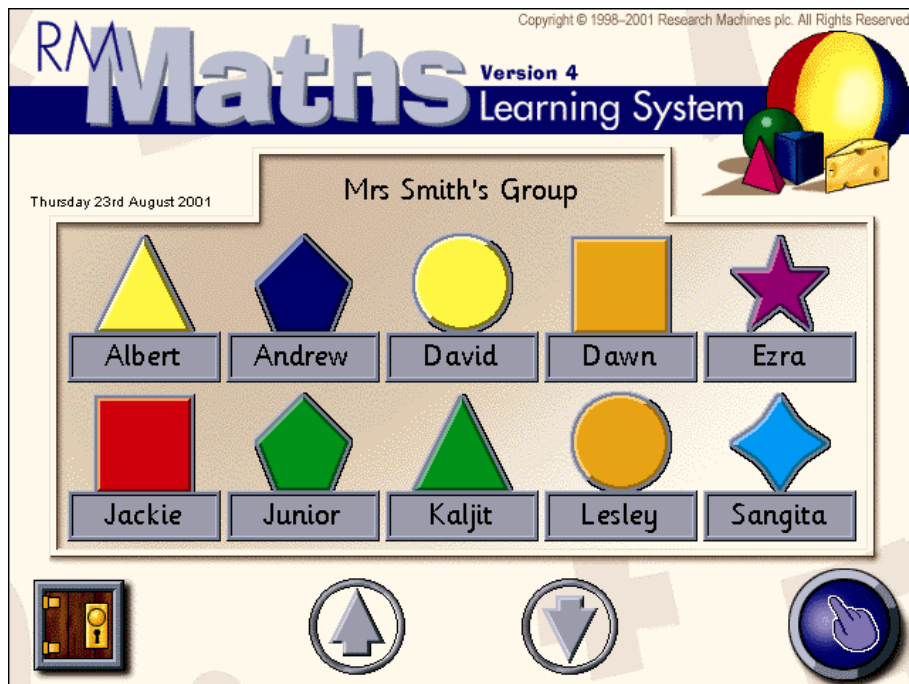
Using The Teacher's Program

Frequent use of the Teacher's Program is a vital part of getting the most from the product. Once you have set up your pupils to use the system, we recommend that you run this program at least once a week to:

1. Check that the pupils are performing their sessions as expected.
2. Monitor their progress through the curriculum.
3. Discover if there are any skills with which they have had problems, either individually or as a group.

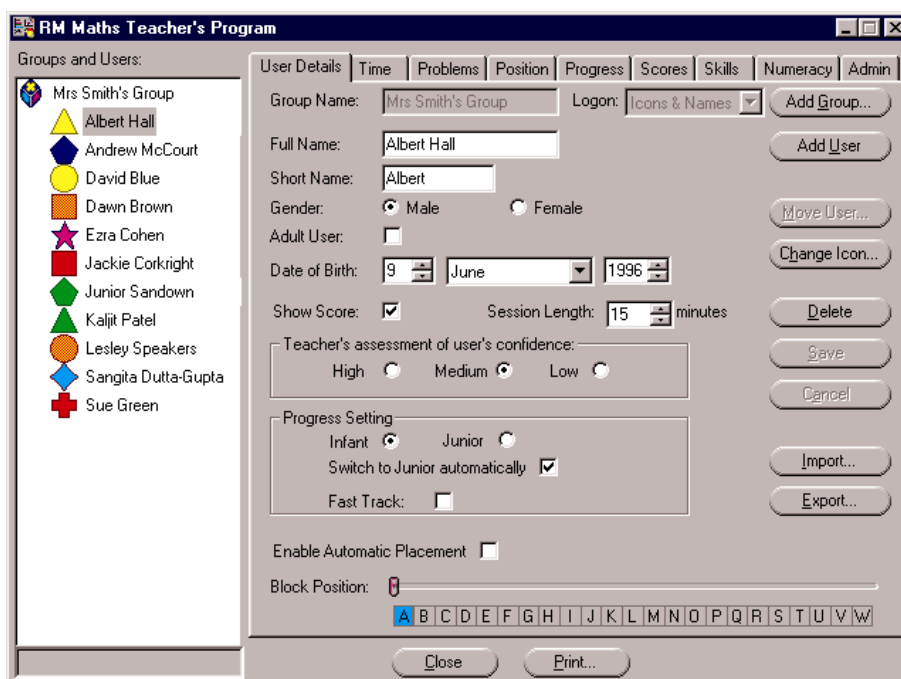
Managing Users and Groups

Before a pupil can use RM Maths, you must register them as a user with the Teacher's Program. You can group pupils however you want (for example, by their class, year or room), but each pupil can only appear in one group at a time. Pupils in a group appear on the RM Maths Pupils' Logon screen as follows:



If there are more than 10 pupils registered in one group, some of the pupils will have to use the up and down arrow buttons to find their names.

Users are managed from the 'User Details' page in the Teacher's Program. All the users held on the system are displayed in the 'Groups and Users' panel under the group to which they belong.



Double-clicking on a group name compresses the list by hiding the users. Double-clicking again reveals the users. This can be useful if you have lots of groups and users.

If you click a group name, the status bar at the bottom left-hand corner of the 'User Details' page shows the number of users in the group. If you select a user who is currently running an RM Maths session, *Session in progress* is displayed. This is useful as it prevents you from changing any user details for a user who is currently using the system.

Adding a group

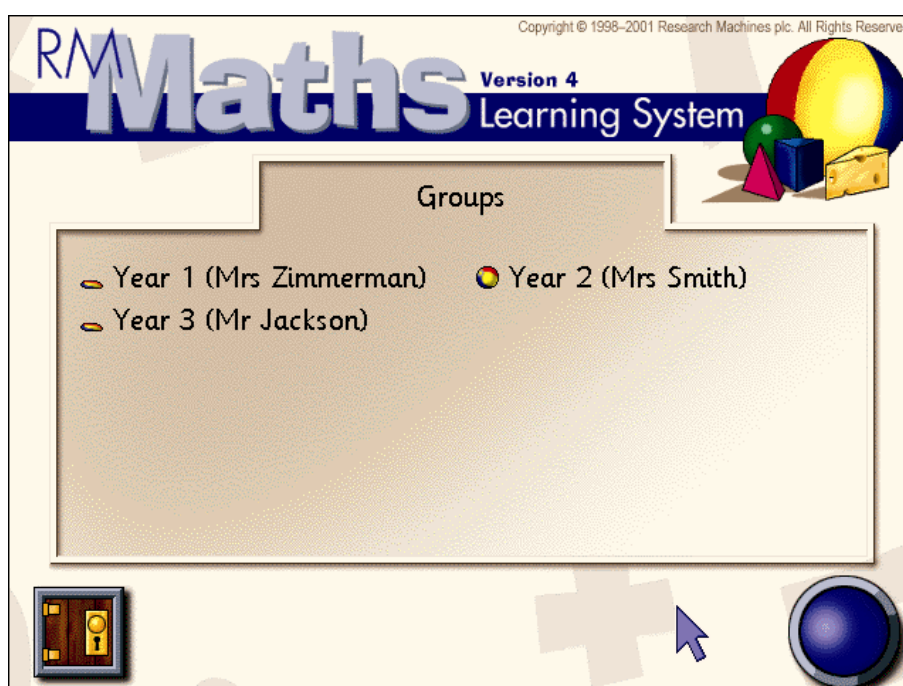
1. From the Teacher's Program 'User Details' page, click **Add Group**.
2. The 'Add New Group' box appears. Type in the name of the new group. This could be the class or year (e.g. Year 1), or room (e.g. Room 4). You may want to include the name of the teacher in the group name (e.g. Year 1 – Mrs Smith). (You may wish to set your class up under a different group to the one you set up to contain your own details in the '30 Minute Guided Tour'. You can then 'dip' into the activities yourself if you wish to, without being grouped with your pupils.)
3. Click **OK**. The new group name appears in the 'Groups and Users' panel. To add users to the group, refer to 'Adding a user' on page 70.
4. The default logon style for a new group is *Infant*. The logon style of *Junior* is a more 'grown up' version of the RM Maths Pupils' Logon screen, using pupils' full names and without the coloured icons. If you wish to change the logon style, set the required style from the pull-down **Logon** options. We recommend that you leave the default style of *Infant* selected for younger pupils who may find it easier to recognise their coloured shape than their name.
5. Click **Save** if you changed the logon style to *Junior*.

Once you have more than one user group, when you exit the Pupils' Logon screen by clicking the **exit door** you will notice a new 'group selection' screen listing all user groups. This gives you the opportunity to open another group by selecting it and clicking the blue button.

Using The Teacher's Program

If the workstation you are using is linked to other computers (as part of an RM SchoolShare system, peer-to-peer workgroup or client-server network), the screen includes a **Broadcast group** button. When you want to open another group, select it, click the **Broadcast group** button and then click the blue button. All the other workstations running RM Maths in the SchoolShare group or network are updated to display the new group details. This allows you to change all machines in an IT suite to another group for example, without going to each machine individually.

Note If you have a workstation that is part of your network, but you don't wish it to be updated using the **Broadcast group** button (perhaps the station is in another room, for example), run the Teacher's Program on that station and clear the broadcast group logon box on the 'Admin' page. See page 135 for more details.



To exit from this screen, click the **exit door** once more.

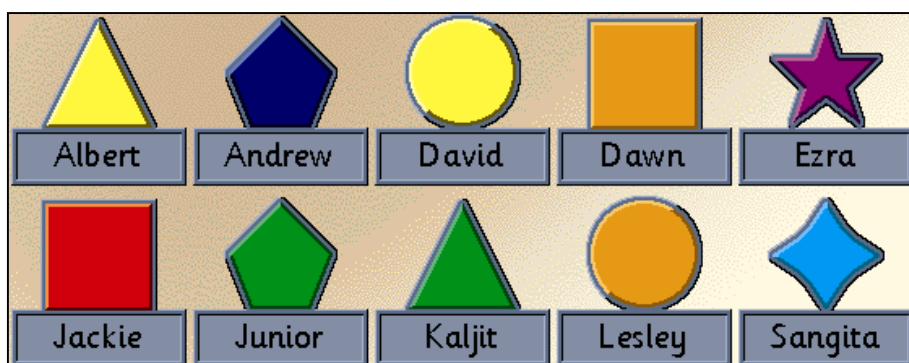
In setting up user groups, remember:

- The RM Maths Pupils' Logon screen only shows the pupil names for the currently selected group.
- Each time you exit RM Maths, the program remembers which group was last displayed. The next time you run RM Maths, this group will be shown on the Logon screen automatically. To choose a different group, click the **exit door** to go to the group selection screen.
- A pupil can only belong to one group. The maximum number of pupils in one group is 49, but there is no limit to the number of groups.

Adding a user

1. From the Teacher's Program 'User Details' page, click the group which is to contain the new user.
2. Click **Add User**.
3. Type the full name of the new user in the **Full Name** box.
4. The first name of the user appears automatically in the **Short Name** box.

The short name is the name that appears on the grey buttons on the Pupils' Logon screen. It is automatically set to the first name of the user.



Note If a group is assigned a logon style of Junior, the Logon screen displays the full name of the pupil without the coloured shapes.

You may want to change the short name (for example, if a pupil's first name is Joseph and he is known as Joe, or to add an initial to distinguish two pupils with the same first name). If so, click in the **Short Name** box and enter the new short name. The maximum length of the short name depends on the letters it contains. The program works out the length of the short name you type and warns you if it is too long to fit on the button.

5. Select the correct **Gender** radio button.
6. If the user is an adult, click the **Adult User** tick box. This option would usually only be used by teachers or perhaps parents during an open evening.
7. If the user is a pupil, enter their **Date of Birth** using the up and down arrow buttons beside each control. It is very important that you complete the date of birth for all pupils since it will influence the place where they start. (If the user is an adult, the **Date of Birth** box will be greyed out.)
8. The **Show Score** box is ticked and so the user's scores will be shown to them at the end of a session. You can clear this tick box if you do not wish a pupil to see their score at the end of the session. Scores are shown within themes which motivate pupils to continue to use RM Maths. The themes are discussed in 'Success and Motivation' on page 117.
9. You can adjust the **Session Length** using the up and down arrow buttons. The session length is automatically set to 15 minutes. This is the length of time we have found to be most appropriate and you are advised not to change it without good reason.
10. When a date of birth has been entered, the program will automatically set the **Progress Setting** to *Infant* or *Junior*. The *Infant* progress setting gradually introduces new concepts and strategies, and so is most suitable for younger pupils. The *Junior* progress setting offers older pupils the opportunity to tackle more challenging activities and to progress through the curriculum more quickly. However, if you feel the setting chosen by the program is not appropriate, then you can alter it manually. If you have selected adult user then the progress setting will be *Infant*, unless you manually select the *Junior* setting. For more information, see 'How The RM Maths Learning System Works' on page 113.

11. Select your assessment of the user's **Confidence** – *High, Medium* or *Low*.

The confidence level influences the way the automatic progression and regression mechanism works. For more information, see 'How The RM Maths Learning System Works' on page 113.

Don't worry if you are not sure which setting to use. This is an advanced feature for 'fine tuning' only. The program will operate well for all pupils using the default 'medium' confidence setting.

12. When a user is added, they will begin their first session with a **Position Test**. This is because **automatic placement** is enabled for all new users. The initial level of this test is determined by their date of birth. **Automatic placement** is intended to place each pupil quickly and accurately according to their maths skills, by initially using their age as an indicator of their ability. Users will continue in **automatic placement**, quickly progressing and regressing through blocks within the test, until they are placed in a position that suits them individually. This is discussed in more detail in 'Position Tests and Automatic Placement' on page 121.

If you believe that their age is not a good initial indicator of their ability you can move the **Block position** marker to another block where they will begin their test. Refer to your curriculum structure chart for more information on the content of each block. You will find that the **Block position** marker moves in pairs of blocks while in automatic placement.

Alternatively you can turn off **automatic placement** if you do not wish a pupil to be placed automatically. If you do this it can take much longer for a pupil to be placed correctly using the normal session progression and regression mechanism.

13. If you have turned off automatic placement for a pupil, you may wish to click the **Fast Track** tick box. This will enable the pupil to move through the skills at a faster pace, provided they continue to complete most of the activities successfully. If a pupil starts failing to answer most questions successfully, **Fast Track** is automatically switched off.

If the pupil is going to take a placement test you can still click the **Fast Track** tick box. When they complete the test and are placed **Fast Track** will already be enabled. However, we recommend that the tick box is left unticked for most pupils since the Position Test will have already placed them according to their ability. **Fast Track** will always be turned on and off automatically during normal sessions if their lesson scores warrant it. For more information, see 'Fast Track' on page 123.

14. To add the user to the selected group, click **Save**.

The new user name appears in the 'Groups and Users' panel under the selected group. This user will automatically be allocated a user icon. If you wish to change this, refer to 'Changing a user's icon' on page 76.

Adding users electronically

The two previous sections describe how to add new groups and users to the Teacher's Program by typing the information into the 'User Details' page. However, if you have other software (such as a school administration system) that already holds pupil details then you may be able to import this data electronically without having to re-type all of the information.

1. Run the source program that has the pupil data you wish to register on RM Maths.
2. Export this pupil data onto floppy disk or another drive in RM Exchange format if the program can do this. If not, export the pupil information as a comma-separated value (CSV) file. This is a standard format for swapping data between programs. You will then need to use a tool such as Microsoft® Excel to manipulate the data into RM Exchange format. Note that this operation will probably require some previous data manipulation experience and you may have to supply some data that the source program was unable to provide. For more information, and a definition of RM Exchange format, please refer to Appendix II.
3. Once you have pupil data in RM Exchange format, use the **Import** button on the 'User Details' page to load this information and register the pupils as RM Maths users. For more information, see 'Moving users from one computer to another' on page 78.

Important RM Exchange files must be named RMXCHNGE.CSV before they can be imported into the Teacher's Program. If you make an RM Exchange file manually using Microsoft Excel or a similar tool, make sure you give it this filename when you save it.

Deleting a user

Warning Deleting a user will permanently delete **all progress records** for that user. If you are moving a user from one computer to another with the export feature, please ensure that the user has been successfully imported onto the new computer **before** you delete them from the original computer.

1. From the Teacher's Program 'User Details' page, select the user to be deleted.
2. Click the **Delete** button and click **Yes** to confirm the deletion of this user.

The user is removed from the 'Groups and Users' panel. *All* details for that user are also deleted.

Deleting a group

Warning Deleting a group will permanently delete **all progress records** for **all users in the group**. Please use with caution!

1. From the Teacher's Program 'User Details' page, select the group to be deleted.
2. Click the **Delete** button and click **Yes** to confirm the deletion of this group and all the users it contains.

The group is removed from the 'Groups and Users' panel. *All* details for that group and its users are deleted.

Changing a user's details

1. From the Teacher's Program 'User Details' page, select the user whose details you wish to change.
2. Change the user's details as required and click the **Save** button to save the changes. To abandon making any changes, simply click **Cancel** at any time.

Note If the user is logged on elsewhere on a network, the status *Session in progress* is displayed in the bottom left-hand corner of the 'User Details' page. The fields on the page are greyed out, indicating you cannot change the details of a user who is currently using the system.

Changing a user's icon

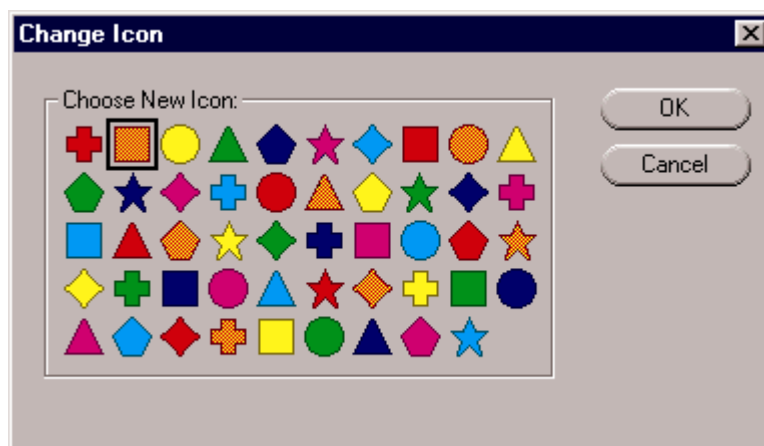
To aid recognition, pupils with a logon style of *Infant* have a coloured shape or *icon* associated with their name that appears on the Pupils' Logon screen. This coloured icon is also used to help identify that user in the graphs and charts.

Note Templates for these icons are shown on page 157. You can use this template to copy the icons, cut them out and give them to your younger pupils to colour. They may enjoy making a badge to represent their RM Maths logon icon.

It is not usually necessary to change a user's icon. However, if you merge two groups, you may find that two similar icons appear next to each other, or two pupils with similar names (for example, Alice and Alicia), have similar icons (both the same colour or shape for example).

You can change a user's icon as follows:

1. From the Teacher's Program 'User Details' page, select the user whose icon you wish to change.
2. Click the **Change Icon** button. The 'Change Icon' box appears.



3. Select a new icon and click **OK**. Note that you cannot select an icon that has already been assigned to a user in the same group.
4. Click the **Save** button to save the new icon.

Moving a user to another group

1. From the Teacher's Program 'User Details' page, select the user to be moved to another group.
2. Click the **Move User** button.
3. The 'Move Users' box appears. This contains a list of the available groups to which you can move the user. Select the required group and click **OK**.
4. Click **Yes** to confirm that you want to move this user.

The 'Groups and Users' panel is updated to show the user in their new group. Note that the incoming user's icon will automatically be changed if it has already been assigned to a user in the destination group.

Moving all users in a group to another group

1. From the Teacher's Program 'User Details' page, select the group containing the users to be moved to another group.
2. Click the **Move User** button.
3. The 'Move Users' box appears. This contains a list of the available groups to which you can move the users. Select the required group and click **OK**.

The 'Groups and Users' panel is updated to show the users in their new group.

Moving users from one computer to another

If you are using your computer in standalone mode (that is, your computer is not part of a SchoolShare system, peer-to-peer workgroup or client-server network), you will sometimes need to move user details from one computer to another (for example, in September when a pupil has moved to another class).

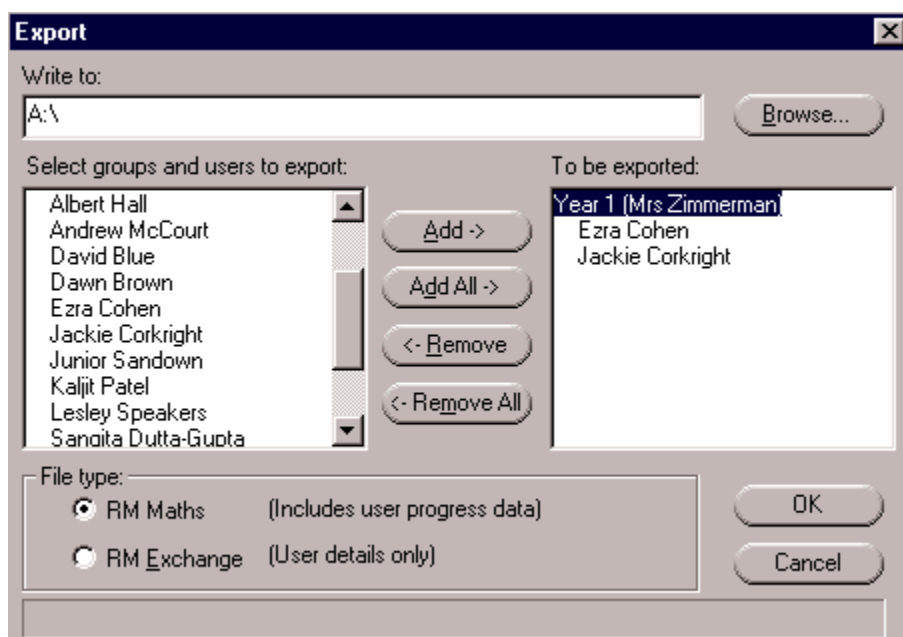
You can either move users individually or in any combination of users and groups.

1. Go to the computer that currently holds the details on the users to be moved.
2. Run the Teacher's Program.
3. Insert a formatted floppy disk into the computer's floppy disk drive. The floppy disk does not have to be blank, but will obviously hold more information if it is.

Note Many floppy drives collect dust in the classroom environment and can become unreliable. Import/export errors can occur if the floppy drive is not cleaned at regular intervals.

4. Click the **Export** button on the 'User Details' page.

The following screen is displayed:



5. Select the user or group to be moved and click the **Add** button. The users appear in the list to be exported on the right.
6. The file type 'RM Maths' is the correct type when you want to move users so that they can carry on using RM Maths on a different computer. Choosing this file type exports all information about the selected users, including their progress history.

Note If you have other software which stores pupil information and it can accept pupil information electronically, you may want to use the 'RM Exchange' file type. Choosing this file type only exports basic information about the selected users (such as name, date of birth, gender, class name and so on). This could avoid the need for typing in these details all over again. **However, if you use the 'RM Exchange' option to move users from one RM Maths computer to another, none of the information on usage, progress or problems will be moved to the destination computer.**

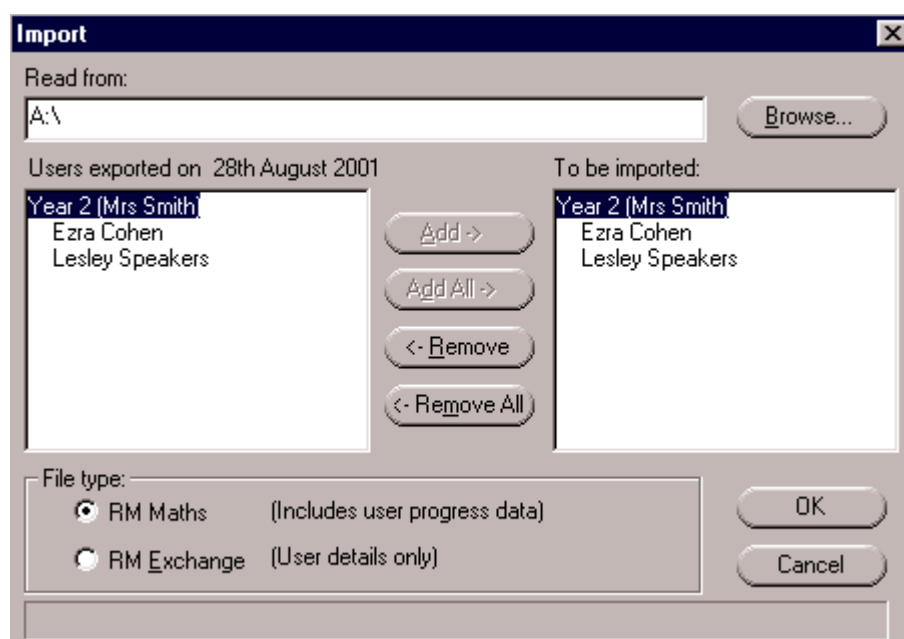
7. Click the **OK** button.

RM Maths Learning System Teacher's Guide

8. This makes a copy of the users' information on the floppy disk.
9. Now go to the computer you wish the pupils to use from now on and insert the floppy disk into the drive.
10. Run the Teacher's Program on this computer.
11. From the 'User Details' page, click the group name in which the users will reside and click the **Import** button.

Note If you want to import RM Exchange data then the RM Exchange File type must be selected. This file type only supports basic information about selected pupils. **If you make an RM Exchange file manually using Microsoft Excel or a similar tool, make sure you give it the filename RMXCHNGE.CSV when you save it.**

The following screen is displayed:

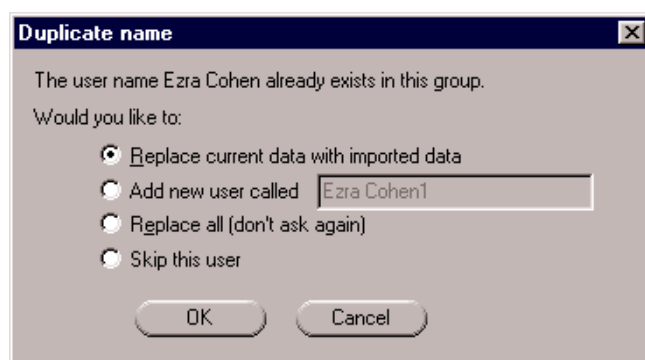


Note If, when you exported, the data was exported onto more than one disk, when you import from either of these disks, you will notice that some of the names are grey. This is because the list contains all the names of exported groups/users, but only those present on the current disk are active. The greyed names will be present on the other disk.

12. Select the user or group to be imported from the list on the left and click the **Add** button. The users appear in the list to be imported on the right.

13. Click **OK**.

14. This copies the users from the floppy disk and adds them to the list of users in the selected group. Note that if an imported user was assigned an icon which has already been assigned to a user on the destination machine, then the imported user will be assigned a new icon because all users in a group must have a unique icon. If you attempt to import a user and the name already exists, the following dialog is displayed.



This gives you the following choices: replace the current data with the imported data; import the user data but change the imported user name slightly (you cannot have users with the same name in the system); replace the current data with the imported data for all duplicate names in the group; do not go ahead with the import. Select the option you require and click **OK**.

15. Once you have checked the import has been successful (the imported users should appear in the 'Groups and Users' panel), return to the first computer and delete the users. This is important because each user must only have one set of user records. Do not delete the users before you have made sure the import has been successful.

Monitoring Your Pupils' Progress

The Teacher's Program contains a number of charts and reports you can view enabling you to keep track of your pupils' progress and identify any problem areas pupils may have. These are:

- **Printed pupil report.** Prints a pupil's personal details (for example, name, age and gender), work details (for example, number of sessions, position in each topic), any problem skills they may have and any comments recorded against the pupil. This report can be produced for a pupil or group. See page 84 for details.
- **Work time.** Check the number of sessions a pupil has worked in a period or the total time they have been using RM Maths. This chart can be produced for a pupil or group. See page 87 for details.
- **Problem skills.** Check on your pupils' current problem skills. It enables you to run activities from the problem skills so you can see for yourself the activities that the pupil was unable to do. This chart can be produced for a pupil or group. See page 90 for details.
- **Position in the course.** See how far your pupils have progressed through the RM Maths curriculum. This chart can be produced for a user or group. See page 93 for details.
- **Progress history.** View their rate of progress through the RM Maths curriculum. This chart can be produced for a pupil or group. See page 96 for details.
- **Session scores.** Discover the proportion of activities the pupil got correct at the first/second/third attempt, any activities where they had to be shown the answer after three unsuccessful attempts, and their score shown at the end of their session. This chart can be produced for a pupil or group. See page 98 for details.
- **Progress through the skills.** See exactly which skills a pupil has covered and not yet covered within a topic. This chart can only be produced for a pupil. See page 100 for details.

- **Numeracy page progress.** If you have chosen either *England and Wales* or *Scotland* as your region (see 'Changing Regional Settings' on page 109 for details), this shows the pupil's progress against either the National Numeracy Framework key objectives or the attainment targets in the Guidelines for Mathematics 5–14 (Scotland). This allows a printed report to be produced for a pupil or group for a whole Year or Level. It allows you to run activities that correspond to a given NNF objective or Guidelines for Mathematics 5–14 (Scotland) attainment target.
- **Recording comments.** You may record extra help given to individuals or account for periods of absence.

Printing pupil reports

You can print an individual report for each pupil. As well as detailing a pupil's personal details such as their name, age and gender, it also includes information on when they first started the course, the number of sessions they have completed, and which block they have reached in each topic area. The report also lists any current skills with which the pupil had problems. This enables you to concentrate your teaching on areas the pupil is finding difficult. Any comments you have recorded against a pupil will also appear on the report.

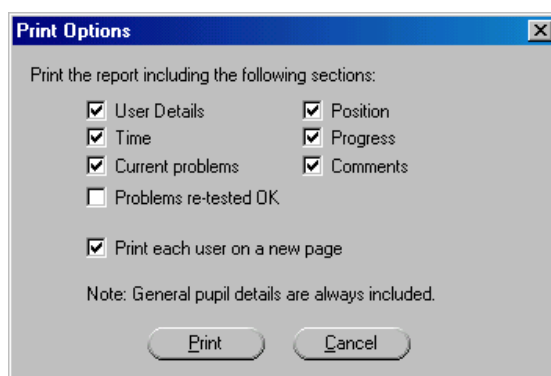
RM Maths Learning System - Pupil Report				29th August 2001																																																											
 Newtown First School 																																																															
Full Name:	Ezra Cohen	Date of Birth:	17th May 1995																																																												
Age:	6 years and 3 months	Gender:	Male																																																												
Details																																																															
Short Name:	Ezra	Group:	Year 2 (Mrs Smith)																																																												
Progress Setting:	Infant	Session Length:	15 mins																																																												
Confidence:	Medium	Auto Position:	Not Used																																																												
Fast Track:	Off	Show Score:	Off																																																												
Time																																																															
First Session:	21st March 2000	Last Session:	29th July 2001																																																												
Sessions:	103	Total Time:	25 hours 2 minutes																																																												
Position																																																															
Block Started:	A																																																														
Numeracy:																																																															
Pairing	[Finished]	Shape & Space and Handling Data:																																																													
Cardinal Number	[Finished]	Pattern	K																																																												
Numerals	[Finished]	Position & Direction	K																																																												
Number Abstraction	[Finished]	Length & Measure	K																																																												
Partitioning	K	Area	K																																																												
Number Development	K	2D Shapes	K																																																												
Addition	K	Handling Data	[Not started]																																																												
Subtraction	K																																																														
Multiplication	K																																																														
Division	K																																																														
Number Patterns	L																																																														
RM Maths Learning System Block		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td><td>N</td><td>O</td><td>P</td><td>Q</td><td>R</td><td>S</td><td>T</td><td>U</td><td>V</td><td>W</td><td>X</td><td>Y</td><td>Z</td><td>a</td><td>b</td><td>c</td> </tr> <tr> <td colspan="10">Level 1</td> <td colspan="5">Level 2</td> <td colspan="5">Level 3</td> <td colspan="5">Level 4</td> <td colspan="5">Level 5</td> </tr> </table>			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	Level 1										Level 2					Level 3					Level 4					Level 5				
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c																																			
Level 1										Level 2					Level 3					Level 4					Level 5																																						
England & Wales NC*																																																															
*approximate mapping to National Curriculum levels of attainment																																																															
Progress																																																															
Ezra has taken 10 months to cover 1 year and 0 months worth of the RM Maths Learning System curriculum.																																																															
Problem Skills																																																															
17/10/2000	Position and Direction B2 Identifying 'above' and 'below'.																																																														
Comments																																																															
22/10/2000	Did a session on identifying 'above' and 'below' with Ezra today.																																																														
12/11/2000	Auto comment: Fast Track option switched off today.																																																														

The example report on the previous page shows all the information that can be included on the printed pupil report.

The progress section will only report a pupil's progress through the curriculum after automatic positioning has been completed. The program calculates a pupil's progress compared to an internal RM Maths age – not an average of pupil abilities. You can choose not to print this section in your reports.

To change the contents of the User Details Report:

1. From the Teacher's Program 'User Details' page, click the **Print** button. The Print Options dialog box appears:



2. Clear the tick box against any information you wish to leave out of the report. Put a tick against any information you wish to include.
3. Click the **Print** button.

These settings will be remembered and all pupil reports you print will follow this template until you decide to change it.

To print a report for a single pupil:

1. From the 'Groups and Users' panel, select the pupil whose report you wish to print.
2. From the Teacher's Program 'User Details' page, click the **Print** button.

To print a report for every pupil in a group:

1. From the 'Groups and Users' panel, select the group for whom you wish to print reports.
2. From the Teacher's Program 'User Details' page, click the **Print** button.

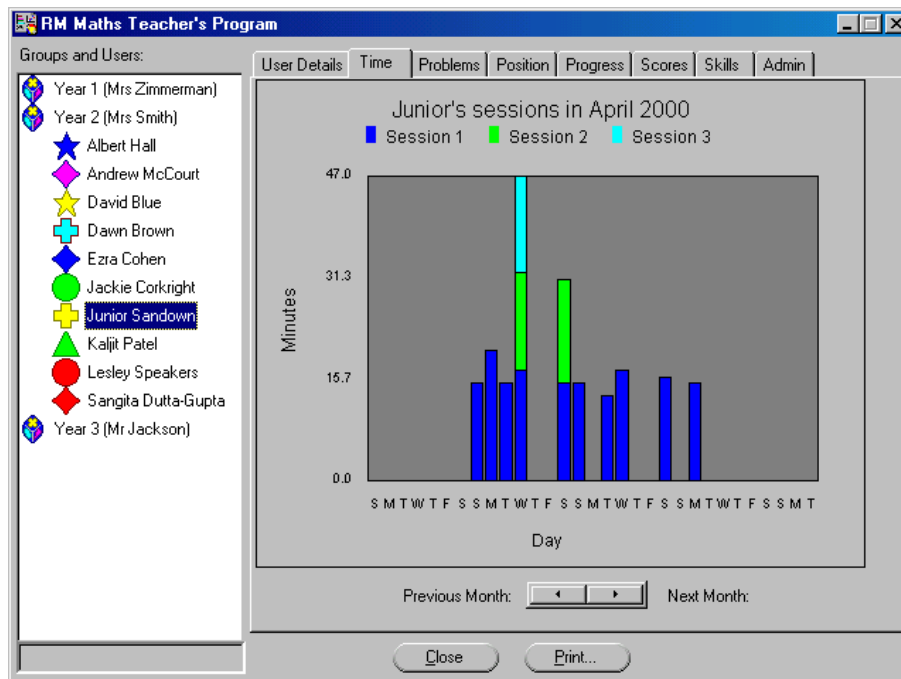
By default, each pupil report is printed on a separate page. To switch this function off, clear the **Print each user on a new page** tick box on the **Print Options** dialog and click the **OK** button.

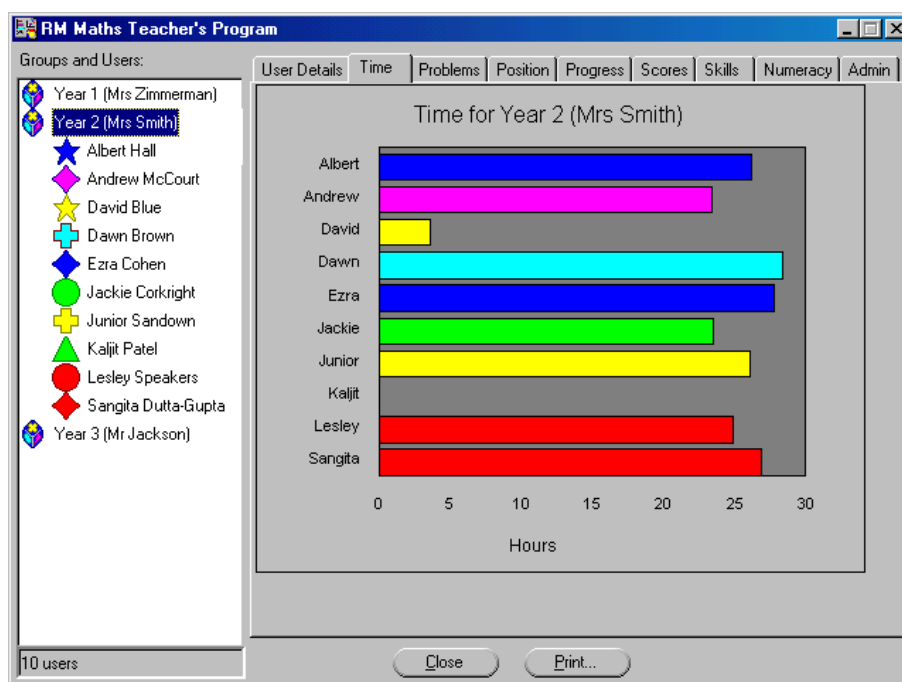
Note See the 'Troubleshooting' section on page 125 for details on changing the default printer.

Work time

You can view the number of sessions a pupil has completed in a period as follows:

- From the Teacher's Program 'Time' page, select the pupil whose sessions you wish to view. The following chart appears:





Only 10 users appear on a page. If there are more than 10 users in the group, the chart is split up to display a maximum of 10 users on a page to make it easier to understand. Use the vertical arrow buttons to scroll up or down to the next page of users.

To obtain a printed copy of this chart, click the **Print** button.

Problem skills

If a pupil repeatedly fails to answer a skill correctly a number of times, the skill is marked as a problem skill. The pupil is progressed to the next activity in the topic and the problem is flagged by the system for your attention.

Note Regular monitoring of these problem skills may reveal areas where the pupil is struggling and allow you to target additional teaching, either on or off the computer.

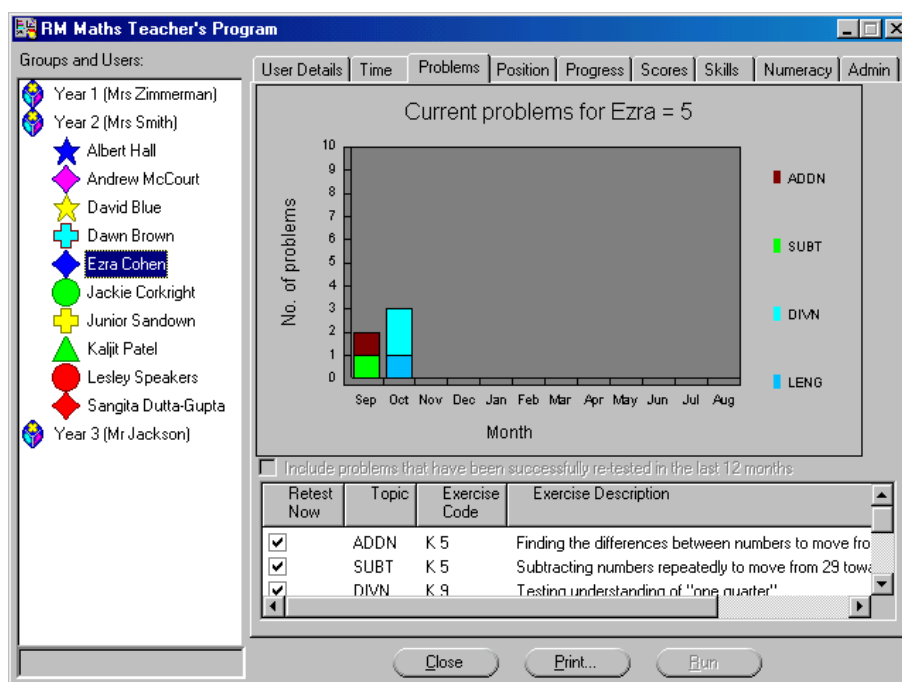
To view any problem skills:

From the Teacher's Program 'Problems' page, select the pupil whose problem skills you wish to view.

If the pupil has problem skills, the following chart is displayed showing which topic(s) the problem skills are in. It also shows the month the problems occurred so you can see which problems are old and which are new. The chart is colour coded to show distribution of problems across topics. The chart initially only shows *current* problems that occurred in the previous 12 months. RM Maths re-tests pupils on skills with which they have previously had problems after 30 days. You can force a pupil to be re-tested on a problem skill at the start of their next session by ticking the box for that skill in the **Retest Now** column. In the example below the pupil will be re-tested on the top three problems at the earliest opportunity (over the next two sessions, since the maximum is two re-tests per session), because the **Retest Now** boxes are all ticked.

Any problem skills which the pupil completes successfully when re-tested are automatically removed from their current problem skills but are never 'forgotten'. To view *all* problems, click the **Include problems that have been successfully re-tested in the last 12 months** tick box. (If the pupil hasn't succeeded at any problems re-tested, this tick box will be greyed out.)

If a pupil has no problem skills, a message will be displayed informing you there are no details to display.



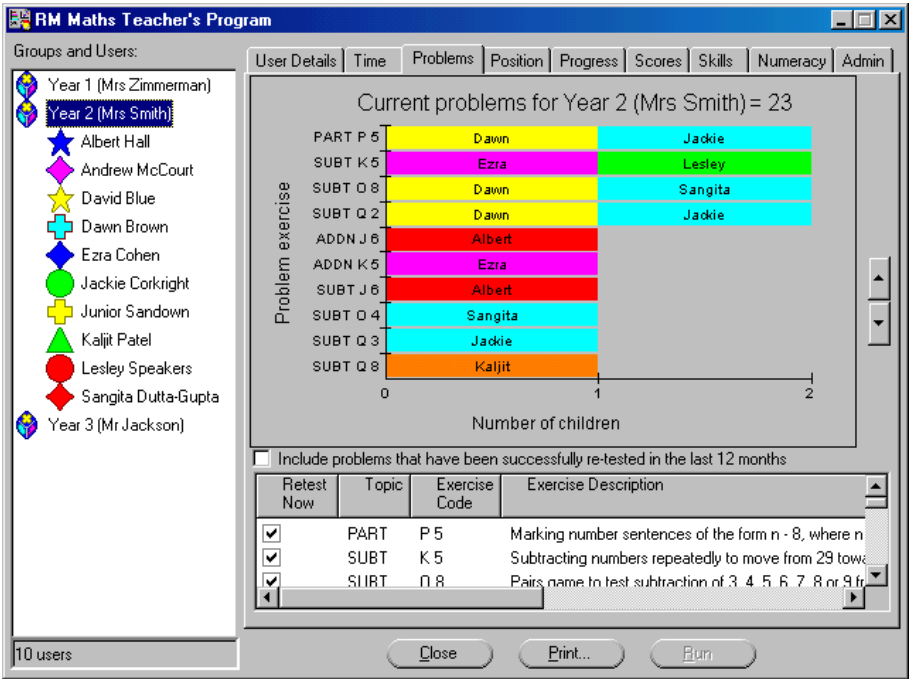
Underneath the chart, the codes of the problem skills are listed with their descriptions. You can click any skill in this list and click the **Run** button to run it so you can see the actual activities that the pupil was unable to do. You will see as many examples of this activity as you wish – simply click the **exit door** to return to the Teacher's Program.

Note You may want to use this feature to sit down with the pupil and work through some examples together on the computer.

To obtain a printed copy of this report, click the **Print** button. A print out of the skills list is also produced.

RM Maths Learning System Teacher's Guide

If you click the group name above the list of pupils' names, the chart shows how many pupils in that group had problems with the same skill.



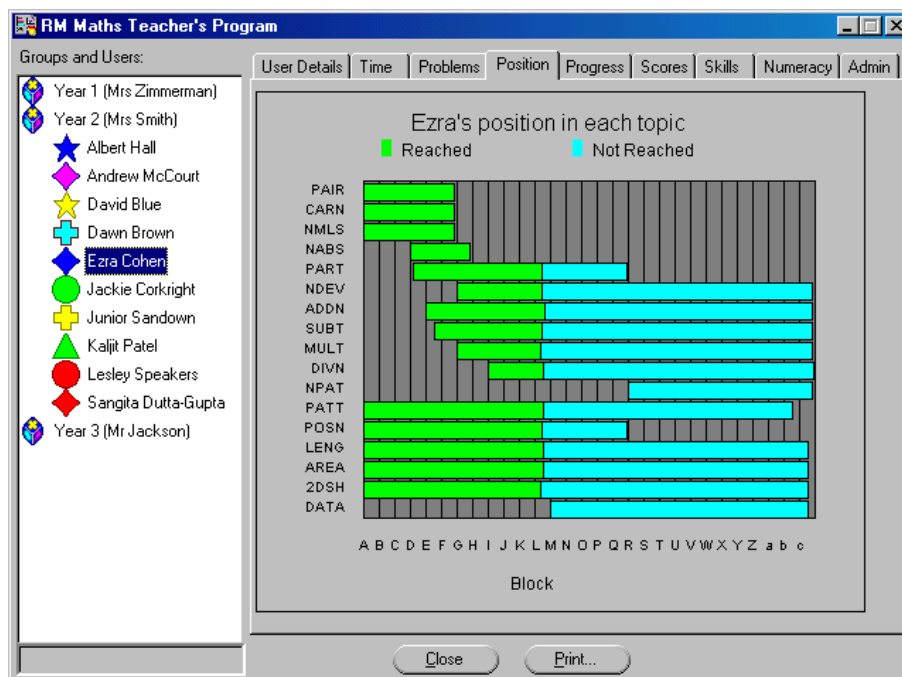
This may be useful in identifying common areas of misunderstanding and allow you to target specific teaching to the whole class or a particular group of pupils.

To obtain a printed copy of this chart, click the **Print** button.

Position in the course

You can view a pupil's position in each topic as follows:

From the Teacher's Program 'Position' page, select the user whose position you wish to view. The following chart appears, showing the structure of the RM Maths curriculum and the pupil's current position:



The curriculum that has been completed is shown in green. The curriculum which has not yet been covered is shown in blue. The example chart above shows that Ezra is working through curriculum block L and will very shortly start on the topic of Handling Data (called DATA, see below for all topic names).

To obtain a printed copy of this chart, click the **Print** button.

RM Maths Learning System Teacher's Guide

The activities set by RM Maths provide comprehensive coverage of most Number, Shape & Space and Handling Data elements of the English & Welsh National Curriculum and also the Guidelines for Mathematics 5–14 (Scotland). The curriculum is divided into these topics:

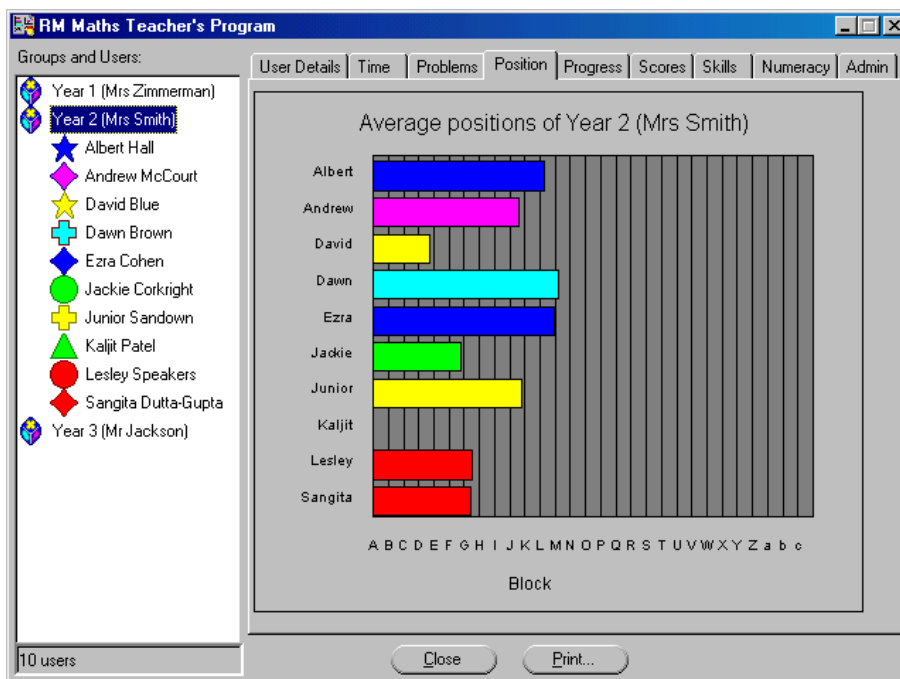
PAIR	Pairing
CARN	Cardinal number
NMLS	Numerals
NABS	Number abstraction
PART	Partitioning
NDEV	Number development
ADDN	Addition
SUBT	Subtraction
MULT	Multiplication
DIVN	Division
NPAT	Number patterns
PATT	Pattern
POSN	Position and direction
LENG	Length and measure
AREA	Area
2DSH	2D shapes
DATA	Handling data

The accompanying fold-out chart shows the structure and content of the RM Maths curriculum in more detail.

Using The Teacher's Program

You can see an overview chart of your pupils' average position across all active topics.

From the Teacher's Program 'Position' page, select the group whose progress you wish to view. The following chart appears:

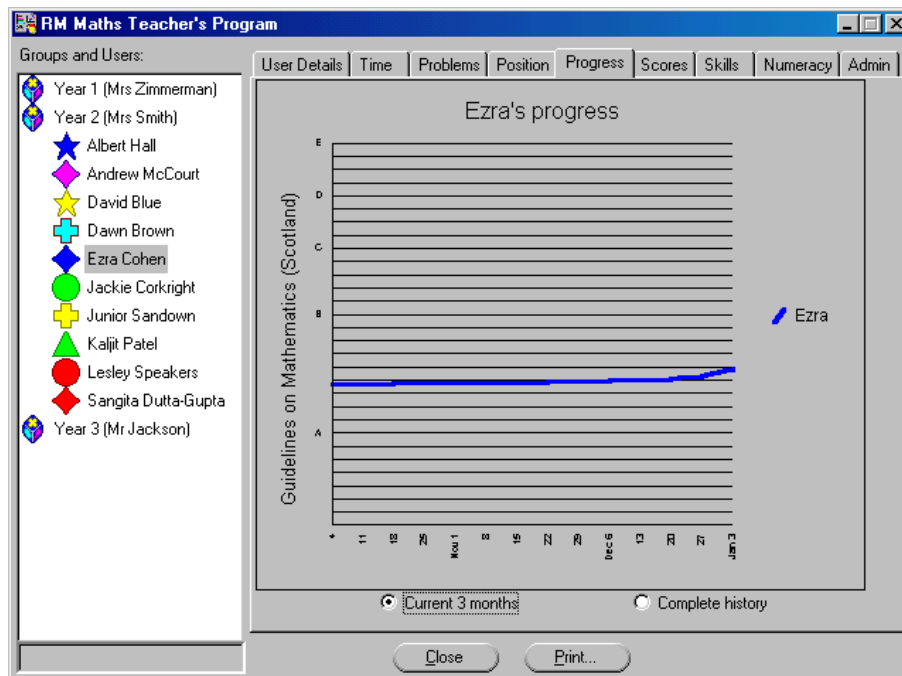


Only 10 users appear on a page. If there are more than 10 users in the group, the chart is split up to display a maximum of 10 users on a page to make it easier to understand. Use the vertical arrow buttons to scroll up or down to the next page of users.

To obtain a printed copy of this chart, click the **Print** button.

Progress history

From the Teacher's Program 'Progress' page, select the user whose progress you wish to view:



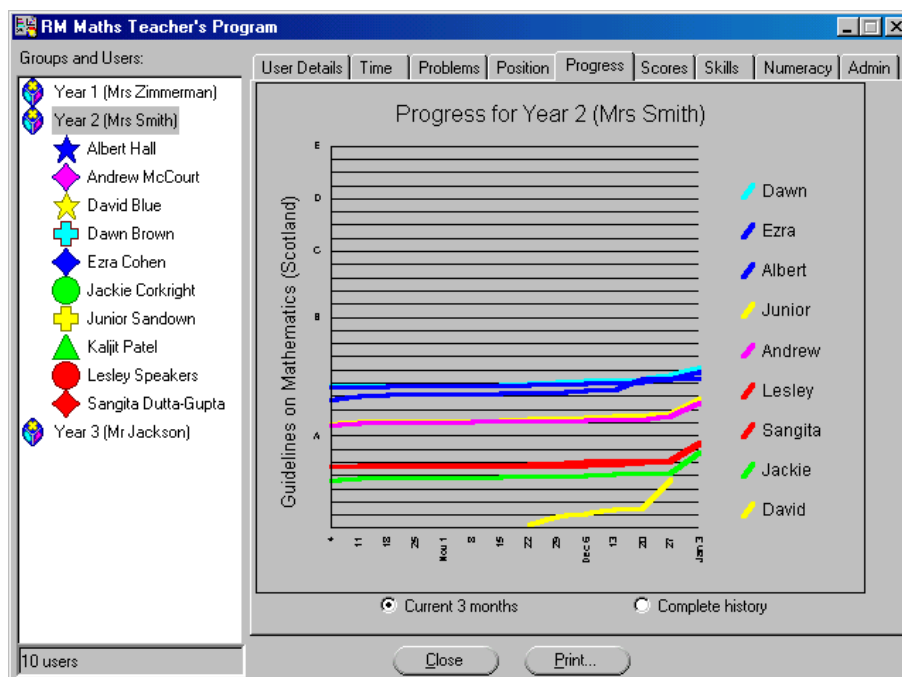
The chart shows the pupil's progress for the current 3 months. To view the pupil's progress from the time they first started using RM Maths, check the **Complete history** radio button. (This choice is only available if the user has been using the system for more than 3 months.)

In the above example the regional setting is *Scottish* so that progress is shown using Guidelines for Mathematics 5–14 (Scotland) levels of attainment. You can also show progress using National Curriculum levels. If *No region* is selected the progress graph will show the RM Maths block levels. For more information on changing your regional settings, see page 109.

To obtain a printed copy of this chart, click the **Print** button.

Using The Teacher's Program

If you click the group in the 'Groups and Users' panel, the chart shows the progress for all the pupils in that group:



Only 10 users appear on a page. If there are more than 10 users in the group, the chart is split up to display a maximum of 10 users on each page to make it easier to understand. Use the vertical arrow buttons to scroll up or down to the next page of users.

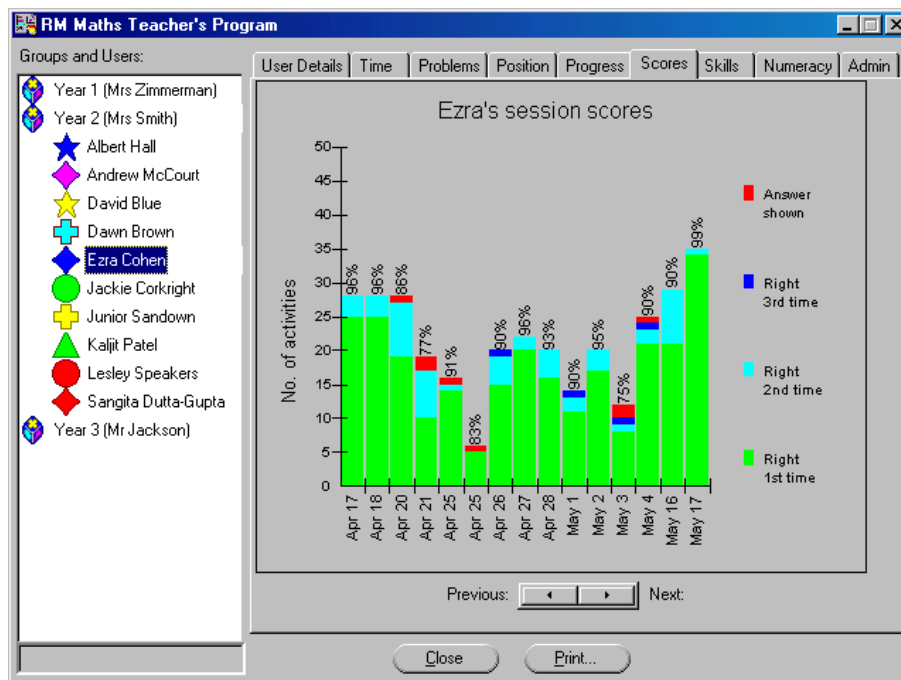
To distinguish between two or more pupils with the same line colour, look at the order of the names listed in the chart 'key'. The name at the top of the list corresponds to the user who has progressed furthest, and the name at the bottom represents the user who is at the lowest place in the course.

To obtain a printed copy of this chart, click the **Print** button.

Session scores

You can view a pupil's session scores as follows:

From the Teacher's Program 'Scores' page, select the user whose session scores you wish to view. The following chart appears:



The chart shows the number of activities attempted in each session (the total height of each bar) so you can see and compare the work rates of each pupil. Be careful in interpreting this as activities at higher levels are more involved and some take longer to complete than others.

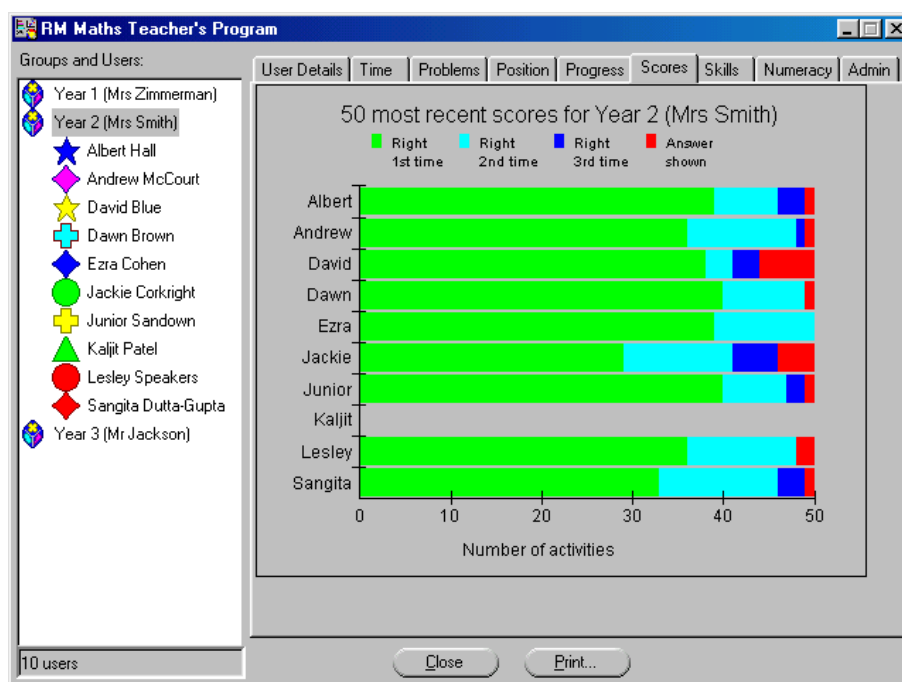
The chart also shows the proportion of activities the pupil got correct at the first/second/third attempt (with increasing help between attempts), and any activities where they had to be shown the answer after three unsuccessful attempts.

Using The Teacher's Program

The percentage figure shown at the top of each bar represents the pupil's score at the end of each session. For each activity the pupil completes, they are awarded 3 points for right first time, 2 points for right second time, 1 point for right third time, and no points if the answer is shown. The pupil's total score for the session is calculated and expressed as a percentage of the maximum possible score that the pupil could have achieved (number of activities $\times$ 3 points). This score is shown to the pupil if **Show Score** has been enabled in the Teacher's Program for that pupil (refer to page 70 for information on managing pupil details).

The user chart shows the scores for their last 15 sessions. If data exists for previous sessions, you can click the left  and right  arrows to move backwards and forwards through their session history.

If you click the group name, the chart shows the session scores of the previous 50 activities for the group.



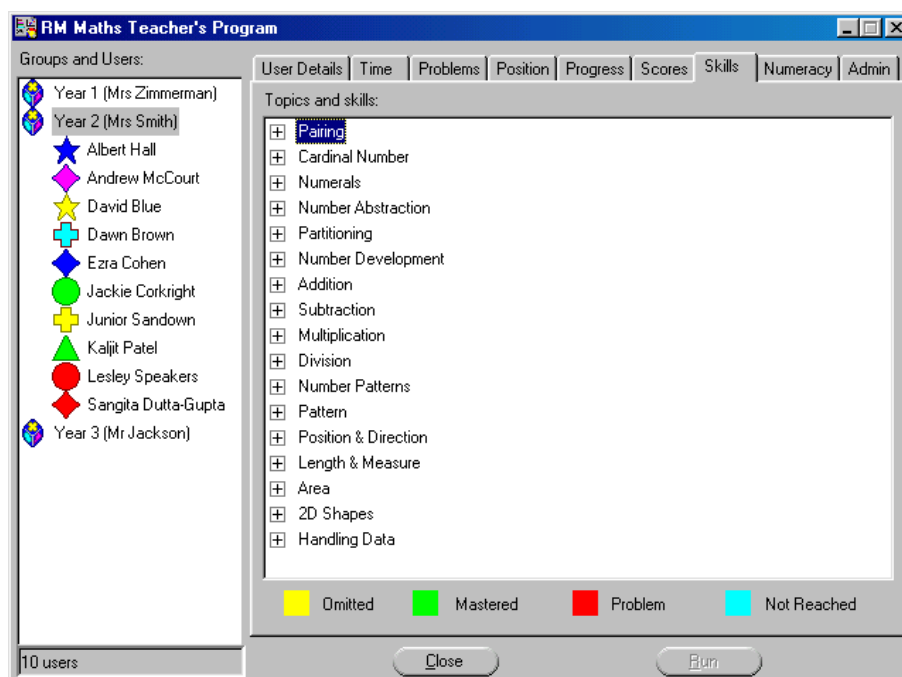
RM Maths Learning System Teacher's Guide

Only 10 users appear on a page. If there are more than 10 users in the group, the chart is split up to display a maximum of 10 users on a page to make it easier to understand. Use the vertical arrow buttons to scroll up or down to the next page of users.

To obtain a printed copy of this chart, click the **Print** button.

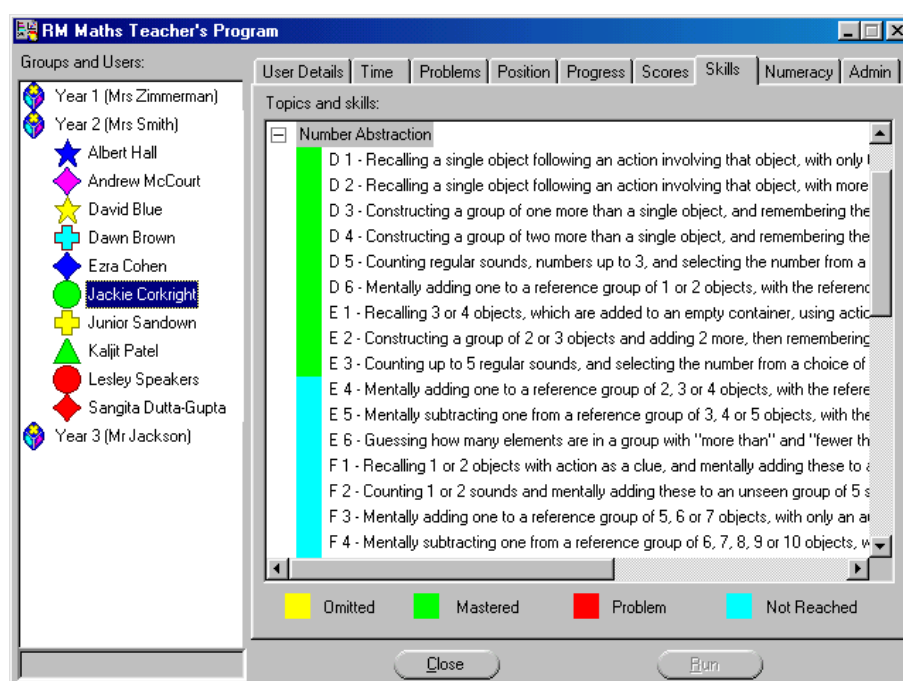
Progress through the skills

You can view how far a pupil is through the detailed skill sequence as follows. From the Teacher's Program 'Skills' page, select the user whose progress you wish to view. The list of topics is displayed as follows:



Double-click the  icon next to a topic to expand it.

The list of skills contained in that topic are displayed:



The skills the pupil has mastered are shown in green. The skills the pupil has not yet reached are shown in light blue. Yellow skills have been omitted and red skills are current problems.

Note Pupils may have omitted skills if the position test has been taken or the block slider has been moved manually.

Use the scroll bars or the Up and Down arrows to view the full list of skills. Where the text of a skill does not fit onto the page, position your mouse pointer over the skill to display a window containing the full text of that skill.

You can click any skill in this list and click the **Run** button to run the selected activity. You can see as many examples of this skill as you wish – simply click the **exit door** to return to the Teacher's Program.

Double-click the  icon next to the topic to hide the skill list.

Pupil's progress on the Numeracy page

Teachers in England and Wales have the option of reviewing the progress of their pupils in terms of the key objectives defined in the National Numeracy Framework (NNF). Teachers in Scotland can review pupil progress in terms of the attainment targets in the Guidelines for Mathematics 5–14 (Scotland). Teachers elsewhere may find these reports of little value because they refer explicitly to the mathematics curriculum and teaching programme followed by schools in England and Wales, and the guidelines for mathematics for schools in Scotland.

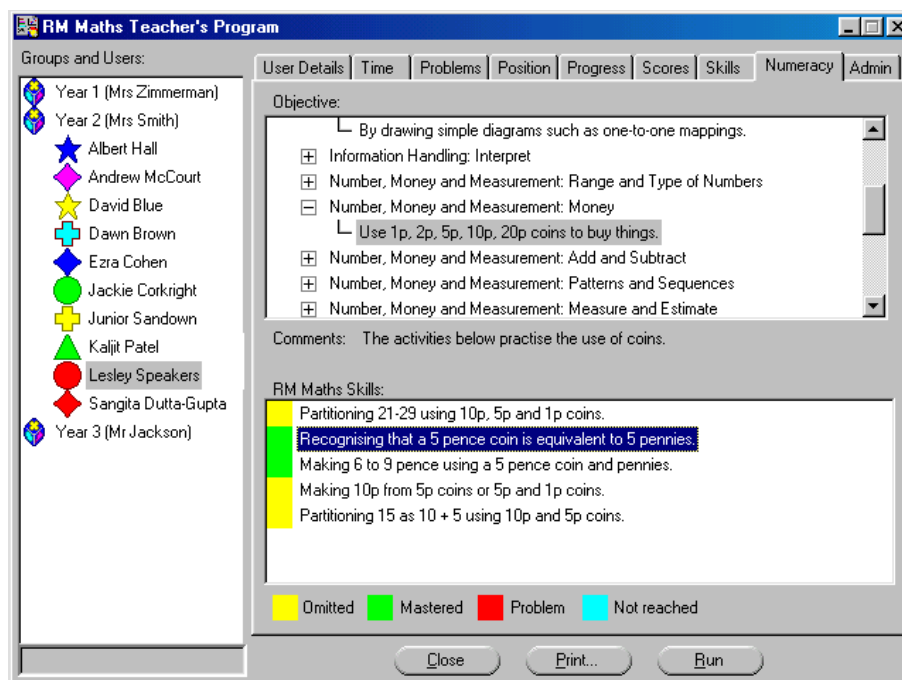
Important The option to display the 'Numeracy' page is first offered during the installation of RM Maths. If you selected *Other Region* then the Numeracy page will not be visible. When you run the Teacher's Program, if the Numeracy page is not present and you would like to see these reports, click the **Regional Settings** button on the 'Admin' page and select either *England and Wales* or *Scotland* as appropriate.

For each key objective defined in the NNF and each attainment target in the Guidelines for Mathematics 5–14 (Scotland), a number of RM Maths skills have been identified that support each one. This allows a pupil's normal progress through the RM Maths curriculum to also be viewed in terms of progress against the NNF key objectives or Guidelines for Mathematics 5–14 (Scotland). This information can prove valuable to teachers to support the professional assessments of their pupils because it shows real evidence of what they have achieved and any problems that they have had.

To view a pupil's progress against either of these sets of objectives, select their name from the 'Groups and Users' window. The 'Numeracy' page presents a tree structure in the 'Objectives' window. This is organised by year groups Reception to Year 6 for the NNF and by levels A to E for the Guidelines for Mathematics 5–14 (Scotland).

When viewing the NNF year groups, double-click the  icon next to a year to show the key objectives for that year. Clicking on an objective reveals a list of RM Maths skills associated with that objective in the 'RM Maths Skills' window below. If an objective has been divided into sub-objectives then the  icon will be visible next to the objective. Double-click the  icon next to an objective to expand it, showing the list of sub-objectives. Again, you can view the list of RM Maths skills associated with a sub-objective by clicking on the sub-objective description in the list. The comments box offers further useful information for the selected objective or sub-objective.

When viewing the Guidelines for Mathematics 5–14 (Scotland) levels, double-click the  icon next to a level to show a list of attainment outcomes and strands, for example 'Number, Money and Measurement: Money'. The  icon will be visible next to each of these outcome and strand pairs. Double-click the  icon to show the list of attainment targets. You can then view the list of RM Maths skills associated with each attainment target by clicking on the descriptions in the list. Again, the comments box offers further useful information for the selected attainment target.



The RM Maths Skills window displays a list of skills and their status for that pupil's objective or attainment target. The skills the pupil has mastered are shown in green. The skills the pupil has not yet reached are shown in light blue. Yellow skills have been omitted and red skills are current problems.

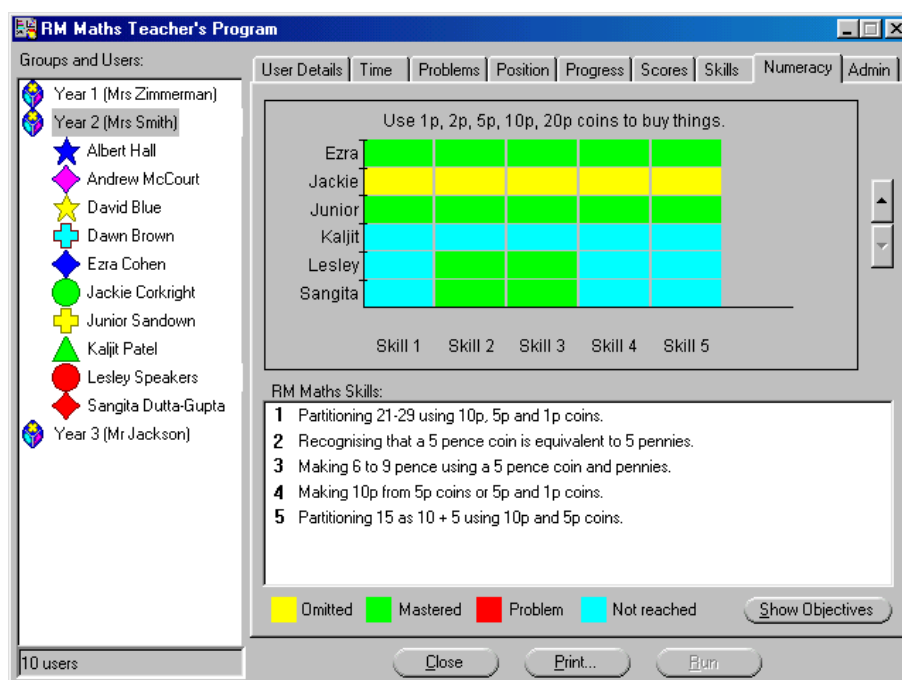
Note Pupils may have omitted skills if the position test has been used or the block slider has been moved manually.

You can click any skill in the list and click the **Run** button to run the selected activity. You can see as many examples of this skill as you wish – simply click the **exit door** to return to the Teacher's Program.

To obtain a printed copy of the pupil's report for this objective or attainment target, click the **Print** button.

Using The Teacher's Program

To review reports for a group of pupils, click the Group name in the 'Groups and Users' panel, and select the desired key objective or attainment target. Click the **Show Graph** button to display a colour-coded report. If there are more than six pupils in the group then use the vertical arrow buttons to scroll up or down to the next page of pupils.



To obtain a printed copy of the group report for the selected objective, sub-objective or attainment target, click the **Print** button.

Click the **Show Objectives** button to return you to the list of objectives or attainment targets.

Recording comments on a pupil

You can keep a 'diary' of comments and observations on a pupil. For example, 'Did a session with Ezra on counting from 10–20 today'. This allows you to correlate the data recorded by the program with real classroom observations. Some RM Maths processes, such as the switching on and off of Fast Track and Show Score, are automatically commented.

To record a comment:

1. Select the Teacher's Program 'Admin' page.
2. From the 'Groups and Users' panel, select the pupil against whom you want to record comments.
3. Type your comments in the **Comments** box. Today's date will be automatically inserted against your comment.
4. Click the **Save** button to record your comment, or click **Cancel** to abandon the change.

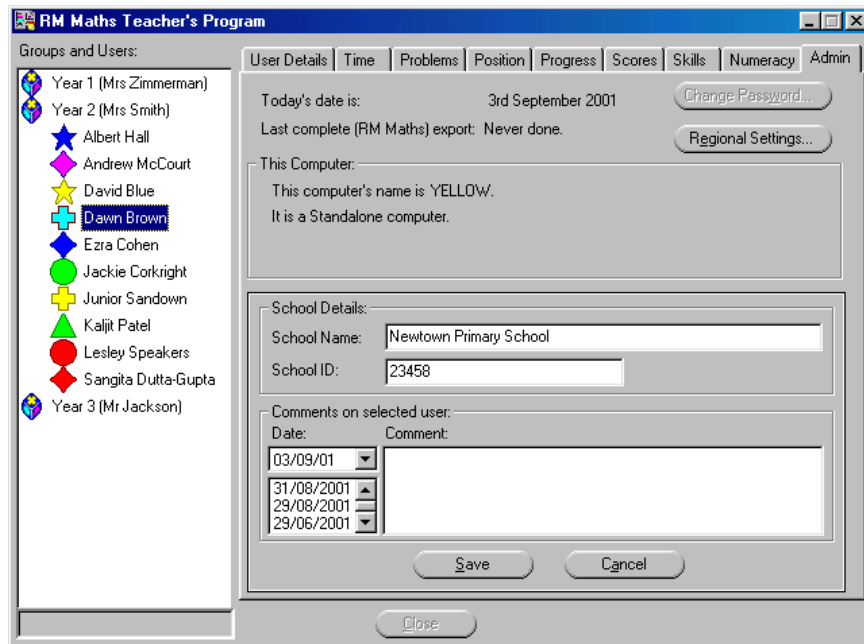
Any comments you have recorded against a pupil can be included in the *RM Maths – Pupil Report* (see 'Printing pupil reports' on page 84 for more information).

System Administration

Changing your school name

You can change your school name as follows:

1. From the Teacher's Program 'Admin' page, edit your school name in the **School Name** box:



2. Click the **Save** button to save the new name or click **Cancel** to leave the name unchanged.

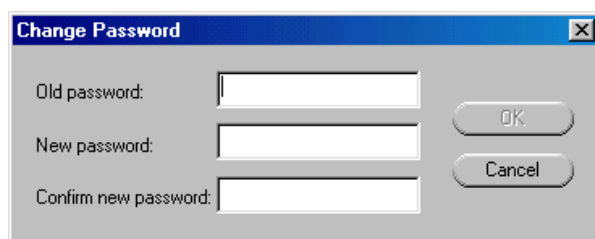
Changing your password

There is a single password that has the following functions. It prevents:

- An unauthorised exit from RM Maths
- Entry to the Teacher's Program
- A pupil running a second session in one day without authorisation.

You can change the password as follows:

1. From the Teacher's Program 'Admin' page, click the **Change Password** button.

A screenshot of a 'Change Password' dialog box. It has a blue title bar with the text 'Change Password' and a close button (X). The dialog box contains three text input fields: 'Old password:', 'New password:', and 'Confirm new password:'. To the right of the input fields are two buttons: 'OK' and 'Cancel'.

2. Type the existing password in the **Old password** box. It will appear as asterisks for security reasons.
3. Type your new password in the **New password** box. The new password must be between 5 and 10 characters long. Any letter characters you use may be in upper or lower case. The password is not case-sensitive (i.e. 'apple' and 'Apple' would both be considered the same password).
4. Re-type the new password in the **Confirm new password** box and click the **OK** button to activate the new password. (Clicking the **Cancel** button abandons the change.)

The password will be changed provided that you typed the existing password correctly, and typed the new password identically in both the middle and bottom boxes.

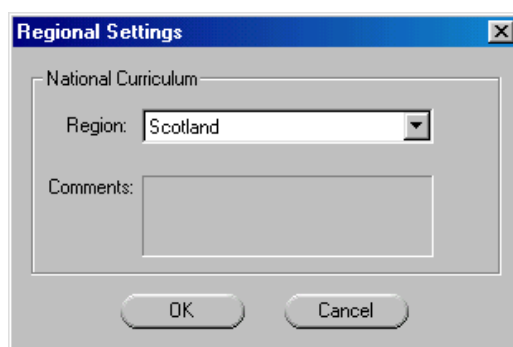
Note Remember to inform any other teachers or classroom assistants who will need to know the new password.

Changing Regional Settings

The regional setting within Teacher's Program controls two aspects of progress reporting. Firstly, as discussed earlier the Numeracy page is only available when the region is either *England and Wales* or *Scotland*. Secondly, if the region is *England and Wales* graphs and reports will show the approximate National Curriculum Levels, if the region is *Scotland*, they will show the approximate Guidelines for Mathematics 5–14 (Scotland) levels of achievement. If *No region* is selected the RM Maths Curriculum Levels will be used.

You can change the Regional Settings as follows:

1. From the Teacher's Program 'Admin' page, click the **Regional Settings...** button.



2. Use the down arrow to select the region that you want to use.
3. Click the **OK** button to set your selection.

Backing up and restoring pupil data

It is very important that you ensure that your user database is regularly backed up. This means that a copy of the database is made and stored in a safe place. This database contains the user details and progress records for each pupil on the system. Without this data, each pupil would have to start from scratch and you will have no historic records of their work in RM Maths. If you make frequent backup copies of the database, in the event of data loss you can revert to the most recent backup copy. We recommend you back up the user database weekly on each standalone computer or server.

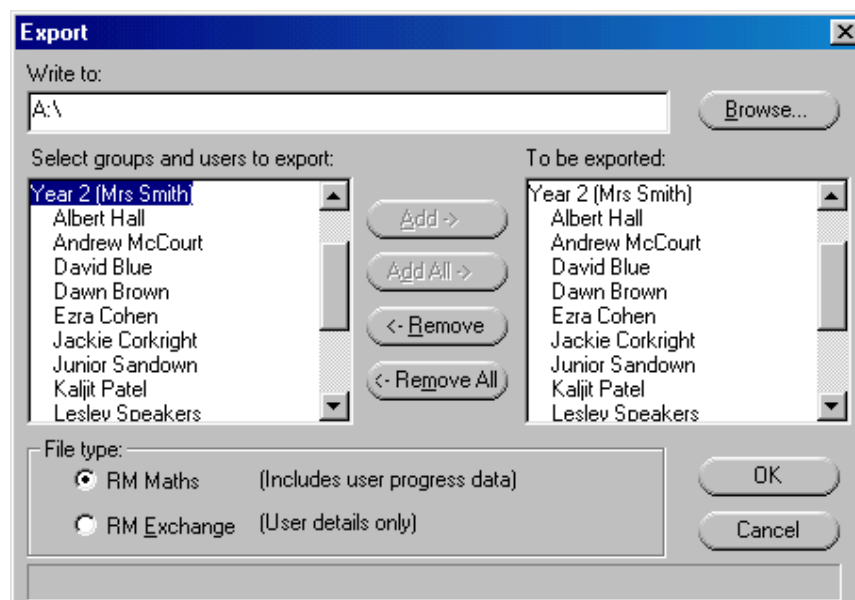
Note Many floppy drives collect dust in the classroom environment and can become unreliable. Import/export errors can occur if the floppy drive is not cleaned at regular intervals.

If your system is held on a network file server, the database can be easily and automatically backed up using the server's tape backup unit.

Important In all cases, even if you have automatic backup procedures in place, we recommend you back up your user database to floppy disk regularly to safeguard against database corruption, hardware failure, theft or fire damage. Store the disks in a separate, secure area.

To back up your user database:

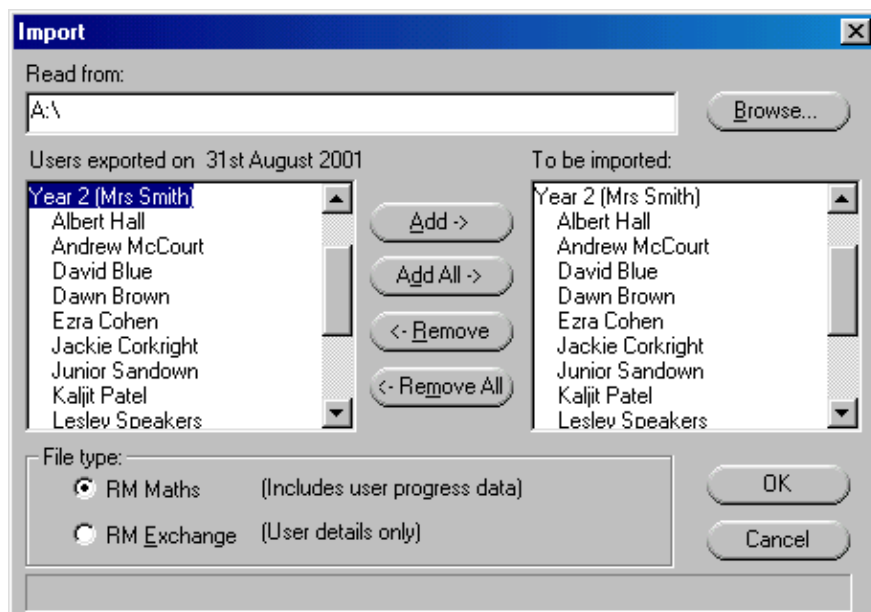
1. Insert a blank, formatted floppy disk into the computer's floppy disk drive.
2. From the Teacher's Program 'User Details' page, click the **Export** button.
3. Click the **Add All** button. All groups and users appear in the list to be exported on the right.



4. Click the **OK** button. The user database is written to the floppy disk. (If the database is too big to fit onto one disk, you will be prompted to insert new disks as needed until the backup is complete.)
5. The date of the **Last complete (RM Maths) export** on the 'Admin' page is updated to display today's date.

To restore your user database:

1. Insert the floppy disk containing the user database to restore into the computer's floppy disk drive.
2. From the Teacher's Program 'User Details' page, click the **Import** button.
3. You can choose to restore the data for all users (click the **Add All** button), a group (select the group and click the **Add** button) or just one user (select the user and click the **Add** button). Select your choice. The group/user to be imported appears in the list on the right.



4. Click **OK**. The data is now restored from floppy disk. (If you attempt to import a user and the name already exists, you will be given the chance to replace the current data with the imported data, import the user data but change the imported user name slightly, replace the current data with the imported data for all duplicate names in the group, or abandon the import.)
5. Repeat this procedure for each disk in the back-up disk set if necessary. (Every disk in a multiple back-up disk set has the complete index of all users, but only the users in bold are on the current disk.)

How The RM Maths Learning System Works

Despite its deceptively simple appearance, the RM Maths Learning System is a complex product that has taken several years of development to design and produce. Because much of the program operation is automatic, there are many aspects of the way it works that are not visible to the user. This is deliberate as the product is intended to be extremely simple to use in a busy classroom.

You do not need to read this chapter, but if you are curious to find out more about how RM Maths works then you may find it of interest.

Curriculum Design and Structure

- The system has been carefully designed by some of the UK's leading maths experts.
- Finely graded progression means each skill is a small step on from the last, making learning easier.
- The sequencing of skills has been carefully considered to make sure prerequisite skills are in place when they are needed.

Focus on Mental Methods

- Focus is on building mental fluency in pupils' number work.
- Emphasis is on developing a range of strategies for doing mental arithmetic and building a sound foundation for future mathematics development through an understanding of the structure of numbers. The on-screen and aural approach ensures a focus on mental procedures, rather than on written paper and pencil methods.

Examples of strategies employed (not necessarily in this order):

- Instant recognition of 5 objects as being 5 in number.
- Developing '5' as a key stepping stone to '10'.
- Looking for patterns in numbers:
$$6 + 2 = 8$$
$$16 + 2 = 18$$
$$26 + 2 = 28$$
- Learning and recalling addition bonds (for example, $5 + 4 = 9$) and partition bonds (for example, $9 = 5 + 4$) to 10.
- Understanding the significance of the 'decade barrier' and that $9 + 4$ is harder than $11 + 4$ without counting on.
- Performing subtraction by complementary addition (for example, $27 - 23$ can be thought of as $23 + ? = 27$).
- Use of number lines and number grids as a way of visualising number operations.
- Knowing that if you can do $3 + 2$ then $30 + 20$ is not much more difficult just because the numbers are bigger.
- Understanding and applying the commutativity principle (for example, $2 + 17$ looks a lot easier when thought of as $17 + 2$; similarly 9×3 may be more easily recalled as 3×9).
- Building up a real understanding of place value by breaking numbers into their component parts (for example, $52 = 50 + 2$).
- Transforming 'hard' problems into easier problems using 'stepping stone' stages:
$$44 + 37 \text{ is the same as } 44 + 30 + 7 \text{ which is } 74 + 7$$
$$37 + 8 \text{ can be thought of as } 37 + 3 + 5 \text{ which is } 40 + 5$$
- The importance of estimation in assessing your answers and spotting 'silly' mistakes (for example, $317 + 482$ is approximately $300 + 500$ so the answer should be approximately 800).

Curriculum Presentation

- Topics are selected ‘randomly’ to improve variety and keep all topics ‘simmering’ even if other classroom maths work is currently focused on a specific topic.
- Each skill has many different contextual variants and may explore a range of number values, making over 10,000 different activities.
- The screen designs surrounding the maths activities change weekly to provide extra variety to help sustain long-term use.
- Screen designs and characters get more sophisticated as pupils progress from infants to juniors.

Help and Support

There are three levels of response to mistakes:

1. The first time the pupil makes a mistake within an activity, they are generally told that their answer wasn’t correct and asked to have another go. We have chosen this approach so that pupils who make accidental mistakes do not have to listen to long-winded explanations before having another chance to get the skill right. Also, being able to identify and correct their own mistakes is a valuable part of the learning process.
2. If their second attempt is also unsuccessful, the program gives them a ‘clue’. The clue may be aural or visual or both. In some cases this might be a comment about why their answer is wrong; in other activities, part of the correct solution is given.
3. If they still fail to find the right answer after three attempts, the program intervenes and completes the activity for the pupil.

Skill Attainment

Each skill has an associated number known as its *attainment criterion*. The attainment criterion affects forward progress through a topic as follows: if a skill has an attainment criterion of 3, the pupil progresses to the next new skill only when they achieve 3 *consecutive, first-time correct* answers to the current skill. Simply, the attainment criterion determines the amount of 'practice' the program requires the pupil to have at each skill. Attainment criteria vary between 1 and 6. The majority of skills have an attainment criterion of 3 or 4.

Progression

- Progression happens at different rates for each pupil depending on their answers and their work rate (the number of activities they complete per session).
- When a pupil has attained a skill, they will progress on to the next skill in that topic when they are next presented with that topic.
- Progression happens in this way for all active topics independently.
- The program automatically makes sure they progress fairly evenly in all topics. If they fall behind in one topic, the program automatically adjusts the mix of activities to give them more of the topic they are struggling in. This ensures that they do not race ahead in one topic and have problems because they have not covered prerequisite skills in other topics.
- Only first-time correct answers are considered when the program decides to move the pupil on to the next skill. Second-time correct answers neither confirm that the pupil has understood a concept, nor show conclusively that they have not. The exception to this is when a *junior* user attempts a skill which is presented in many stages. If that user answers each of the stages correctly either first-time or second-time, with more correct-first-time than correct-second-time, then this will be considered as first-time correct. This allows a little leniency in the assessment of these very long exercises, but the user must still achieve the attainment criterion overall before moving on to the next skill.

Regression

If the pupil does not provide the correct response to a skill until the *third time* they are asked, or fails to give a correct response at all and is shown the correct answer, this is taken to indicate that the pupil is having difficulty with the skill. For *Infant* progress setting, the pupil is regressed to an earlier skill in the same topic. For *Junior* progress setting, the pupil is offered a second attempt at the ‘difficult skill’. If they still have difficulties with this skill, then the pupil is regressed to an earlier skill. This forces the pupil to revise an earlier skill, chosen to provide help and support for the skill that caused the difficulty. It also moves the pupil back to a skill that they have almost certainly succeeded at before, thus giving the general impression to the pupil that he or she is successful most of the time.

When the pupil has succeeded in answering the revision skill successfully a number of times, they return to the skill they struggled with earlier. If they continue to fail, the regression cycle above repeats.

Success and Motivation

- More able pupils get more activities correct and progress on to new material faster. Junior users can also interrupt the initial question audio to press on with the activity (they can always play the audio again by clicking on the question text at the bottom of the screen).
- Less able pupils make mistakes and progress more slowly. However, when they make mistakes they regress to supportive material they have already tackled which they are more likely to get right.
- The net result is that all pupils achieve a fairly similar ‘success rate’ in terms of the percentage of activities that they get correct in a session. This maintains the motivation for pupils of all ability levels, especially at the lower ability levels because they see themselves as succeeding whilst being unaware of how quickly or slowly they are progressing in real terms.

- **Tutorials** introduce each new interaction type before it is used by an activity (for example, multiple choice, typing an answer, painting and so on). A pupil should only be answering an activity incorrectly because they do not know the answer, not because they don't know *how* to answer (this is particularly important during the automatic position test where accurate placement relies on accurate assessment of a pupil's mathematical ability). Wherever a pupil is placed in RM Maths they will see all of the tutorials up to that point before beginning a real activity or automatic placement test. All tutorials are unmarked and encourage exploration of the new interaction types through supportive audio instruction.
- Throughout RM Maths there are animated **milestones** that pupils will meet as they progress. They are purely motivational, they should not be considered as signifying milestones of mathematical achievement. These milestones are grouped into **themes**, with eight milestones to a theme and a theme typically lasting one school term. Examples of the themes are Jungle, Space Adventure, Detective, Farmyard and Underwater.

Milestones are only encountered at the end of a session; they do not contribute to the overall session score and are not intended to impact the length or value of each session. If during a session a pupil progresses sufficiently to reach a milestone, an additional activity will appear at the end of the session - this is the milestone activity.

As the mathematics increases in complexity through RM Maths so too do the themes. The earliest themes are simple and colourful; collecting eight animals for a farmyard, finding eight creatures in a jungle for example. The later themes become more challenging and complex; solving puzzles and 'using clues to solve a crime' are two such examples. The themes and milestones are particularly motivating for older pupils as they have some idea of achievement and reward across sessions, without being able to place it into a competitive academic context, avoiding comparisons with other pupils.

Within each milestone activity, pupils are also able to review their score for that session. In between those sessions where a milestone is encountered, pupils will be able to review their session score only, presented with an element of the current theme. If **Show Score** is disabled for a pupil or for the whole group the themes and milestones will be disabled.

Confidence Setting

The confidence setting on the 'User Details' page of the Teacher's Program provides a simple way for the teacher to adjust system behaviour depending on the pupil's confidence (as distinct from ability). High confidence pupils don't mind making mistakes and are keen to have a go at anything new. On the other hand, low confidence pupils are more prone to stress and need more gentle handling especially after struggling with an activity. The system is designed to work well with all pupils set to the 'Medium' confidence setting, and choosing the 'High' or 'Low' setting may be regarded as fine tuning. However, if you wish to experiment with this feature:

High confidence setting means:

- The audio prompt occurs after a shorter period of inactivity.
- After making a mistake (or mistakes for *Junior* progress setting) and regressing to an earlier activity, they can return more quickly to the original activity and have another attempt.
- The pupil can make rather more independent progress across the different topics. They must still progress at broadly similar rates in each topic, but it is possible that in a topic they are doing well in, they may see an activity which requires a prerequisite skill from another topic that they have not yet covered.

Low confidence setting means:

- The audio prompt occurs after a longer period of inactivity to give the pupil more time to think about their response without pressurising them.

- After making a mistake and regressing to an earlier activity, they do more practice at this lower level before they can return to the original activity and have another attempt.
- The rates of progress across all topics are more tightly controlled and uniform. This means that the pupil should not be stressed by facing activities which have prerequisite skills that they have not yet attained.

Problem Skills

Eventually, if the pupil continues to have difficulty with a particular activity, it is flagged as a 'problem skill' in the Teacher's Program, and the program moves the pupil on to the next skill in the topic.

At the start of each new session, the program determines whether any of the problem skills are over a month old. If they are, a maximum of two of these problem skills will be presented to the pupil before reverting to normal activities. It is hoped that during the previous month, either through use of the program or through targeted classroom teaching, the pupil has progressed sufficiently in order to complete these skills successfully.

If you have offered some targeted teaching you may want to re-test a pupil sooner than after 30 days. You can force them to be re-tested on a problem skill at the start of their next session by ticking the box for that skill in the **Retest Now** column on the 'Problems' page of Teacher's Program.

The pupil is automatically re-tested monthly on each problem skill from the date the skill is flagged until they succeed and it is no longer a problem. The attainment criterion of the skill controls the number of times the pupil has to get the skill right first time before the system is satisfied that they have attained the skill.

You can obtain a list of the skills that a pupil is finding problematic. See 'Problem skills' on page 90 for more information. The RM Maths problem skill graphs default to showing 'current' problems only (that is, older problems that have subsequently been re-tested successfully are not displayed).

Position Tests and Automatic Placement

This feature attempts to judge the pupil's current maths ability and place them at the correct position in the course automatically.

If automatic positioning is enabled, when a pupil logs on for the first time they see a series of 'test' activities. These activities are based on real activities from the curriculum, but the normal help is not present and the pupil either gets the activity correct or incorrect. Automatic placement is intended to place each pupil quickly and accurately according to their maths skills, by starting with their age as an initial indicator of their ability. A pupil will typically only be placed once within RM Maths but if they do not use the system for 6 weeks or more they will be re-tested at their last position so that they can be moved on if appropriate.

A pupil will start with a test of the material in the two blocks that their age places them in. Their score for this initial test will determine if they begin normal usage in one of these two blocks or if they move straight on to another test. At the end of the first test their score is reviewed:

- If they do very well at the initial test they will be presented with the test for the next two blocks.
- If they make only a few more than occasional mistakes, they are judged to be at approximately their natural level in the curriculum and will be placed in the upper of the two blocks.
- If they make a few more mistakes they will be placed in the lower of the two blocks.
- If they do poorly at the initial test they will receive the test for the previous two blocks.

They will continue taking tests and moving up or down the curriculum until their score shows that they are at an appropriate level to begin normal usage. If the system proves to have been overly conservative in judging their ability, their scores will be high and Fast Track will switch on so they can quickly progress to their true level. At this point, their scores will drop and Fast Track will switch off automatically (see 'Fast Track' below).

It is expected that the vast majority of pupils will be placed within two or three 15-minute sessions, although placement will take longer if their date of birth information was not given accurately during registration. Since automatic placement is designed to work equally well, albeit taking slightly longer, with pupils whose ability is not typical for their age group, it can also cope with incorrect date of birth information but it must be noted that it will take considerably longer.

Important Automatic placement is also vulnerable to an incorrect **system date** on the computer (this is the current date according to the computer's internal clock). Teacher's Program will periodically ask you to confirm the system date but it is a good idea to check this yourself on a regular basis. Speak to your IT coordinator if you are not sure how to do this.

If you already know that their age is not a good initial indicator of a pupil's ability you can move the Block position marker on the 'User Details' page to another block where they will begin their position test. Refer to your curriculum structure chart for more information on the content in each block. You will find that the Block position marker moves in pairs of blocks while in automatic placement.

Note that, other than no help being given for wrong answers, the pupil is unable to distinguish between operating in 'automatic position' mode and normal mode once they have been positioned by the system. The transition from automatic position mode to normal mode after positioning is seamless. It should take no more than three sessions for automatic positioning to be completed for any pupil, provided that their recorded date of birth and the system date are both accurate.

Fast Track

When Fast Track is switched on, the attainment criterion (see ‘Skill Attainment’ on page 116 for details) for every skill is temporarily reduced to one. This means that a pupil progresses to the next skill in a topic as soon as they get an activity correct at the first attempt (that is, without help).

Fast Track can be switched on or off manually by the teacher via the ‘User Details’ page of the Teacher’s Program. The system also controls Fast Track automatically:

- If currently **on**, Fast Track switches **off** automatically when the pupil’s total scores over their most recent activities drops below a threshold value.
- If currently **off**, Fast Track switches **on** automatically when the pupil’s total scores over their most recent activities rises above a higher threshold value. This feature is designed for situations where a pupil has not used RM Maths for several weeks. When they resume, their classroom maths skills may have moved on ahead of their last position in the RM Maths curriculum, so they might find the material easy and their scores would be very high. Fast Track switches **on** to ‘thin out’ the curriculum and lets them progress quickly to their current level, at which point their scores drop again and Fast Track switches off. If the period of non-use is 6 weeks or more the pupil will receive a placement test (see page 121) at their last position since this will be able to assess their current ability and reposition accordingly.

Fast Track’s main use is as an aid to pupil placement in the curriculum. When setting a pupil’s position manually (not using the placement test mechanism), the teacher can choose to be conservative in their estimate of the pupil’s ability without worrying that it will take the pupil too long to find their natural level. For example, if a teacher thought a pupil should be positioned at the start of block F, we would recommend starting them at the beginning of block D and switching Fast Track on. Once their scores drop significantly, Fast Track will switch off and the pupil can continue at what should be their natural level.

RM Maths Learning System Teacher's Guide

You can easily monitor whether Fast Track has been switched on or off for a pupil (whether automatically or by the teacher). On the 'Admin' page of the Teacher's Program, the pupil's comment 'diary' will contain an entry each time the pupil's Fast Track status changes.

Important Do not set Fast Track on indiscriminately or repeatedly to 'force' pupils to progress faster. If they are able to do the activities, they will progress quickly anyway. If the system turns Fast Track off, it means that the pupil is making too many mistakes and needs more practice at each skill.

CHAPTER 8

Troubleshooting

This chapter gives suggested solutions to problems you may encounter. If you need further assistance, please visit www.rm.com/support or contact RM Support on 08709 202202 during office hours (Monday–Friday 8 a.m.–6 p.m.).

Before you call our support line, first:

- Make sure you have read the documentation and other printed information included with your RM Maths Learning System.

If possible, try to be at your computer when you call and have the appropriate product documentation at hand. Be prepared to give the following information:

- The type of computer that you are using. This will normally be shown on a label on the front panel of the computer.
- The serial number of the computer.
- The exact wording of any messages that appeared on your screen.
- A description of what happened and what you were doing when the problem occurred.
- A description of how you tried to solve the problem.

If you have problems with a particular activity, note down the activity number (displayed in the centre-top of the screen) and details of the activity.

Potential Problems

Technical

RM Maths seems to take a very long time to install

10–15 minutes for a server installation is normal. However, installation can take longer if you have anti-virus software installed.

I've forgotten my RM Maths password

1. Don't panic! Contact our support line and they will provide you with a special password that you can use on the day that you call.
2. Run the Teacher's Program and enter this special password.
3. Now change the password to another one of your choice, as described on page 108. Enter the special password in the **Old Password** box.

No sound is coming from my headphones

- Check that your computer is correctly powered up and the headphones are plugged into the back of your computer. The correct socket is usually marked SPK, OUT or PHONES, or it is sometimes just labelled with a picture of some headphones. If you have a multimedia monitor, you may be able to plug your headphones into an audio socket on the front of the monitor. Do *not* plug the headphones into the socket on the front panel of your CD ROM drive – this is for listening to audio CDs only.
- Try adjusting the volume using the volume control on your headphones (if there is one) or on the back of your computer (some models only).

If you have RM ClassMate, you can also change the volume using the RM Volume Control utility on your taskbar: hold your mouse pointer over the loudspeaker symbol on the taskbar and click the right mouse button. The 'RM Volume Control' dialog box is displayed. Click the buttons to the right, or slide the scale to adjust the volume. Ensure the **Mute** box is *not* ticked as this switches off sound output altogether.

If you don't have RM ClassMate, you can still adjust the volume by clicking the loudspeaker symbol on the Windows taskbar.

- Your headphones may be faulty. Try another pair of headphones. If the new headphones work correctly, then the original headphones are probably faulty. If there is still no sound output, then the fault could lie with the computer or sound card. Contact RM Support.

My mouse/keyboard has ceased to function

- Check that your computer is correctly powered up and the mouse/keyboard cable is correctly plugged into the back of your computer.

Note If a PS/2 mouse is unplugged while the computer is on, you will need to reboot the computer before it will work again.

- Making sure you turn off the computer first, try swapping with the mouse/keyboard from another identical computer. This should tell you whether the fault lies with the computer or with the mouse/keyboard.

The program icon/icons have disappeared from my desktop

- Check that your icons are not minimised on the taskbar.
- If you don't have RM ClassMate installed, right-click somewhere on the Windows desktop and select **Arrange Icons, Auto Arrange** if not already selected. If the icon/icons still don't appear, contact our support line.

The wrong date is displayed

- Correct the date using Windows (click the **Start** button, and select **Settings**, **Control Panel** and double-click the **Date/Time** icon). If you had to set the date back in time, the next time you run the Teacher's Program, it will ask you to confirm the date, then checks all user progress records and adjusts any dates stored so that they are before the correct current date. (This process may take a few minutes.)

If you had to set the date forward, the next time you run the Teacher's Program it may ask you to confirm the date is correct if it is three months since the last pupil completed a session.

On RM SchoolShare, switch all the machines off except one. Change the date on this machine, then switch the others on again.

I click the Import button and get the message 'Project exception bad record'. When I click OK the program closes

- The data to be imported has become corrupt. To allow you to enter the Import dialog again, start the Teacher's Program again and export a user. You can now use the Import button again and select valid data.

I've lost or damaged my RM Maths Learning System CD

- Contact our support line.

I get read/write errors exporting/importing with floppy disks

- Try using a different floppy disk.
- The floppy drive could be dirty. Use a floppy drive cleaner, then try again.
- If you continue to experience exporting/importing problems, you may need to replace the floppy drive in the PC.

How do I print to a different printer?

- You cannot change your default printer in the Teacher's Program. This needs to be done in Windows.
 1. Close the Teacher's Program.
 2. Click the **Start** button on the Windows toolbar.
 3. Go to **Settings**, then click **Printers**.
 4. Double-click the printer you would like to set as the new default. A dialog box should open for that printer.
 5. Click **Printer** on the toolbar, then click **Set as Default**.
 6. Start the Teacher's Program, then print your report.

When I try to import data in the RM Exchange format, no groups or pupils are displayed in the Import screen

- If the RM Exchange file was made manually with an application such as Microsoft® Excel (as a CSV file), it must be named RMXCHANGE.CSV to be recognised by the Teacher's Program. Only this name will work.

Network

When I try to setup a workstation by running the setup program located in the 'setup' folder on my server, I see a progress dialog that gets to 99% then nothing happens.

- Ensure that your server name (its name in Network Neighborhood) does not have a space in it. E.g. 'My Server' is not valid, however, 'MyServer' is valid.
- Ensure that the server's share in which you are intending to install RM Maths does not have a space in its name. E.g. '\\NWServer1\my share' is not valid, however '\\NWServer1\myshare' is valid.

The system runs correctly when I'm logged on as an Administrator or Supervisor but not when I'm a standard user

- Check the access rights for the standard user account. It must have full access rights to the RM Maths folder and all sub-folders.

I have seen a message which says I have exceeded the number of concurrent licenses, but I want to use some more computers. What should I do?

- Please contact RM Sales for information on purchasing additional user licences (see page 4).

Curriculum

I want to look at a particular curriculum activity

- The Teacher's Program 'Skills' page displays a list of topics. Double-click the 'plus' icon next to a topic to expand it. The list of skills contained in that topic is displayed. You can click any skill in the list and click the **Run** button to run the selected activity.

A pupil has logged on under the wrong name

- Click the **exit door**, type the system password in the white box and click the big blue button to return to the Pupils' Logon screen. Now ask the pupil to log on as themselves.
- If you think the pupil has deliberately logged on under the wrong name, explain to them that this does not count towards their 'score' and they are doing someone else's work for them!

A pupil is finding work too hard

You could try some, or all, of the following recommendations:

- Change the pupil's confidence setting on the Teacher's Program 'User Details' page from *High* to *Medium*, or from *Medium* to *Low*.
- Change the pupil's progress setting on the Teacher's Program 'User Details' page from *Junior* to *Infant*.

- Use the slider control on the Teacher's Program 'User Details' page to move them back to an earlier point in the curriculum.
- Tick the 'Enable Automatic Placement' box for that pupil so that they complete a placement test next time they use RM Maths.

A pupil is finding work too easy

You could try some, or all, of the following recommendations:

- Change the pupil's confidence setting on the Teacher's Program 'User Details' page from *Medium* to *High*, or from *Low* to *Medium*.
- Change the pupil's progress setting on the Teacher's Program 'User Details' page from *Infant* to *Junior*.
- On the Teacher's Program 'User Details' page, switch Fast Track on. This will 'thin out' the curriculum and let them progress quickly to their current ability level, at which point their scores will drop and Fast Track will be switched off automatically.
- Use the slider control on the Teacher's Program 'User Details' page to move them forward to a later point in the curriculum.
- Tick the 'Enable Automatic Placement' box for that pupil so that they complete a placement test next time they use RM Maths. This is the best way of correcting a gross mismatch between a pupil's ability and their current RM Maths position.

I've ticked 'Retest Now' on the Problems tab, but the pupil was not re-tested when they started their next session.

- Only two problem skills will be re-tested per session. If 'Retest Now' is ticked against more than two problem skills, the two problem skills that have not been seen most recently will be chosen to be re-tested in the session.

Using RM Maths On A Network

Read this appendix for additional information on using the RM Maths Learning System where the user database is shared by more than one computer. For example, on:

- RM networks, including RM Connect, RM Connect Foundation and RM Primary Network
- Other networks such as Microsoft Windows NT or Novell Netware
- Peer-to-peer workgroups running Windows 95, Windows 98, Windows 2000, Windows NT4 Workstation or Windows XP, with one computer nominated as the 'server'.

In this appendix, the term 'network' is used to refer to all of these configurations involving a single shared database, and a computer on the network is referred to as a 'station'.

General Points to Note

- If a pupil is running RM Maths at one station, their name will appear 'greyed out' on the RM Maths Pupils' Logon screens of all other stations on the network.
- The Teacher's Program may be run from any station. When this program is started, it checks to see if the Teacher's Program is already running on another station. If no other station is currently running the Teacher's Program, then that station temporarily secures the necessary access rights to save changes back to the database and all functions of the Teacher's Program will be available.

However, when starting the Teacher's Program at a station, if another station is already running the Teacher's Program, then the program title bar will display the words 'Read Only' to indicate that you cannot modify any user details. However, you can still view and print the users' progress reports in this mode. In other words, you can run the Teacher's Program on as many stations as you like, but on only one of these stations will you be able to edit user details.

- The Broadcast button on the Group Logon screen can be used to automatically change the displayed logon group on all stations. If there are any stations which you do not wish to be included in 'broadcasts', run the Teacher's Program on each of these stations and from the 'Admin' page specify that the station should not respond to broadcasts.

Backing up the Database

It is very important that the RM Maths user database is backed up frequently. If your RM Maths system is held on a network file server, the database can usually be easily and automatically backed up as part of a scheduled backup using the server's DAT backup unit. See your network documentation for more information.

On a peer-to-peer workgroup you will normally need to make your own backup provision. If the station acting as the RM Maths 'server' will not be fully backed-up, you should make a partial backup that includes all of the user database files. These are located in:

Drive:\....\{RM Maths folder}*.UDB (including all sub-folders)

An alternative backup option is to use the Export button in the Teacher's Program to export a copy of the database to either floppy disks or to the hard drive of one of the stations.

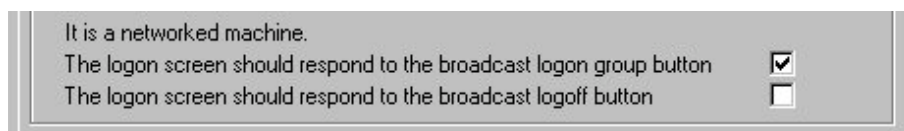
Broadcasting Across a Network

When using RM Maths across a network, you can change the user logon group currently displayed for the whole network from a single workstation. This is useful when a new class comes into the IT suite. You can also log all the machines out of RM Maths from one workstation, for example, at the end of each day or when a class of non-RM Maths users comes in to the IT suite. These devices mean that you don't have to go to each machine to change the group or log the machines out using the password.

Listening for broadcast messages

When you install RM Maths, workstations by default 'listen' for broadcasts to change group but do not 'listen' for broadcasts to log off. You can control each of these features independently on each workstation.

1. Go to the Admin page in Teacher's Program. You will see two tick boxes:



A screenshot of a software window titled 'It is a networked machine.' containing two lines of text with checkboxes to their right. The first line is 'The logon screen should respond to the broadcast logon group button' with a checked checkbox. The second line is 'The logon screen should respond to the broadcast logoff button' with an unchecked checkbox.

It is a networked machine.	
The logon screen should respond to the broadcast logon group button	☒
The logon screen should respond to the broadcast logoff button	☐

2. Place a tick in each one and then close down Teacher's Program.

The workstation you are currently using will now listen for each type of network broadcast. To demonstrate these devices you must make sure there are ticks in both boxes for several workstations.

Note If you have an RM Maths network that is predominately in an IT suite but with a small number of workstations in classrooms, you might make sure the classroom machines are not 'listening' to prevent them changing group or logging off when not required.

Changing group

This is only available when you have more than one group registered on RM Maths.

1. Go to a workstation showing the User Logon screen and click the exit door to drop out to the Group logon screen. In the top left corner of the Group Logon screen are two broadcast buttons: **Group** and **Logoff**.



2. Say the workstations are all displaying a group called 'Year 1'. Select another group on the Group Logon screen, let's call this 'Year 2'. Now click the **Group** button.

All other workstations on the network who are 'listening' for change group broadcasts will switch to show the User Logon screen for 'Year 2'. Look around the IT suite, you will see the workstations switch group.

Logging off

1. Go to another workstation showing the User Logon screen and click the exit door to drop out to the Group Logon screen.
2. This time click the **Logoff** button.

All other workstations on the network who are 'listening' for logoff broadcasts will exit from RM Maths. Look around the IT suite, you will see the workstations log off.

Note If a pupil is midway through a session on a workstation that is listening for either type of broadcast message, that workstation will wait until the pupil has completed the session before changing group or logging off.

RM Exchange File Format

RM Exchange is a data format that enables basic user data to be imported/exported between RM Maths, RM Snapshot, RMMS Administration Software and other applications.

Data is exchanged in ASCII comma-delimited form (.csv file).

A single entry (record) contains eight fields. All fields are mandatory, separated by a single comma.

Filename

RM Exchange files *exported* by RM Maths will always have the filename RMXCHNGE.CSV. Any valid files to be *imported* must also have this filename, otherwise they will not be recognised.

Record Format

The record format is as follows:

<PupilID1>,<PupilID2>,<PupilSurname>,<PupilFirstName>,<Gender>,
<DOB>,<YearGroupDescription>,<ClassName>

For example, A4543-43543,45,Bloggs,Fred,M,1992-11-16,2,Ms Jones's Class

Field Definitions

<PupilID1>

Type: String

Limitations: Maximum of 20 characters. If an application generates a new record and is unable to generate a valid entry for this field, the field is set to 'n/a'.

<PupilID2>

Type: String

Limitations: Maximum of 20 characters. If an application generates a new record and is unable to generate a valid entry for this field, the field is set to 'n/a'.

<PupilSurname>

Type: String

Limitations: Must not contain embedded space characters. May be truncated by importing application if too long to display.

<PupilFirstName>

Type: String

Limitations: Must not contain embedded space characters. May be truncated by importing application if too long to display.

<Gender>

Type: String

Limitations: Must be set to 'M' (male) or 'F' (female).

<DOB>

Type: String

Limitations: Must conform to the ISO8601 standard. That is, the date of birth field is expressed as year first, followed by month, then day, with each separated by a hyphen ('-'). Numbers less than 10 preceded by a leading zero.

Thus November 4th, 1992 would be: 1992-11-04. This format must be adhered to regardless of the regional settings on the importing/exporting computer.

<YearGroupDescription>

Type: String

Limitations: For RM Snapshot this is validated against 'Reception','1','2','3','4','5','6','7','8','9','10','11'. Outside of RM Snapshot there are no restrictions to this field other than those imposed by its type.

<ClassName>

Type: String

Limitations: The Class Name may be truncated by the importing application if it is too long to be displayed. For example, 'Mrs Smith's Reception Class' will be shortened to 'Mrs Smith's Reception Cl'.

Additional Limitations

- String fields cannot contain the comma character.
- String fields may be optionally enclosed in an outer matched pair of quote characters. If found, they are stripped off by the importing application.
- Leading and trailing 'white space' characters (spaces, tabs, control characters and so on) may be legitimately removed by importing or exporting applications.

RM Maths Learning System Teacher's Guide

- Empty fields are not allowed. Exporting applications should insert 'n/a' into fields which they are unable to fill with suitable data.
- Pupil Name and ClassName fields are not 100% reliable for identifying pupils because they may be incomplete as a result of modification by the exporting/importing application. For reliable cross-referencing the PupilID field(s) should be used.

Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks

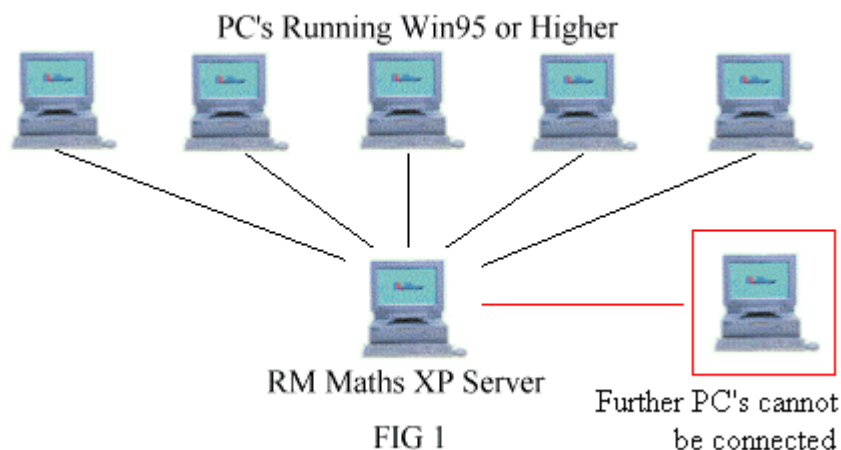
The following only applies to RM Maths on **peer-to-peer networks** (including RM SchoolShare) if you are considering installing to **Microsoft® Windows XP Home** or **XP Pro**.

Schools currently use RM Maths on peer-to-peer networks, including SchoolShare, to enable them to share the pupil data between computers. Users on several computers all connect to data files stored on one particular computer – the RM Maths server. The advantage of this is that users can access their own data whichever one of these computers they are working at.

Unfortunately, Microsoft have introduced a limit in Windows XP Home which means that only 5 other computers can connect to its resources at any one time. This limit applies whether these other computers are trying to access files, printers, scanners, and so on, or any combination of these types of resource.

Therefore, if the RM Maths server is a Windows XP Home computer, RM Maths can only be run on the RM Maths server and 5 other computers at any one time (as shown in figure one). You should also be aware that if any computers other than these five are connecting to resources on the RM Maths server (for example, printing or accessing files), each one would reduce the number of computers that can run RM Maths.

For Windows XP Pro, the same principle applies but with 10 simultaneous connections permissible, rather than 5.



Recommendations for RM Maths

1. Use your fastest non-XP PC as the RM Maths server. If you do this there will be no restrictions on the number of PCs able to use RM Maths.
2. If your RM Maths server is Windows XP Home and your peer-to-peer network has only 6 computers, then RM Maths will work on all computers.
3. If you need to run RM Maths on more than 6 computers and you must use a Windows XP Home computer as the RM Maths server, then you will have to set up two (or more) separate RM Maths servers. You can do this, but you must be careful that you keep track of which computer in your network connects to which RM Maths server. Pupil data will not be transferred between the two separate RM Maths servers.
4. If your RM Maths server is Windows XP Home and you have more than 6 computers in your peer-peer network, do not connect any printers to the RM Maths Server. In this way, printer connections will never limit the number of RM Maths connections that you can have. This is shown in figure two.

Important Note for Installing RM Maths on Windows XP Peer-To-Peer Networks

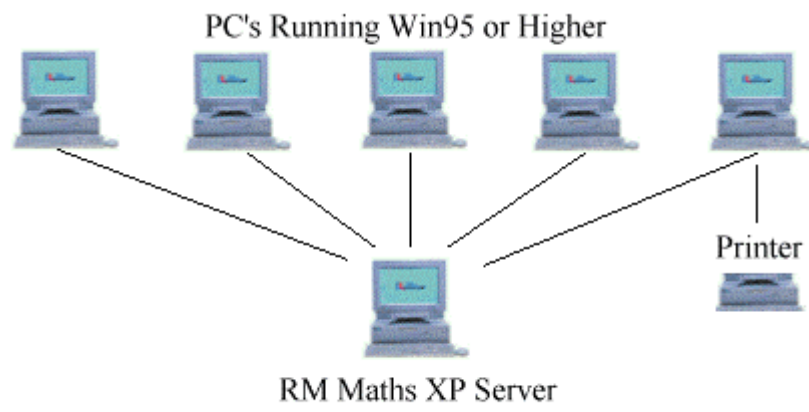


FIG 2

Using The SIMS And Integris Utilities

Two utilities are installed to your RM Maths folder. These enable you to export pupil data from SIMS and Integris into RM Maths. If you have a Connect network, these can be found in:

p:\apps\32bitwin\RM Maths\Sims

p:\apps\32bitwin\RM Maths\Integris

For all other RM Maths networks and standalone configurations, they can be found in the RM Maths folder, typically:

\Program Files\Research Machines\Learning System\Sims

\Program Files\Research Machines\Learning System\Integris

If you intend to use these utilities they should be run from floppy disk. Copy the contents of the two folders to two separate floppy disks and label them **SIMS and RM Maths** and **Integris and RM Maths** respectively.

This appendix covers:

- SIMS and RM Maths
- Exporting Integris Data for RM Maths
- Importing RM Exchange Data into RM Maths.

SIMS and RM Maths

RM Maths can import data in RM Exchange format from a school administration system. The following steps outline the procedure for exporting data from SIMS RepGen Lite reporting module and then converting this data into RM Exchange format.

Import the RepGen Lite report definition into SIMS

1. Insert the **SIMS and RM Maths** floppy disk.
2. Select **RepGen Lite** within SIMS.
3. Select **Tools**.
4. Select **Import Reports**.
5. Select **a:** in the 'Drive' box and then click **OK**.
6. You are asked to confirm that you want to import your selected report. Click **Yes**.
7. A message should appear stating that the import was successful. Click **OK**.

Note If you experience difficulties when importing this RepGen Lite report definition please consult your documentation for SIMS or contact your local SIMS support team.

Export the data onto floppy disk

1. Insert a blank floppy disk into the floppy disk drive.
2. Click the **Pupil Details** button at the top of the screen.
3. Type **RM** and select **RM Exchange format** from the list of reports.
4. Click the **Run Report** button.
5. The report 'Criteria' box is displayed. Click **OK**.
6. The RM Exchange Export report is displayed on the screen. Click the **Export data to disk** button.

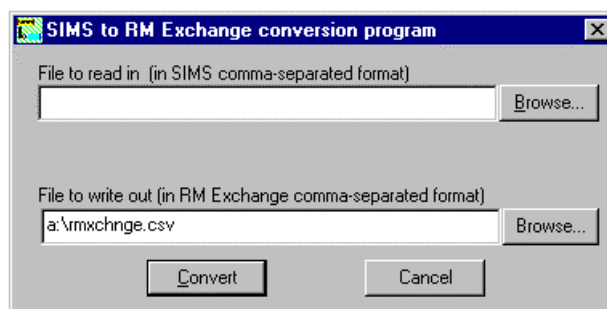
7. Type **Simsdata.csv** into the 'File name' box. Select **Comma separated files** for the 'Save file as type' box. Select drive **a:** in the 'Drive' box. Click **OK** to export the data to floppy disk.
8. A message should appear stating that the export was successful. Click **OK**.
9. Remove the floppy disk and label it.

Note If you experience difficulties when exporting this data please consult your documentation for SIMS or contact your local SIMS support team.

Converting data to the RM Exchange format

This conversion program converts the data exported from SIMS into RM Exchange format so that RM Maths can recognise it.

1. Insert the **SIMS and RM Maths** floppy disk into the floppy disk drive.
2. Click **Start** on the task bar and then select **Run**.
3. Type **a:\simconv.exe** to run the conversion program.
4. Insert the floppy disk containing the SIMS data and then click **OK**. The following screen is displayed.



5. Type **a:\Simsdata.csv** into the 'File to read in' box (where 'Simsdata' is the name of your file). Alternatively click the top **Browse** button to browse to your file.

6. Click **Convert** to convert your file.
7. Remove the floppy disk.

Note The RM Exchange file that you export must be called Rmxchnge.csv otherwise RM Maths will not recognise the file.

Please refer to the section entitled 'Importing RM Exchange data into RM Maths' for details on how use this RM Exchange file.

Integris and RM Maths

Exporting Data for RM Maths

Integris is also supplied with facilities to help you transfer information from Integris to RM Maths. You may want to do this to avoid having to re-enter all your student details.

Data that is to be imported into RM Maths must be in RM Exchange format. To export student data from Integris in RM Exchange format for RM Maths:

1. Select **Admin** from the bar on the right-hand side of the screen.
2. Click the **Reports** button.
3. In the Reports tree, double-click the **Exports** folder. The contents of the folder are shown.
4. Click **RM Exchange report**.

A description of the format is displayed and you are required to do two tasks:

- identify the file that is to contain the exported data
 - create a query that acts as the source for the data to be exported.
5. Click the **Browse** button. Select **a:** in the 'Save in' box and type **Rmxchnge.csv** in the 'File name' box. Click the **Save** button.
 6. Click the **New Query** button. The 'Student Search' screen is displayed.
 7. Search for and identify the students whose details you want to export. See 'Searching for Students and Staff' in your Integris documentation for details about how to find students. By selecting the students, you are creating a query. A description of the query is shown in the Query field.
 8. Click **Print**. The details of the selected students are exported into the named file in the specified location.
 9. Close the 'Reports' screen.

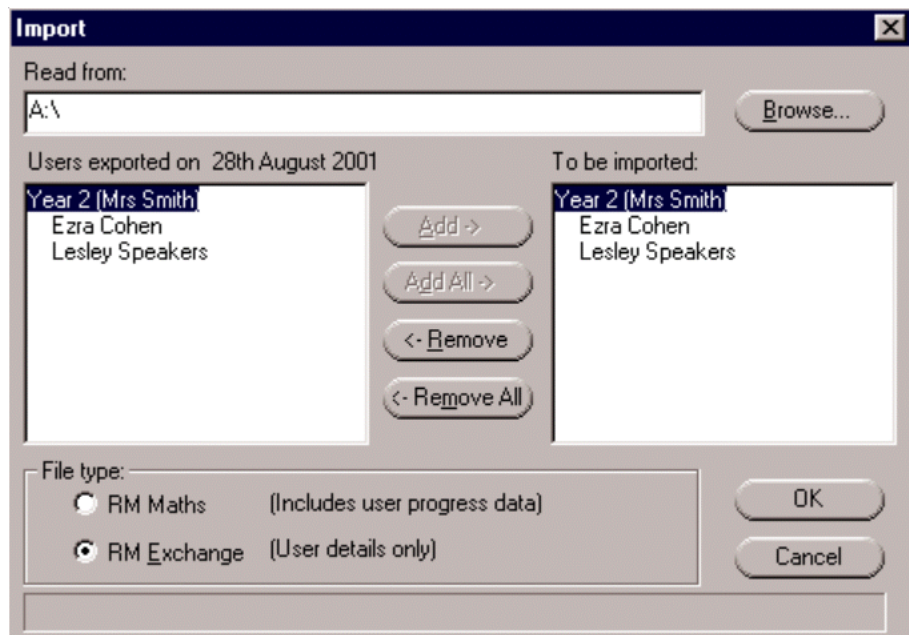
Note If you experience difficulties when exporting the RM Exchange file please consult your documentation for Integris or contact your Integris support team.

Please refer to the section entitled 'Importing RM Exchange data into RM Maths' for details on how use this RM Exchange file.

Importing RM Exchange Data into RM Maths

Once you have obtained an RM Exchange file (Rmxchnge.csv) it can be imported into RM Maths. The following instructions outline how to do this.

1. Insert the floppy disk containing the RM Exchange file.
2. Run **Teacher's Program**.
3. Click the **Import** button. The 'Import' dialogue box is displayed.



4. Make sure that the **Read from:** box reads **a:** and that **RM Exchange (User details only)** is selected.
5. Select the groups of pupils using the **Add** button, then click **OK**.

APPENDIX V

End User Licence Agreement

The following is a **copy** of the Licence Agreement that you must accept during installation before you can use RM Maths Learning System:

RM Maths Learning System SINGLE or NETWORK or SITE END USER LICENCE (as appropriate)

Summary of licence contents:

Only the number of people set out in your RM Licence Confirmation Certificate can legally use the software in your school at the same time. As a teacher, you may also install the software on your computer at home, but the software cannot be used at home and at school at the same time. 'Using' the software is defined in the licence agreement enclosed in this document.

If you wish to use the software on two or more computers (screens) at the same time, you need to buy an additional copy for each computer it is used on or if available a site licence.

This brief summary does not form any part of the licence agreement enclosed in this document and merely serves to illustrate the kind of use permitted by the enclosed licence. It is important that you read and understand the terms and conditions of the enclosed licence prior to accessing the Software, as on first loading, installing and/or otherwise accessing the Software you will then be bound by the conditions of the enclosed licence.

RM Maths Learning System

SINGLE or NETWORK or SITE END USER LICENCE (as appropriate)

Research Machines plc ("the Licensor") is authorised to license the RM Maths Learning software ("the Software") to you ("the Licensee") and by downloading, installing or otherwise accessing the Software the Licensee accepts a non-exclusive, non-transferable licence to "Use" (as hereinafter defined) the Software upon the terms and conditions contained herein. If the Licensee does not agree to the terms and conditions contained herein, the Licensee must not download, install or otherwise access the Software. For the purpose of this End User Licence a single person (being either a pupil, teacher or other member of staff of the Licensee) shall be considered to be "a User" and "Use" means use of the Software in accordance with Clause 3 hereof.

1 Type of End User Licence

This End User Licence grants the following rights to the Licensee:

1.1 Where a single user licence has been purchased by the Licensee (as evidenced by a Licence Confirmation Certificate issued by the Licensor) the Licensee may permit a User to Use the Software:

- a) consecutively on one PC at one postal location; and
- b) on more than one PC at one or more postal locations but at different times i.e. not concurrent use.

1.2 Where a network licence has been purchased by the Licensee (as evidenced by a Licence Confirmation Certificate issued by the Licensor) the Licensee may permit the number of concurrent Users shown on the Licence Confirmation Certificate to Use the Software:

- a) concurrently on one network at one postal location at any time;
- b) concurrently on one network which links different postal locations at any time.

1.3 Where a site licence has been purchased by the Licensee (as evidenced by a Licence Confirmation Certificate issued by the Licensor) the Licensee may:

- a) permit any number of Users to Use the Software on the network(s) for that Site which may be accessed from any of the PCs at that Site;
- b) Use the Software on the PC of any teacher who is permanently employed at the Site provided that such PC is located at the teacher's principal private residence only and provided that the licence in respect of that PC shall expire when the teacher ceases to be so employed. "Site" shall mean the educational institution subject to a single Department for Education & Skills identification number for England & Wales (or its equivalent elsewhere).

A site licence does not permit the Use of the Software by pupils of the Site at any location other than the Site.

2 Acceptance of this Licence

The terms and conditions of this Licence are deemed to be accepted by the Licensee when the Licensee downloads, installs or otherwise accesses the Software.

3 Use of the Software

3.1 For the purposes of this Licence "Use" shall mean and include:

- 3.1.1 utilisation of the Software by copying, transmitting or loading the same into a PC;
- 3.1.2 copying the Software for back-up or archive purposes provided that except in the case of a site licence no more than two (2) copies will be in existence under any Licence at any one time without prior written consent from the Licensor or as otherwise permitted by law;
- 3.1.3 utilising (but not copying) the instructional and/or operational manuals relating to the Software.

3.2 Additional concurrent Users on a Network Licence may be added by increasing the number of multiple concurrent user licences on the Licence Confirmation Certificate for which an additional Licence Fee is payable.

4 Licence Fee

4.1 Where a Licence Fee is payable to the Licensor and is not paid by the Licensee at the time the Software is obtained from the Licensor or its agent or where the Licence Fee is or forms part of a periodic payment, the Licence Fee or periodic payment will be payable within the number of days specified in the Licensor's invoice or as otherwise agreed in writing by the Licensor.

RM Maths Learning System Teacher's Guide

5 Licensee's Undertakings

5.1 The Licensee undertakes not to perform any of the acts referred to in this sub-clause 5.1 except to the extent and only to the extent permitted by law to the Licensee as a lawful user (i.e. a party with a right to use) of the Software and only then for the specific limited purpose permitted by law or hereunder. The Licensee undertakes:

- 5.1.1 not to copy the Software (other than for normal system operation and as specified in Clause 3 above) nor otherwise reproduce the same provided that the Licensee may copy the Software for back-up purposes or incidentally, in the course of converting the Software in accordance with 5.1.3 below;
- 5.1.2 not to translate, adapt, vary or modify the Software;
- 5.1.3 not to disassemble, decompile or reverse engineer the Software except as permitted by law;
- 5.1.4 not to remove, obscure or alter any notice of patent, copyright, trademark or other proprietary notice on the Software;
- 5.1.5 not to sub-license, distribute, rent, lease or otherwise transfer the Software or any copy to any third party;
- 5.1.6 not to make the Software accessible by any type of broadcast or transmission, including but not limited to broadcast or transmission by cable, Internet, television, satellite or telephone provided that this sub-clause will not prohibit the Software from being accessed on a network for a particular Site where the appropriate site licence has been purchased;
- 5.1.7 not to use the Software to attract customers away from the Licensor or to procure commercial advantage over the Licensor or to use it in any other way which is likely to be directly or indirectly detrimental to the Licensor or its business;
- 5.1.8 not to enable a third party to do any of the acts set out in this clause 5.1;
- 5.1.9 to maintain accurate and up-to-date records of the number and location of all copies of the Software;
- 5.1.10 to supervise and control Use of the Software in accordance with the terms of this Licence;
- 5.1.11 to ensure that its employees, agents and other parties who will use the Software are notified of this Licence and the terms hereof prior to such employee, agent or party using the same;
- 5.1.12 to reproduce and include the copyright notice of the Licensor on all and any copies, whether in whole or in part, in any form, including partial copies or modifications of the Software made herein;
- 5.1.13 not to provide or otherwise make available the Software in whole or in part (including where applicable, but not limited to program listings, object code and source program listings, object code and source code), in any form in connection with or in conjunction with or as part of any Managed Service or to any person without prior written consent from the Licensor. For the purpose of this clause 5.1.13 "Managed Service" shall mean any commercial time sharing rental, bureau service or outsourcing agreement or arrangement;
- 5.1.14 within 14 days after the date of termination or discontinuance of this Licence for whatever reason, to destroy the Software and all updates, upgrades or copies, in whole and in part, in any form including partial copies or modifications of the Software received from the Licensor or made in connection with this Licence, and all documentation relating thereto and the Licensor shall have the right to enter the Licensees premises to retake immediate possession without the need for process or other legal action.

6 Warranty

- 6.1 The Licensee acknowledges that Software in general is not error-free and agrees that the existence of such errors shall not constitute a breach of this Licence.
- 6.2 In the event that the Licensee discovers a material error which substantially affects the Licensee's use of the same and notifies the Licensor of the error within 90 days from the date of payment of the Licence Fee or where the Licence Fee is or forms part of a periodic payment, then within 90 days from the date of the first of such periodic payments (the "warranty period") the Licensor shall at its sole option either refund the Licence Fee or use all reasonable endeavours to correct by patch or new release (at its option) that part of the Software which does not so comply PROVIDED THAT such non-compliance has not been caused by any modification, variation or addition to the Software not performed by the Licensor or caused by its incorrect use, abuse or corruption of the Software or by use of the Software with other software or on equipment with which it is incompatible.
- 6.3 To the extent permitted by law, the Licensor disclaims all other warranties with respect to the Software, either express or implied, including but not limited to any implied warranties or terms and conditions of satisfactory quality or fitness for any particular purpose. Specifically the Licensor does not warrant that the functions mentioned in the Software will meet the Licensee's individual requirements.

7 Licensor's Liability

- 7.1 The Licensor shall not be liable to the Licensee for any loss or damage whatsoever or howsoever caused arising directly or indirectly in connection with this Licence, the Software, its use or otherwise, except to the extent set out in clause 7.2 below or to the extent that such liability may not be lawfully excluded.
- 7.2 The Licensee agrees that the maximum aggregate liability of the Licensor whether in contract, tort, negligence, statutory duty or otherwise, for any loss or damage whatever arising from or in any way connected with any liability not excluded by this Agreement shall be limited to £250,000. This limit shall also apply in the event that any exclusion or other provision contained in this Agreement is held to be invalid for any reason and the Licensor becomes liable for loss or damage that could otherwise have been limited.
- 7.3 The Licensor expressly excludes liability for indirect, special, incidental or consequential loss or damage which may arise in respect of the Software, its use, the System or in respect of other equipment or property, or for loss of profit, business, revenue, goodwill, data and/or anticipated savings.
- 7.4 The Licensor does not exclude liability for death or personal injury to the extent only that the same arises as a result of the negligence of the Licensor, its employees, agents or authorised representatives.
- 7.5 If the Licensor is unable through no act or default of the Licensee to procure the correction of defects in the Software in accordance with and during the 90 day warranty period and where the Software is totally unusable due to the defect, the Licensee may reject it by sending written notice to the Licensor within ten (10) days of receipt of notice from the Licensor that the Licensor is unable to correct or procure the correction of such defects and upon its return to the Licensor's premises is entitled to recover the Licence Fee.

8 Copyright, Patents, Trade Marks and Other Intellectual Property Rights

The Licensee acknowledges that any and all of the copyright, trademarks, trade names, patents and other intellectual property rights subsisting in or used in connection with the Software including but not limited to all documentation and manuals relating thereto, all images, animations, audio music and text incorporated into the Software remain the sole property of the Licensor. The Licensee agrees to immediately notify the Licensor of any actual or suspected infringement and the Licensee also agrees not to use any of the Licensor's trademarks as any part of the name under which the Licensee conducts its business.

9 Confidential Information

End User Licence Agreement

9.1 All information, data, drawings, specifications, documentation, Software listings, source or object code which the Licensor may have imparted and may from time to time impart to the Licensee relating to the Software is proprietary and confidential. The Licensee hereby agrees that it shall use the same solely in accordance with the provisions of this Licence and that it shall not at any time during or after expiry or termination of this Licence, disclose the same, whether directly or indirectly, to any third party without the Licensor's prior written consent.

9.2 Subject only to the specific, limited provisions of Clause 5.1 and its sub-clauses above, the Licensee further agrees that it shall not itself or through any subsidiary, agent or third party use such confidential information to copy, reproduce, translate, adapt, vary, modify, decompile, disassemble or reverse engineer the Software nor shall the Licensee sell, lease, license, sub-license or otherwise deal with the Software or any part or parts or variations, modifications, copies, releases, versions or enhancements thereof or have any software or other program written or developed for itself based on any confidential information supplied to it by the Licensor.

9.3 The foregoing provisions shall not prevent the disclosure or use by the Licensee of any information which is or hereafter, through no fault of the Licensee, becomes public knowledge or to the extent permitted by law.

10 Force Majeure

The Licensor shall be under no liability to the Licensee in respect of anything which, apart from this provision, may constitute breach of this Licence arising by reason of force majeure, where such event is beyond that party's reasonable control.

11 Termination

11.1 In addition to provisions for termination as herein provided, the Licensor may by notice in writing to the Licensee terminate this Licence if:

11.1.1 the Licensee is in breach of any term, condition or provision of this Licence or required by law and fails to remedy such breach (if capable of remedy) within 30 days of having received written notice from the Licensor specifying such breach; or

11.1.2 if the Licensee ceases to carry on business or a substantial part thereof or enters into liquidation whether compulsory or voluntary other than for the purpose of amalgamation or reconstruction or compounds with its creditors generally or has a receiver or manager or administrator appointed over all or any part of its assets or becomes unable to pay its debts as they fall due.

11.2 Upon termination, the Licensee shall comply with its undertaking specified in clause 5.1.4 above.

11.3 Termination, howsoever or whenever occasioned shall be subject to any rights and remedies the Licensor may have under this Licence or under law.

12 Assignment

The Licensee shall not assign or otherwise transfer all or any part of the Software or this Licence without the prior written consent of the Licensor.

13 Waiver

Failure or neglect by either party to enforce at any time any of the provisions hereof shall not be construed nor shall be deemed to be a waiver of that party's rights hereunder nor in any way affect the validity of the whole or any part of this Licence nor prejudice that party's rights to take subsequent action.

14 Headings

The headings of the terms and conditions herein contained are inserted for convenience or reference only and are not intended to be part of or to affect the meaning or interpretation of any of the terms and conditions of this Licence.

15 Severability

In the event that any of these terms and conditions or provisions shall be determined by any competent authority to be invalid, unlawful or unenforceable to any extent, such terms, condition or provision shall to that extent be severed from the remaining terms, conditions and provisions which shall continue to be valid to the fullest extent permitted by law.

16 Law

This Agreement will be governed by and construed in accordance with the laws of England and shall be subject to the exclusive jurisdiction of the English Courts.

17 Notices

Any notice required to be given under these conditions shall be in writing and shall be sent to the address of the Licensor's registered office. All notices hereunder shall be sent by confirmed facsimile (provided, however, that any notice which could materially affect the rights of either party shall also be sent by courier as provided herein) or recognised commercial overnight courier service. Such notice shall be effective upon receipt, but in any event no later than three days after sent by recognised commercial overnight courier.

18 Survival

The provisions of clauses 5, 7, 8, 9, 11, 12, and 16 shall survive termination of this Licence.

19 Entire Agreement

This Agreement supersedes all prior agreements and arrangements of whatever nature and sets out the entire agreement and understanding between the parties relating to its subject matter. Nothing in this clause shall relieve either party of liability for fraudulent misrepresentations and neither party shall be entitled to any remedy for either any negligent or any innocent misrepresentation except to the extent (if any) that a court or arbitrator may allow reliance on the same as being fair and reasonable.

Logon Icons

You can use this template to copy the icons, cut them out and give them to your younger pupils to colour. They may enjoy making a badge to represent their RM Maths logon icon.

