



# *The Wilkie Way*

*Newsletter August 2011*

## **Key Findings for Making a Bigger Difference in Mathematics Teaching** *(Derived from a range of national and international monitoring data and research including NEMP, TIMSS, PISA, ERO and 103 NDP evaluations & studies)*

There are 10 findings of which I have just looked at the first two in this newsletter.

### **This article is intended for in school discussion:**

Reflect on your current practices. Consider what you are doing well and what you might need to change or improve on to make your mathematics teaching more effective to raise the achievement of your students.

#### **1. An ethic of care:**

Effective teaching requires students to have positive mathematical identities. Current practices that risk undermining student mathematical identities:

- Widespread use of ability streaming within and between classes in mathematics teaching in NZ;
- Widespread use of the least trained adults (teacher aides) to teach the lowest achieving students.

#### **2. Arranging for learning:**

- NZ teachers make less use of highly effective whole class sessions than teachers in other countries. Skilled whole class teaching can enable greater access to mathematical ideas for low achievers if complemented by intensive group and individual work.
- Maths group work in NZ typically involves grouping students by achievement levels to work on the same task independently. Optimal approaches use flexible grouping practices (not fixed streaming into groups by ability).
- Collaborative and co-operative peer approaches to learning are highly effective in accelerating achievement **when well implemented**.
- Students do not naturally work collaboratively in classrooms. NZ students engage in high levels of intimidatory, exclusionary, name calling and other bullying behaviours that undermine effective collaboration. These behaviours are rarely visible to the teacher.
- If teachers use small group approaches without teaching students the skills to participate productively and, without designing and using effective group tasks, social engagement can undermine and displace rather than support intellectual engagement.
- Students need to have opportunities for productive independent time to think and work quietly by themselves. NZ students get more time to work independently (without teacher guidance) than the international mean. The quality of this opportunity is dependent upon teacher guidance, task quality and what has been learnt in whole class and group contexts.
- Overseas evidence reveals that when families play and enjoy mathematical (e.g. board) games this has a more positive effect on achievement than any other form of mathematical homework help. School provision of mathematical games libraries and support for parents and whanau can be critical to homework succeeding.



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## Did you know you can purchase library sets of Wilkie Way Numeracy Games?

**Minimum purchase 2 of each set:**  
Either **Early Numeracy Games** (120 games)  
**\$480.00**

OR  
**Multiplication & Division Games** (80 games)  
**\$320.00**

OR **Early Numeracy & Multiplication & Division Games** (200 games)  
**\$800.00**

See prices for more than 2 sets on  
[www.ncwilkinsons.com/wilkieway](http://www.ncwilkinsons.com/wilkieway)

**22% discount on RRP of individual sets**

**Order by email.**

[wilkieway@ncwilkinsons.com](mailto:wilkieway@ncwilkinsons.com)





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## **Professional Development Opportunities: Term 3**

**Hamilton** (contact [poundn@waikato.ac.nz](mailto:poundn@waikato.ac.nz))

**Tuesday 6 September: Supporting the teaching & learning of numeracy**

– a course for teacher aides, RTLB, SLS teachers

**Wednesday 7 September: Becoming Numerate – using mathematics to solve problems**

- Classroom teachers years 3 – 8
- Teachers of year 9 & 10 (Students working at levels 3 & 4)

## **Whole school professional development:**

### **Expressions of Interest for 2013 or Bookings for 2012**

Please contact [charlotte@ncwilkinsons.com](mailto:charlotte@ncwilkinsons.com) to register expressions of interest.

Schools registering expressions of interest are recorded in date of registration order and will be contacted in term 2 or 3 of 2012.

A confirmed booking can be made at any time. (provided space is available)

A professional development is designed to meet the needs of the school while ensuring the focus remains on raising the achievement of all students through:

- Expanding teacher expert mathematical content knowledge;
- Improving the quality of the teaching in line with the National Curriculum;
- Assisting the development of problem solving classrooms;
- Using school data to inform teaching programmes;
- Building teacher confidence in the teaching of mathematics;
- Ensuring the Key Competencies and Values are explicitly displayed through the mathematics curriculum.

A typical school professional development model always looks to sustainability and may consist of:

- In school workshops;
- In class modeling & discussion;
- In class observations & feedback;
- Professional reading;
- Learning assignments;
- Planning & Assessment guidance;
- In school leadership of Mathematics.

## **New on Free Resources [www.ncwilkinsons.com/wilkieway](http://www.ncwilkinsons.com/wilkieway)**

Teacher Professional Knowledge – Moderation Sheets these sheets have been designed for collecting OTJ's and can be used for recording student performance on problem solving tasks. They cover strategy, number knowledge, measurement, geometry and statistics. Please feel free to use them and any feedback on usefulness or improvements gratefully received.



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## A problem to cause thinking

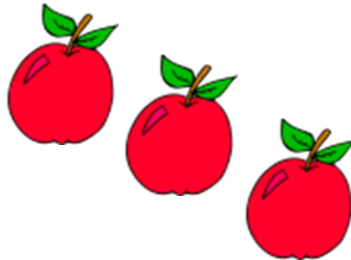
There are 4 people at the party. They all had the same amount of food to eat.  
On the table was:

1 Birthday cake



2 Pizzas

3 Apples



4 Muffins



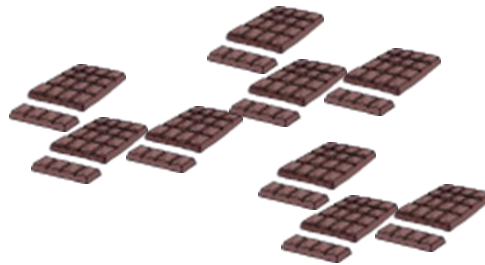
5 Sandwiches

6 Chocolate biscuits

7 500mL bottles of lemonade

8 Lollypops

9 250g bars of chocolate



10 bags of chippies

**What if?**

There are 3 people at the party.  
There are 5 people at the party?

What did each person eat?

Work out as many as you can. You can use materials, draw pictures or write equations and words.

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