



# *The Wilkie Way*

*Newsletter October 2010*

## **Is the New Mathematics and Statistics Curriculum firmly bedded into your school curriculum?**

### **Checklist:**

- Students are involved in real problem solving activities;
- Students actively engage in thinking mathematically and statistically;
- Teachers are involved in real problem solving activities;
- Teachers actively engage in thinking mathematically and statistically;
- Teachers understand how their students are thinking and are able to ask the questions to move their students thinking forward;
- The school curriculum provided learning opportunities in number & algebra, geometry & measurement and statistics in proportions appropriate to the level.

Does your implementation plan reflect all of the above?

Will a teacher new to your school fully understand the expectations of your school in the teaching of mathematics?

Does your assessment policy and types of assessment data collected reflect the value of problem solving and thinking mathematically and statistically?

Do you still value speed of recall and set that as an important goal (timed basic facts tests) – if you do then students (and teachers) value this above thinking because it is more easily measured?

### **Topic for Staffroom discussion**

Timed tests: research says over and over again that speed of recall is necessary for working mathematically. However it also says that timed tests at primary level when students are learning basic facts create maths anxiety in the very students who are finding mathematics difficult anyway. Maths anxiety is the single biggest learning difficulty and common practice in primary schools widens the gap between able and struggling students rather than closes the gap.

What can you do in your school to assist speed of recall necessary for working mathematically at the appropriate curriculum level for the student?

To work at level 2 (Early Additive) students need to have recall of addition and subtraction facts to 10.

To work at level 3 (Advanced Additive) students need to have instant recall of addition and subtraction facts to 20.

To work at level 4 (Advanced Multiplicative) students need to have instant recall of multiplication and division facts.



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### Games provide a tool for gaining recall of arithmetic facts in a stress free environment

We all know we learn best when we are enjoying ourselves, emotion plays a huge part in learning, both positively and negatively.

Wilkie Way provides a range of dice and counter games for the building blocks of instant recall addition and subtraction facts. Each set has 5 different games on the same theme.



**Set 4 5+ knowledge**



**Set 5 Doubles to 12**



**Set 6 Pairs to make 10**

These facts are required for students to begin to use early additive strategies: for example If I know  $3 + 3 = 6$  then  $3 + 4 = 3 + 3 + 1$ .

Using these facts and plus or minus one students know every fact within ten.



**Set 7 10+ knowledge**



**Set 8 Doubles to 20**



**Set 9 Using the basic facts**

Knowing basic facts and being able to use the basic facts enables students to work additively. Students need to be able to "unconsciously" use their addition facts as counting is no longer a viable option for working with larger numbers.



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Wilkie Way also provides games for learning the multiplication tables:

### Early Numeracy Sets 10 - 12



Set 10 x 2



Set 11 x 5



Set 12 x 10 and place value

Recall of these tables is required to build the remaining tables using additive strategies and the associative and distributive properties of multiplication. (Need to know addition facts too!)

### Multiplication and Division Games Sets 1 - 6



Set 1  $x/\div 3$



Set 2  $x/\div 4$



Set 3  $x/\div 9$



Set 4  $x/\div 6$



Set 5  $x/\div 7$



Set 6  $x/\div 9$

Once students have learnt the additive strategies for deriving multiplication facts they need plenty of practice for the facts to become instantly recalled for using to think multiplicatively.



Set 7  
Multiplication



Set 8  
Division

All games have been held at 2005 price and we will even absorb the GST increase until the end of year.

**Just \$22.50 per set**

Order online at

[www.ncwilkinsons.com/wilkieaway](http://www.ncwilkinsons.com/wilkieaway)

Unfortunately the price of the games will have to increase in 2011

Check website for options on buying multiple sets. Click tab: **Educational Resources** at top of home page



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## Investigations or Problems to be solved!

Three teddy bears went on a picnic.



I don't like cheese



I don't like ham



I don't like tomato

In the picnic basket were 12 sandwiches:

- 3 were ham and cheese
- 3 were egg and tomato
- 3 were cheese and tomato
- 3 were ham and egg.

Can each teddy eat four sandwiches - sort out which sandwiches they would eat?

Mr Lyall bought 7 metres of ribbon for making Christmas decorations. He bought three different colours. The red ribbon was twice as long as the green ribbon. The yellow ribbon was half the length of the green ribbon.



How long was each coloured piece of ribbon?

Mrs Cane bought 7 metres of ribbon for making Christmas decorations. She bought three different colours. The green ribbon was three times as long as the blue ribbon. The yellow ribbon was 70 cm longer than the green ribbon.



How long was each coloured piece of ribbon?

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