



The Wilkie Way

Newsletter August 2023

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Assessment Refresh

The repositioned direction for assessment will be provided through the Pedagogy & Assessment section of Te Mataiho and expanded upon in the Common Practice Model for Literacy & Communication and Mathematics. (*Education Gazette Vol 102 No 7 8 June 2023*)

Firstly there is no section listed under the Curriculum components called Pedagogy and Assessment. The closest we get is Mataireia I Supporting progress with a subsection called Teaching and Assessment

“Teachers adapt their practice so that students pace and progress is cumulative through the pathway. They are actively seeking to learn what they can do differently in the moment and over time to support students to progress.” (Te Mataiaho [Draft] Page 39)

The 2007 curriculum stated “Assessment for the purpose of improving student learning is best understood as an ongoing process that arises out of the interaction between teaching and learning. It involves the timely gathering, analysis, interpretation, and use of information that can provide evidence of student progress. Much of this evidence is “of the moment”. Analysis and interpretation often takes place in the mind of the teacher, who then uses the insights gained to shape their actions as they continue to work with their students.” (Curriculum 2007 Page 39)

Question - Has assessment been refreshed or just reworded?

In the rewording and the illusion of change we have a new acronym - NNR

NNR stands for Noticing, recognising and responding - to learning progress

NNR will help learners progress and chart the path of their own learning

Te Mataiaho marks a clear shift from the 2007 outcomes focused curriculum to a progressions focused curriculum. The progressions are in the form of phases of learning, progress outcomes and progress steps. These replace the curriculum levels.

The shift to progressions requires distinctive practices that support assessment. Within progress outcomes and progress steps, NNR supports teachers to purposefully use classroom observations and conversations **NOTICE** student work and reliable assessment information to **RECOGNISE** and then **RESPOND** to learner progress as they plan and modify what and how they teach to meet all students needs.

In this context “noticing doesn’t just happen by chance. It is the active and deliberate process of being present during a learning experience.

While I firmly believe Noticing, recognising and responding is definitely the way to go with assessment, it won’t happen just by rewriting the curriculum or rewriting how assessment is to be carried out.

If you don’t know what you are looking for then noticing cannot happen. Therefore a thorough knowledge of the progressions is required.

Noticing also takes concentration - teachers are seldom able to concentrate for a period of time without constant interruption - other students, other adults, the intercom, (and in some classes I have noticed mobile phone bleeps). When I am modelling for a teacher their most common comment is how much they are able to notice when observing their students when they are not actually teaching them.

Recognising - this involves the teacher understanding the student's misunderstanding. Therefore teachers also require an in depth conceptual understanding of the mathematics in question. This is not the same knowledge as being able to do the mathematics. (In observing teachers teaching, I can generally recognise more student confusion or misunderstanding than the teacher)

Responding - requires teachers to have a clear understanding of common misconceptions, likely knowledge gaps, how to adapt their teaching, the use of manipulatives to clarify understanding, the words to use to make a clear explanation, how to question for understanding. When I am modelling for teachers the most common question I am asked is "how do you know what question to ask?"

Why can I notice, recognise and respond better than the teacher? - because I am highly knowledgeable in my field of expertise (primary mathematics). Would I be as effective in the art classroom - most definitely not, so subject expertise is essential for NNR.

Just writing the sentence, "Students are highly engaged in their learning and make progress across the full breadth of the learning areas." doesn't mean it will happen.

Looking at the learning science literature, teachers need to address a range of cognitive challenges to promote effective student learning.

- 1. Mental mindset:** Mental mindset can broadly be defined as the attitudes, beliefs and expectations about learning and the whole academic context – for example, how students view their ability to learn through their own efforts influences their willingness to take on challenges and their perseverance (e.g. (Yaeger and Dweck, 2012)).
- 2. Metacognition and self-regulation:** Students are not often good judges of their own level of learning, nor are they effective in managing their study behaviour to improve their understanding (e.g. (Pintrich, 2004)).
- 3. Fear and mistrust:** Students who believe that their teachers want them to succeed and who trust that teachers have designed assignments that are worthwhile will work harder and persevere longer than students who see their teachers as either indifferent or trying to weed out weak students (e.g. (Cox, 2011); (Yaeger et al., 2013)).
- 4. Prior knowledge:** The more that students know about a subject, the easier it is for them to learn more about that subject (Ambrose and Lovett, 2014).
- 5. Misconceptions:** Misconceptions are common in psychology and remarkably resistant to correction (Taylor and Kowalski, 2014).
- 6. Ineffective learning strategies:** Students often prefer the least-effective study strategies for longterm learning (e.g. (Dunlosky et al., 2013); (Karpicke et al., 2009)).
- 7. Transfer: The processes of applying learning to new situations More of learning:** Students often fail to generalise learning beyond the immediate classroom context (e.g. (Day and Goldstone, 2012)).
- 8. Selective attention:** Students overestimate their ability to learn while multitasking or in the presence of distractions (e.g. (Raviazza et al., 2012b)).
- 9. Constraints of mental effort and working memory:** Students can concentrate on and consider only a limited amount of information (can Merriënboer and Sweller, 2005).

While the intention of the curriculum refresh and the Common Practice model may be good, it will be a complete waste of money and time unless there is serious consideration given to teacher professional development in developing learning area expertise.

At present the funding for regionally allocated professional development is disappearing at a rapid rate and the priorities based around local curriculum design is focusing schools on writing their own curriculum reflecting the curriculum refresh. Once again another lovely sounding document that makes very little difference in the classroom. Teachers didn't become teachers to be policy writers. Professional development should focus on the development of subject expertise and effective pedagogical practice.

New Resources for Wilkie Way Members

Subscriptions purchased at the online store at www.wilkieWAY.co.nz

Individual \$50 - paid via paypal


NZ School paid via invoice - complete form at online store

Under 30 Students \$50 + GST 30 to 100 students \$150+GST

101 - 300 students \$250 + GST 301- 500 students \$350 +GST

501 - 700 Students \$450 + GST 701+ Students \$550 + GST

Non NZ School \$650 - paid via paypal

A guide to the teacher professional resources available in the members area of wilkieWAY.co.nz

Individual subscription
\$50 per annum
(no automatic renewal - you will receive a reminder to resubscribe)

School subscription
(cost depends on school size)
With a school subscription everyone with a school email address can create an account which will be activated.

Teacher Handbook Resources


Arithmetic Operations
Fractions, Decimals, & Percentages
Numbers & the Number System
(Handbooks available from online store)

Teacher Professional Resources


Planning Assessment
Moderation Curriculum Knowledge
Learning Progressions Professional Practice
Professional Readings
Common Practice Model

The directory of the professional resources that can be found in the members area was sent out to all newsletter readers.

You can also find a copy at the **News and Information Blog** on the home page of wilkieWAY.co.nz along with the guide to student resources



Mathematical Challenge



A Dartboard Challenge

A game of darts uses 3 darts. A dart landing in the outer green ring scores double the number for 1 dart.

A dart landing in the inner red/green ring scores triple the number for 1 dart.

The inner bullseye is worth 50 points and the outer bull's eye worth 25 points.

The lowest possible total is 3

The highest possible total is 180 (triple 20 with all 3 darts)

Is it possible to make all the totals between 3 and 180?


(There will be multiple ways of making some totals - find just one solution for each total.)

Which totals are impossible?

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Student Resources

Challenges: Three new challenges



Mathematical Challenge

Exploring with Multiples of Three

Using the digits 0, 1, 2, 3, and 4 make 2-digit numbers which are multiples of 3


For example 30

How can you be sure you have found all possible multiples?

Using the same 5 digits - can you find all the 3 digit numbers which are multiples of 3?


Can you find all the 4 digit numbers which are multiples of 3?

How could you check your solutions are all solutions?




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August Featured Resource




A Wilkie Way Rich Learning Task


The Hundredth Birthday Party



5



40



13


The single rule for the hundredth birthday party is the total of the ages at each of the three tables must total 100 years.

The number on each person is their age.

There are a number of different solutions; There may be a different number of people at each table.

There may be the same number of people at each table.

Rich learning tasks may have a specific learning focus - but they are rich because they have the potential for multiple learning outcomes. How rich they are depends on how you use them in your classroom.



Extended Multiplication Problem for a whole class

Levels 1-3 Multiplicative Thinking Signposts 3-5

This is a problem solving approach that may require some direct teaching, but what is taught will be determined by the students. Some may only get to question 3 others will get through to question 5. All students should be given the opportunity to go as far as they can independently. Don't wait for the most confident to challenge; provide the support required to keep going.

Key points about multiplication:

- Do students solve multiplication problems by skip counting or equal sharing? (MT Signpost 3)
- Do students understand multiplication as repeated addition? (MT Signpost 3)
- Can students use multiplication as an array? (MT Signpost 3)
- Do students make use of the commutative property of multiplication? (MT Signpost 4)
- Do students derive multiplication facts? (MT Signpost 4)
- Do students use their multiplication and division facts to solve problems? (MT Signpost 5)

If students are working at signpost 3 then you need to spend some time teaching multiplication arrays and exploring the properties of multiplication. Also ensure they know how to use 10.2 (partitionable decimals), 10.1 (place value), 10.3 (adding and taking 10) and 10.4 (multiplication and division facts).

These multiplication facts are required for students to use 10.2 & 10.4 and related division facts.

If students are working mainly at signpost 4 then they require strategies to learn their multiplication facts based on array strategy.

Distributive property $8 \times 6 = (8 \times 5) + (8 \times 1) = 40 + 8 = 48$


Associative property (doubling & halving) $4 \times 20 = (2 \times 20) \times 2 = 40 \times 2 = 80$

Practise games and opportunities to use multiplication and related division facts.

Multiplication and Division Facts are stored in verbal memory in the brain and take distributed practice over varying periods of time to become automatic. Applying them 8 weeks to 8 years.

If students are working at signpost 5 the task provides opportunities to work towards signpost 6

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A Multiplicative Learning Task


Going to Camp

Name: _____

Class: _____

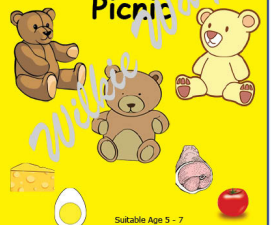



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A Wilkie Way Problem Solving Activity

The Teddy Bears' Picnic



Suitable Age 5 - 7

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The Wilkie Way

Problems with Books

Sam took home a bag of 12 books to read in the holidays.
If he read 5 books and his mum read another 4 books to him,
how many books did he not read?



Josh and Mia love reading and entered a sponsored read at the library.
Josh read 78 pages and Mia read 64 pages.
How many more pages did Josh read?

If they earned 10c for every page they read,
how much money did they raise altogether?



The library had to decrease the number of books before it could buy new ones.
There were 2400 books on the database, and they needed to reduce the number by 25%

How many books did they need to sell or get rid of?

When they had decreased the number they were allowed to buy
new books to increase the number of books by 50%

How many books would be on the library database now?



Serge has 128 books on his bookcase. He has twice as many
motorbike books as hunting books and three times as many
fishing books as hunting books and he has 56 novels.
How many motorbike, fishing and hunting books does he have?

