
Activities with Handheld Technology

Classroom resources for teaching
and learning mathematics at 11-16,
with the TI-83 or TI-84 family
of graphics calculators



T³ EUROPE



TEXAS INSTRUMENTS

Contents

Activity 1:	There and back again	Inverse operations	Level 5
Activity 2:	Round and round	Circles and coordinates	Level 5
Activity 3:	Prime time	Exploring divisibility	Level 3/4
Activity 4:	Drawing shapes	Use of coordinates for drawing	Level 5/6
Activity 5:	$Y=MX+C$	Graphs of linear functions	Level 6
Activity 6:	Trig ratios	Sine, cosine and tangent	Level 8
Activity 7:	Substitution	Substitute in linear expressions	Level 5
Activity 8:	Ball bounce	Distance time graphs with the CBR	Level 6+
Activity 9:	Coins, marbles and dice	Probability from experimental data	Level 7
Activity 10:	Cumulative frequency	Median and IQR for grouped data	Level 8

About the activities

These ten activities have been written for teachers by teachers. Each one suggests an activity that uses handheld technology to teach topics that are central to the National Curriculum. The activities are in no particular order and the National Curriculum Levels suggested above are for guidance only

For each activity there are detailed notes for the teacher describing ways in which the activity has been used successfully in real classrooms. These notes link the activity directly to the **Framework for teaching mathematics: Years 7, 8 and 9**.

There are also **student worksheets** that may be photocopied freely.

The activities are designed for use with the TI-83 or TI-84 families of calculators. The assumption is that you will have access to a class set of calculators and also a calculator that can be used for whole-class teaching. This demo calculator can take various forms including the TI-SmartView™ emulator or a Viewscreen™. It is possible for schools to borrow from Texas Instruments the very latest technology, both for the class and the teacher - see <http://education.ti.com/uk>.

The 10 activities illustrate using the graphics calculator to teach **a wide range of mathematical topics**. Some require very little previous experience with using the calculator whereas others are for students and teachers who have already acquired some skill and confidence with using the handheld technology. They have been chosen to illustrate a range of things the calculator can do effectively, including simple calculation and algebra on the home screen, graphing and drawing on the graphing screen, using lists to deal with large data sets and using one of the commonly available software applications. One activity also uses the TI motion sensor known as the CBR™ together with its built-in software

Five of the activities have been adapted from those published previously in **30 Calculator Lessons for Key Stage 3**, a photocopiable resource published by A+B books. (www.AplusB.co.uk). Details of this and other resources supporting the use of handheld technology in the teaching of mathematics are listed at the back of this book.