



The Wilkie Way

Newsletter May 2010

Using Evidence to Make Assessments – Implications for NZ

This is precisely what I have been doing in my 6 week visit to the UK. During my time I collected anecdotal evidence from practicing teachers, (both primary and secondary) students, university mathematics lecturers and educational researchers.

It is eleven years since I left the UK teaching force as I felt like I was becoming a political pawn to be moved around at the whim of the Minister of Education. I felt my professional status was being eroded and the enjoyment of teaching was fast disappearing. Teaching in New Zealand was like a breath of fresh air. I could be innovative, I could use my professional judgment to make sure every student in my class achieved to their potential. I could respond to students as another human being and not as a statistic.

In the eleven years that I have been absent from the UK the test results of students at 7 and 11 have increased year on year. Wow! So students are really getting better at mathematics?

Let's look behind the statistics at what is really happening:

1. Experienced, good quality teachers are bored, tired and depressed and leaving the profession at the earliest opportunity.
2. Students are bored with mathematics where emphasis is placed on memorizing, speed and recall.
3. Secondary school teachers are dismayed at the lack of mathematical understanding in students entering high school (Year 7 in the UK)

Why has this happened?

Assessment used for teaching and learning is part of a cycle to raise achievement. Used in this way teachers know where their students are at in their understanding and build on to what they already know making the connections to enhance and extend student understanding.

When the same assessments are used to monitor and compare students and schools the assessments become very "high stakes" and teachers are forced into a situation which goes against all good educational practice. Teachers have to teach to the test as this is what they are being measured against. This has led to a curriculum programme for each year group which students follow – teaching to their age not their stage of learning. A one size fits all curriculum. Students quickly learn to stop trying to understand and rely on memory and recall. The "good" students are the ones who can do this at speed! At primary level most mathematics can be learnt from memory and recall (without understanding) but to be able to use and apply the mathematics is quite different and seldom features in the UK classroom as it is too time consuming when pressure is on to pass a test. By 13 years old, the test results are plummeting – are secondary teachers to blame or perhaps lack of mathematical understanding in their students is more likely.



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Thinking About How You Teach Fractions.

Fractions are used in Primary Schools to represent quantities that cannot be represented by a single whole number.

Two types of quantities taught in primary schools must be represented by fractions. These two types of quantities are different in that students are required to use different types of thinking. The first situation involves measurement – a half cup or a quarter of a metre. The type of thinking required is partitioning.

The second involves division, for example 3 cookies shared between 4 children. In this situation, students use correspondences between units in the numerator and the units in the denominator.

It is crucial for students understanding of fractions that they learn about fractions in both types of situation: most students do not spontaneously transfer what they learned in one situation to the other.

Like whole numbers, fractions can be used to represent quantities and relations between quantities. Proportional reasoning requires the use of fractions to represent relations between quantities.

Adapted from: Key Understanding in Mathematics Learning: Nuffield Foundation 2007

Resourcing your school on a tight budget:

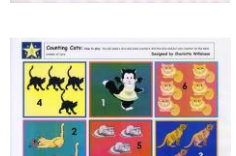
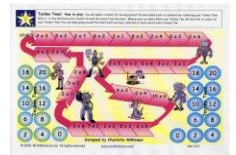
Many schools have taken the opportunity to resource multiple classrooms with sets of Wilkie Way Games by purchasing Library Sets as advertised on the website www.ncwilkinsons.com/wilkeway

By buying multiple sets schools enjoy a significant discount. Library sets consist of multiple copies of Early Numeracy Games (12 sets = 60 different games) or Multiplication & Division Games (8 Sets = 40 different games) or all 20 sets of games = 100 different games.

These games provide independent practice activities for students and require minimal instruction and minimal equipment (dice and counters) making them very user friendly for a classroom.

Prices given are for 2 – 5 complete sets. If schools require more than 5 sets please request a quote.

Games can also be used for homework – schools that have purchased multiple copies are able to replace individual games for \$5 + pp





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Professional Development Opportunities:

Unfortunately National Standards have had a very negative effect of Professional Development for teachers as many courses have had to be cancelled. This is unfortunate as many of the courses I am offering are for Teacher Aides who properly trained can be a greater asset to schools in helping students to achieve their potential.

Teacher Aides:

Supporting Numeracy

Auckland 31 May Napier 29 July Palmerston North 30 July

Supporting Students in Numeracy working at Level 1 and Early Level 2

Christchurch 15 June Invercargill 16 June Dunedin 17 June

Teachers Years 1 - 3:

Planning Junior Programmes: Looking at integrating geometry, measure and statistics into a number heavy mathematics programme. This course will also consider gathering evidence for National Standards and the practicalities of providing judgments at end of 12, 24 and 36 months in school.

Christchurch 14 June Dunedin 18 June

These courses are offered through Otago University. Contact darrell.latham@otago.ac.nz

Teachers Years 1 – 8:

Implementing the New Curriculum – Inquiry Learning for Mathematics

The problem solving and statistical enquiry cycle of the new curriculum fit models for inquiry learning and provide opportunities to gather evidence for National Standards.

Gisborne 12 May Tauranga 27 July Hamilton 8 September

Teachers Years 3 – 8:

Teaching Multiplication and Division – Developing Multiplicative Thinking

This course is aimed at increasing teacher professional knowledge and using teaching multiplication tables as the vehicle for developing early multiplicative thinking.

Tauranga 6 August Gisborne 24 August Hamilton 7 September

These courses are offered through Waikato University. Please see Choices for booking details.



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Have you signed up for your free seminar?

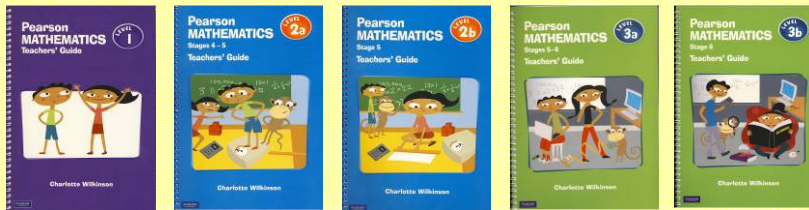
Pearson NZ

A Technology and Education Solutions and Services Provider

Using Pearson Mathematics in your school, in your classroom from Level 1 – 4 *First Choice For Success*

Pearson Mathematics is a structured framework following the strategy and knowledge acquisition progressions as given in the NZ number framework and all the strands in the New Zealand Curriculum. The teachers' guides enable teachers to plan an appropriate programme of learning for the students in their class and have the time and support to further their own professional knowledge as an adult learner does – just in time not just in case.

Can you afford to miss this opportunity to find out more?



Level 4 has gone to print – available July 2010 or earlier!

Free Links from Pearson Mathematics to National Standards available on www.ncwilkinsons.com/wilkieway

These seminars will be held from 4pm to 5.30pm in the following centres in Term 2 and 3
Contact Jane.Huston@pearsoned.co.nz for more details.

May

Nelson 4 May

Gisborne 12 May

Taupo 26 May

June

Hamilton 1 June

Christchurch 14 June

Dunedin 17 June

July

Tauranga 27 June

August

Wellington 9 August

Palmerston North 10 August

New Plymouth 11 August

Napier 12 August



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Some teasers for your classroom or just for you!

My plant has 7 flowers. It grows two new flowers every week and one flower falls off each week.

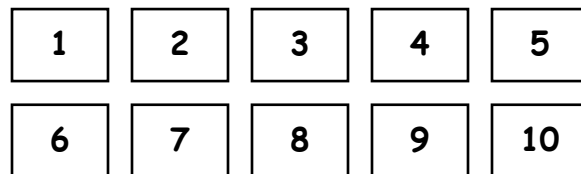
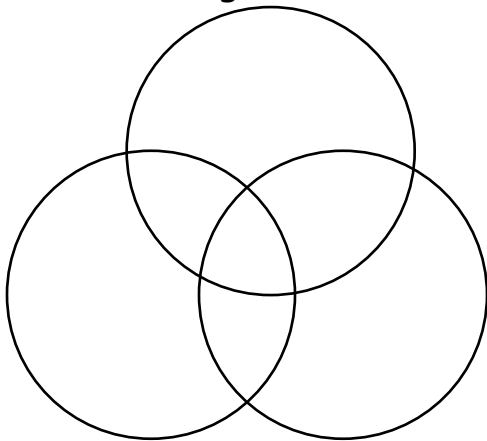
How many flowers are on my plant after 3 weeks?

After 4 weeks?

After 5 weeks?



Challenge: Place the numbers 1 - 10 on the diagram so there is at least one number in each region and the numbers in each circle totals 27.



Copy of diagram on free resources
www.ncwilkinsons.com/wilkieway

A question of history! (8 pints = 1 gallon)

A school year is 44 weeks long.

The school allows a full inkwell for every pupil every 4 week.

If half a pint of ink fills 30 inkwells, how many gallons of ink are used in one school year by a school of 240 pupils?



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