

## Read This Page First!

Why the Number Cruncher will save you time, motivate your reluctant learners and lay a better foundation on which your students can build their numeracy skills

## Contents

<b>Read This Page First!</b>	1
<b>Seven Secrets</b>	
Unique Features	2 - 5
<b>Establishing Place Value</b>	
Tallying M.A.B.	6
Zero as a Place Holder	7
Making the Largest Number	8
Making the Smallest Number	9
Analysing Numbers	10
Rounding Numbers	11
Recognising Numbers	12
Ordering & Comparing Numbers	13
Contracting Numbers	14
Expanding Numbers	15
Reading Numbers	16
Writing Numbers	17
Counting Forward	18 - 21
Counting Backward	22 - 25
<b>Calculating</b>	
Addition	26 - 27
Subtraction	28 - 29
Multiplication	30 - 31
Division	32 - 33
<b>Using Column Labels</b>	34

### **The Number Cruncher Lifts Standards in 73% of the Primary Maths Curriculum**

In spite of what you see and hear in the media, there has been a significant decline in students' proficiency in Maths. Studies show that students don't have a good enough grasp of those concepts and processes that constitute place value. Place value is foundational to 73% of the primary Maths curriculum and a lack of understanding in this area is one reason why standards are down. The Number Cruncher has the potential to turn this trend around.

### **Seven Secrets Provide an Unfair Advantage**

Designed specifically to promote understanding in place value and calculating, the Number Cruncher takes over where M.A.B. blocks leave off. Seven unique features (the seven secrets) combine to provide students with a tool to bridge the chasm between concrete and abstract. They also give students the option to work in concrete or abstract terms and flip from one to the other at will. In fact the Number Cruncher addresses some concepts in ways that no other teaching device can, providing students who have them with an unfair advantage.

### **Promotes Understanding Reduces Risk of Rote Learning**

The Number Cruncher locks concrete into place value in a way that locks students into using first principles. This promotes understanding and reduces the risk of students learning by rote. Whenever students use it they will be consolidating those concepts critical to understanding place value.

### **Teachers Save Significant Amounts of Time**

Significant amounts of time will be saved in that students will learn the basics more quickly and move on to the higher concepts earlier.

### **Evaluation and Assessment Made Quicker and Easier**

When students are observed using the Number Cruncher, errors in thinking can be easily detected. Evaluation and assessment are made quicker and easier in that students can hold up their Number Cruncher and the teacher, with a glance, can determine which students are having trouble.

### **No Little Bits to Get Lost Quiet to Use**

As the Number Cruncher is in one piece it can be distributed and collected quickly and there are no little pieces to get lost. Some teachers think that its greatest asset is that it is quiet to use.

### **Students Prefer to Use the Number Cruncher**

Trials have shown the Number Cruncher to be one of the most motivating pieces of Maths equipment. Most students would choose to use the Number Cruncher in preference to other place value aids. Many teachers make the comment that even students who struggle with Maths enjoy using them and are prepared to 'have a go'.

This manual is not exhaustive. It illustrates how the Number Cruncher addresses place value like no other teaching aid. Teachers may need to modify activities to suit the level of their students.

Now study the next four pages carefully!