



The Wilkie Way

Newsletter May 2024

www.wilkieway.co.nz

Curriculum Refresh or not?

It is very difficult to get any idea what is happening in the curriculum refresh space. I have read in SCOOP independent news the Government is pushing ahead with plans to shelve the Curriculum Refresh and appear to be preparing to replace it with a narrow knowledge rich curriculum. Whether this is real or fake news I do not know - whatever the case we do need to ensure our students do build up a significant body of mathematical knowledge.

With the money being poured into structured literacy (which definition of structured literacy they are using I do not know as there are multiple) I doubt very much if we are going to see the same push for the teaching of mathematics. Mathematics is not a national priority for the regionally allocated professional development fund so the likelihood of schools embarking on mathematics professional development once more slips down the list of priorities despite mathematics being the area most teachers feel least confident.

The ERO report Making it Count was released with no media fanfare, yet it is a very significant and useful document for schools to implement improvements in the teaching of mathematics.

We do not know if or when there will be more funding rounds - the closing dates for terms 2 - 4 are to be confirmed. (TBC)

So the good news is we can continue without political interference in our classrooms and consider the research for ourselves and make professional decisions.

The two enablers (as set out in Making it Count)

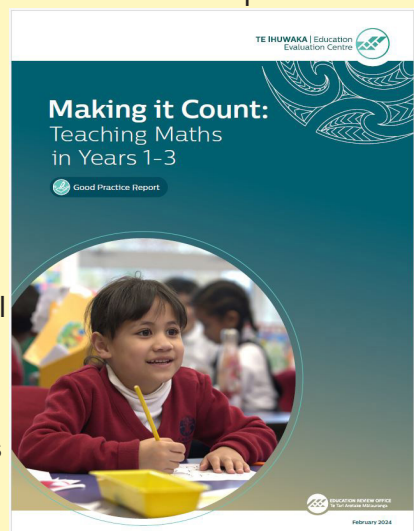
1. Teacher knowledge - confident in their own maths knowledge and skills to be ready to teach them to students. Being clear about how to structure their teaching to develop important maths understandings over time, while avoiding misunderstandings or shortcuts which negatively impact on later learning.

I know teachers are keen to build their knowledge and it was a reason for me to write the three teacher handbooks. Sales of these handbooks has suddenly increased and reprint costs means I will not be doing a reprint. Don't miss out.



Available from the on line store wilkieway.co.nz or by request on a school invoice to charlotte@ncwilkinsons.com
\$45 each
\$120 for all three

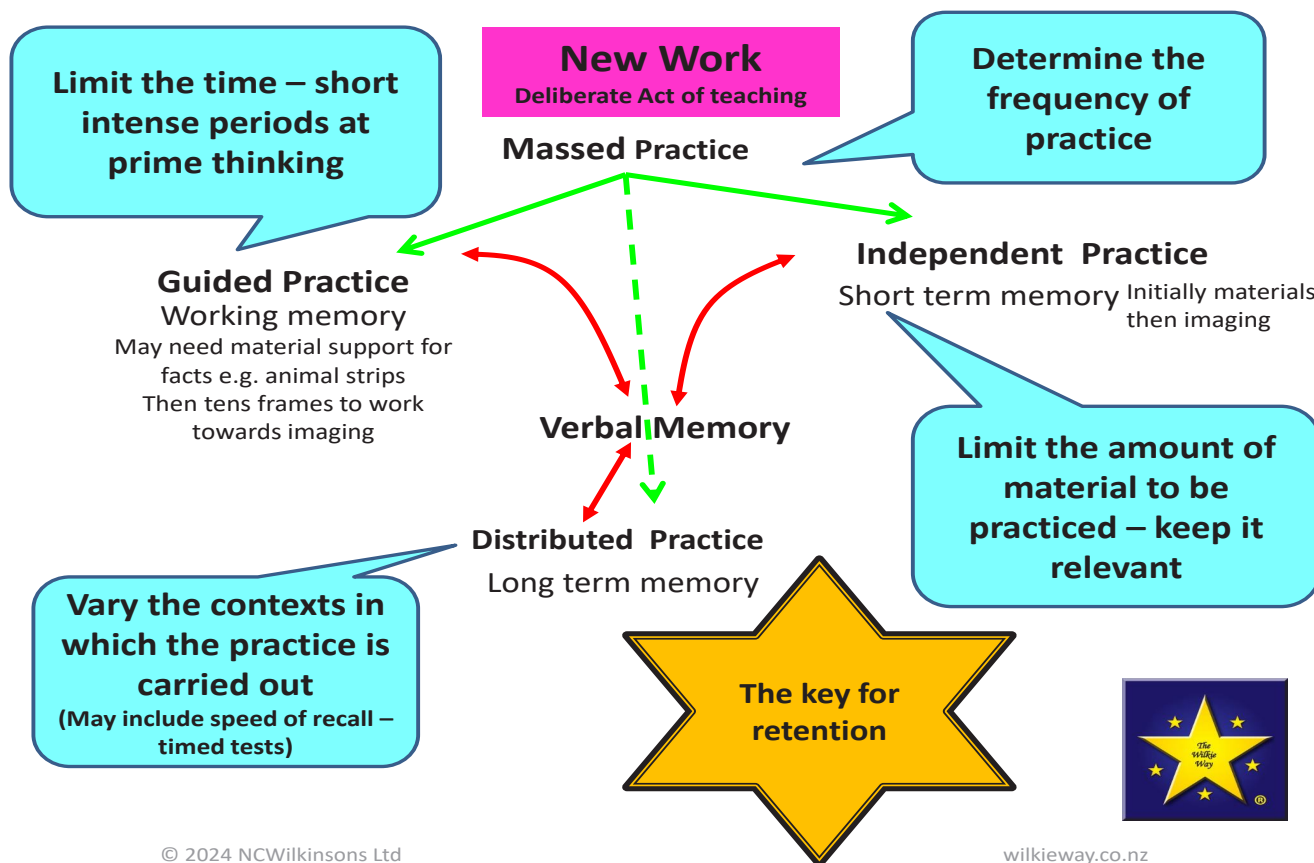
(all material on the CDs is now also provided on a USB and is also available in the subscription area of wilkieway)



2. School Culture and whole school curriculum - a clear, shared understanding of quality maths teaching. This involves clearly setting out what maths teaching and maths progress looks like in a documented, structured whole school curriculum and by supporting teacher understanding with great learning and collaboration opportunities.

Mathematics progress needs to be viewed across a whole school not just in syndicates or a single class. Paul Cobb (researcher) said “Teach with one eye on the big picture and one eye on current need”

Maths progressions are exceedingly important as much of mathematics is hierarchical with new knowledge building onto old. There is a strong place for explicit instruction however there is also the requirement for practicing the mathematics that has been learnt. The “tools of the trade” like basic facts need to become automatic as automaticity reduces cognitive load. Basic facts are stored in verbal memory and to get facts from working memory to the long term verbal memory takes time and practice. It could be 6 weeks, 6 months or 6 years. There is more knowledge in maths than just the basic facts - there is a huge amount of language, across all the strands of maths, units of measure, calculation methods to name just a few. Mastery of knowledge builds confidence.



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Having the tools is not thinking mathematically - using the tools to think mathematically is the goal of mathematics education.

Many schools have sought to document a whole school structured approach by doing the most sensible thing and putting in a published scheme of work across the school. Obviously this requires an investment in resources - BUT a resource is only as good as the teacher using it

Enabler 2 will make little difference without enabler 1 - teacher knowledge. It is therefore imperative that the centre of a published scheme is the teacher guide and the teacher must use the scheme for the benefit of the students not the convenience of the teacher. You cannot give the books to the students and expect them to teach themselves.

A resource should support planning - under the self audit checklist 2: Curriculum for ERO it states “progression of student’s maths dispositions, knowledge and skills at the appropriate level must be explicitly and intentionally planned for and attended to”

When choosing a scheme of work for your school consider does the scheme provide all the components of a mathematics programme.

1. Creating maths - activities like statistical investigations and exploring properties of numbers
2. Using maths - to solve relevant, real world problems
3. Explicit new learning - requiring direct instruction from the teacher
4. Practice activities to practice the maths that has been learnt.

The danger of using a single scheme of work is students think maths is following the maths book and only happens in the maths book. We should still be drawing from a range of resources but deliberately selected to enhance or extend or apply recently acquired knowledge and skills. Opportunities should also be made for students to recognise the need to build new knowledge - using what they know to work towards what they don't yet know.

A scheme that fulfills all these criteria is Maths Aotearoa (I originally wrote the first edition Pearson Primary Mathematics in 2000 to help a teacher who had no knowledge of mathematics progressions - and I was surprised at the lack of schemes of work and the expectation that teachers taught direct from the curriculum document - creating their own curriculum when I first came to NZ. Their own curriculum was of course dependent on their own knowledge. A very idealistic expectation).

Maths Aotearoa fulfills the first three components of a mathematics programme as well as having very detailed teacher guides designed to build teacher knowledge. The fourth component - practice activities are deliberately limited. "Vary the contexts in which the practice is carried out"

Wilkie Way provides a variety of practice activities - from workbooks aligned to specific chapters and dice and counter games.

The books are also linked to other Wilkie Way resources and to the MOE Figure it Out series of books which provide more resources for components 1 and 2 and extension of component 3

Find the documented structure to support your planning for your maths programme at Maths Aotearoa - refreshed curriculum section of wilkieway.co.nz



Maths Aotearoa is published and supplied by edify.co.nz

Phase One

Year 1

Year 1 Number & Algebra	PDF
Year 1 Measurement	PDF
Year 1 Space (Geometry)	PDF
Year 1 Statistics	PDF
Year 1 Probability	PDF

Year 2

Year 2 Number & Algebra	PDF
Year 2 Measurement	PDF
Year 2 Space (Geometry)	PDF
Year 2 Statistics & Probability	PDF

Year 3

Year 3 Number & Algebra	PDF
Year 3 Measurement	PDF
Year 3 Space (Geometry)	PDF
Year 3 Statistics	PDF
Year 3 Probability	PDF

Phase Two

Year 4

Year 4 Number & Algebra	PDF
Year 4 Measurement	PDF
Year 4 Space (Geometry)	PDF
Year 4 Statistics	PDF
Year 4 Probability	PDF

Year 5

Year 5 Number & Algebra	PDF
Year 5 Measurement	PDF
Year 5 Space (Geometry)	PDF
Year 5 Statistics	PDF
Year 5 Probability	PDF

Year 6

Year 6 Number & Algebra	PDF
Year 6 Measurement	PDF
Year 6 Space (Geometry)	PDF
Year 6 Statistics	PDF
Year 6 Probability	PDF

Phase Three

Year 7

Year 7 Number & Algebra	PDF
Year 7 Measurement	PDF
Year 7 Space (Geometry)	PDF
Year 7 Statistics	PDF
Year 7 Probability	PDF

Year 8

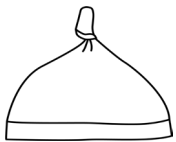
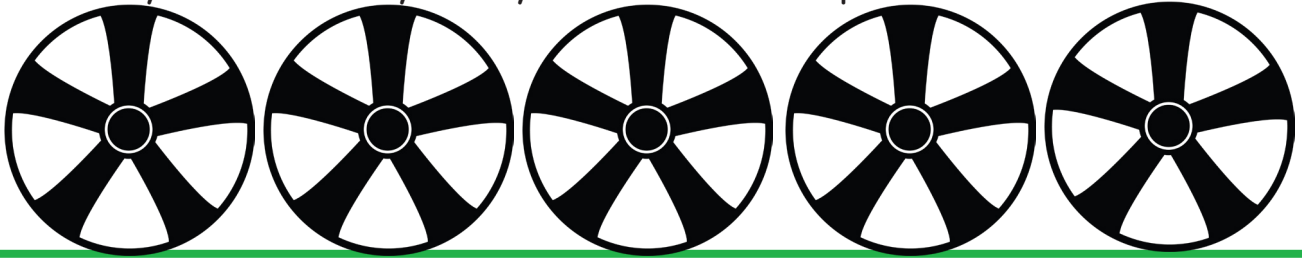
Year 8 Number & Algebra	PDF
Year 8 Measurement	PDF
Year 8 Space (Geometry)	PDF
Year 8 Statistics	PDF
Year 8 Probability	PDF



The Wilkie Way

Problems with Colours

You have a red pen and a yellow pen.
How many different ways can you colour this shape?



You have
3 hats,
3 t-shirts and
3 pairs of shorts.



You have each
item in red, blue
and green.

How many
different outfits
could you make?

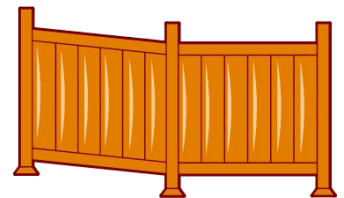
Jake decided to paint his fence with each
panel a different colour to the one next
to it.

One fence panel needs 500mL of paint.
His fence has 18 panels and he wanted to
use 4 different colours.

The paint comes in 1L tins and costs
\$9.50 per tin.

How much will it cost him to paint his
fence?

Draw and colour the
fence.



Mimi wants a very special colour for painting her wall.
She will need to mix the colour from red, yellow and white paint.

The ratio of red, to yellow to white is 2:4:6
She needs a total of three litres of paint.

How much of each colour does she need?

