



Semester 1

2024 Dr Paul Swan Maths Resources Guide

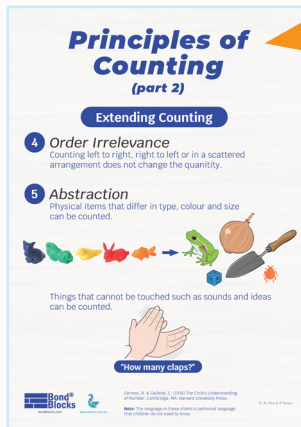
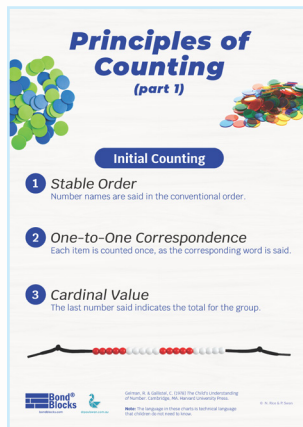
www.drpaulswan.com.au

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Principles of Counting



Score these
posters FREE

p4

ARTICLE

The Daily Review: What is it? What is it NOT?



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HELPER

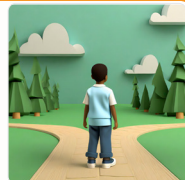
From Vocabulary to Problem Solving



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HELPER

Choosing The Right Resource: Cubes



Thank you for your ongoing support
of our family business. Please take the
time to explore our website for more
great resources.

www.drpaulswan.com.au

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@[drpaulswanmaths](https://www.instagram.com/drpaulswanmaths)



Youtube

youtube.com/DrPaulSwan



You may be aware of the five principles of counting.

1. Stable Order

- The number names need to be said in a conventional order.

2. One-to-One Correspondence

- Each item is counted once as the corresponding word is spoken.
- Often items are in a linear arrangement and students typically count left to right.

3. Cardinal Value

- The last number spoken indicates the total for the group.

Sometimes a student might interpret the question "How many are there?" as an instruction to recount.

To encourage the child to trust the count simply cover the collection and ask how many are in the collection.

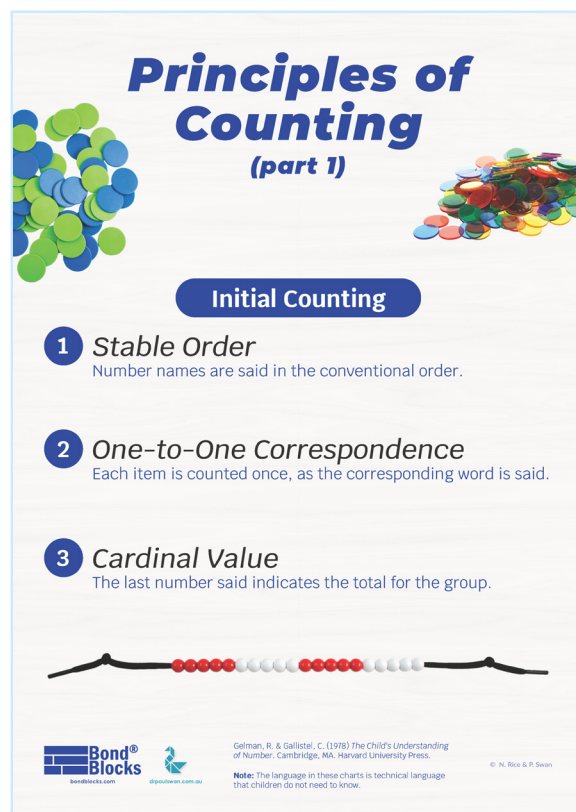
These first three principles are sometimes called the "How to Count" Principles.

The next two principles are sometimes referred to as "What to Count"

4. Order Irrelevance

- Students can count a scattered arrangement and don't have to count left to right.

While I love bead strings if you only count left to right along the string you are not progressing to order irrelevance. Dropping counters (same colour and shape and size) and counting a scattered arrangement will help.



Purchasing Resources & Finding Support

Where to go to get them



drpaulswan.com.au

Here you will find our web shop as well as a ton of downloadables

Other Details: Business Name: A-Z Type
ABN: 95 257 873 542



bondblocks.com

Bond Blocks activities, videos & differentiations.



Teachers Pay Teachers

teacherspayteachers.com/Store/Dr-Paul-Swan

mathsmaterials.com



Learn about maths manipulatives.
Generously supported by Edx Education.



Article:

The Principles of Counting

Abstraction

Physical items can be different colours, shapes, type, and sizes. This is why a variety of counters are important, not just standard round ones, e.g. dinosaur counters.

Students might count the number of claps – something that cannot be seen. That is why I like counting marbles dropped into a tin. You see, then you don't see and then you hear and count. You can pause and then drop more marbles into the tin, developing counting on strategies.

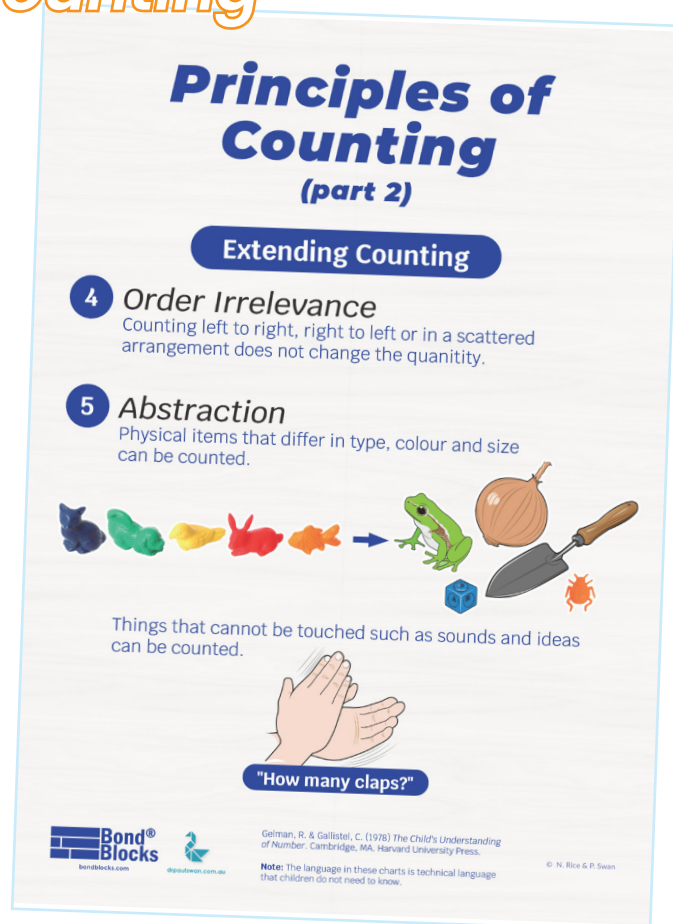
Implications

1. You need different type of counters.
2. Many counting posters placed on walls are too busy and can interfere with students learning the first three "What to Count" Principles.

As a reward for reading this article please feel free to type use this code to download these two Principles of Counting posters (personal copies) for free instead of the usual \$10.

As you can see, counting to 5, then 10 and later to twenty, where place value will cause some issues, is complex. That is why we have created a new kit that covers all of the 5 counting principles as well as the early predictors that indicate students will struggle with number as they get older.

Reference: Gelman, R. & Gallistel, C. (1978) The Child's Understanding of Number. Cambridge, MA. Harvard University Press.



Code: **"Guide2024"**

Scan QR (or visit drpaulswan.com.au/shop) to see the Counting Principles Posters. Use the code above at checkout.



Icons in this guide:



= Related free downloads
drpaulswan.com.au/resources



= Has associated video(s)
youtube.com/drpaulswan



= Interactive Components
drpaulswan.com.au/resources

Prices are listed inclusive of GST. School buyers can claim this back.

Best care has been taken to ensure prices are accurate to the website's prices, but mistakes may have been made in production. We also reserve the right to alter prices. Prices current until June 30.

This resources guide includes pricing for physical books and for personal ebooks.

For eBook School Licenses you will need to head to our website.

Article: The Daily Review



There is no doubt that 'Daily Reviews' are an important part of a Maths Lesson. What I have noticed is that Daily Reviews have begun to morph into a **long** series of PowerPoint slides where children often chant what is presented on the slides without any understanding of what they are saying.

I always like to trace the source of initiatives such as a Daily Review. Rosenshine (2010) is one of the key proponents of a Daily Review. The Daily Review is part of Rosenshine's 'Principles of Instruction'. For an overview of what he says regarding these Principles of Instruction, see the first QR code below.

The first principle is the Daily Review. Rosenshine defined the Daily Review as:

- lasting 5 - 8 minutes,
- developing automaticity with skills, facts and reviewing vocabulary
- a support for future learning.

Note that Daily Reviews were originally designed around checking homework. I am not sure how many primary schools systematically provide and check homework. The research around giving homework is a topic for another time.

The idea of a Daily Review is designed to help students cope with the limits of short-term working memory. It is important not to provide so much material at one time that the students' short-term memory can't cope. This aligns with Cognitive Load Theory. If PowerPoint Slides are used as part of a Daily Review then it is worth reviewing what Sweller, the father of Cognitive Load Theory has to say about the use of PowerPoint. Sweller recommends that Teachers should not show information on a slide and read it as well. Students should set the pace rather than the teacher, so they have time to process information. For more about Warm Ups, see **A Guide to Warm Ups - a form of Daily Review**.



Rosenshine Daily Review



Sweller Cognitive Load Theory



A Guide to Warm Ups



2024

What's New

5



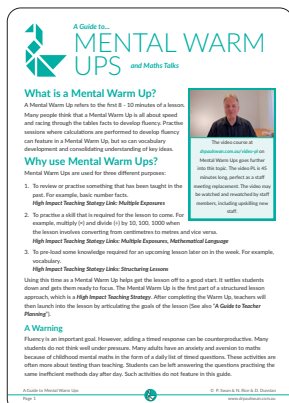
Essential Maths Pack 2

+ now with a Bead string & COMBO Cards

Contains all the materials that you need to run a quick warm up session or a number lesson on place value, basic facts such as tables and probability.

great for tutors, relief and as a shared classroom resource (one between two students)

What are Warm Ups?



Warm Ups are short activities that can be used to review previously taught material or set the scene for a lesson or preload some content (for example, vocabulary) for an upcoming lesson.

For further explanation of the value of Warm Ups see **A Guide to Warm Ups**, which may be downloaded from drpaulswan.com.au/resources



To be effective, Warm Ups need to be quick – around 8 minutes – and therefore cannot use too many manipulatives. Dice, cards, counters and spinners work well.

Warm Ups Video PL

There are also two **Professional Learning Videos** that I have made on the topic.

Each runs for about 45 minutes so it can be viewed in a staff meeting, and staff can rewatch any time.

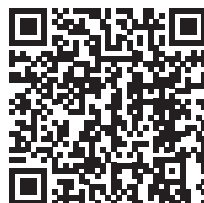
2

Mental Warm Ups and Maths Talks



2

MORE Mental Warm Ups and Maths Talks





NEW! Mathematics and Picture Books in Early Childhood – Foundation to Year 1

Mathematics Literacies • 68 pages

Mathematics and Picture books in Early Childhood provides an exciting opportunity to captivate a child's curiosity, nurture their passion for mathematics, and facilitate the establishment of mathematical relationships. This educational resource uses high-quality picture books and incorporates four enriching mathematical activities for exploration. While the primary emphasis is on Foundation and Year 1 levels, many of these books can be used effectively with students ranging from Kindergarten to Year 2.

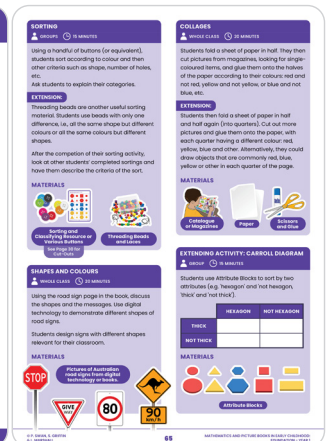
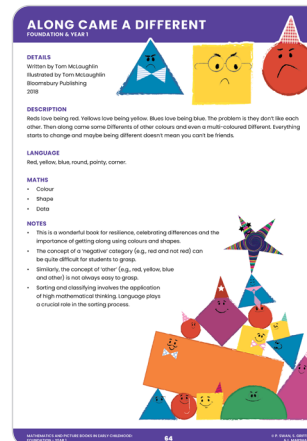
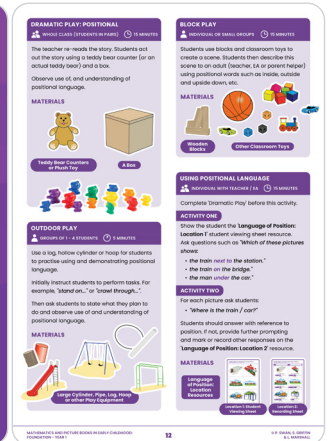
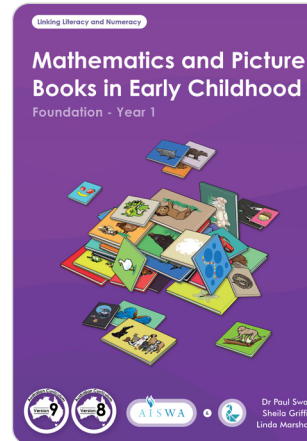
This new book complements our existing suite of three children's literature books:

- *Teaching Mathematics Through Story Books 1: Foundation to Year 1*
- *Teaching Mathematics Through Story Books 2: Year 2 – 3*
- *Teaching Mathematics Through Story Books Year 4 – 6*

This book differs from the Teaching Mathematics Through Story Books titles by providing more in-depth activities.



Years F–2



How does it all fit together?

Scan to see the vocabulary progression
'From Vocabulary to Problem Solving'



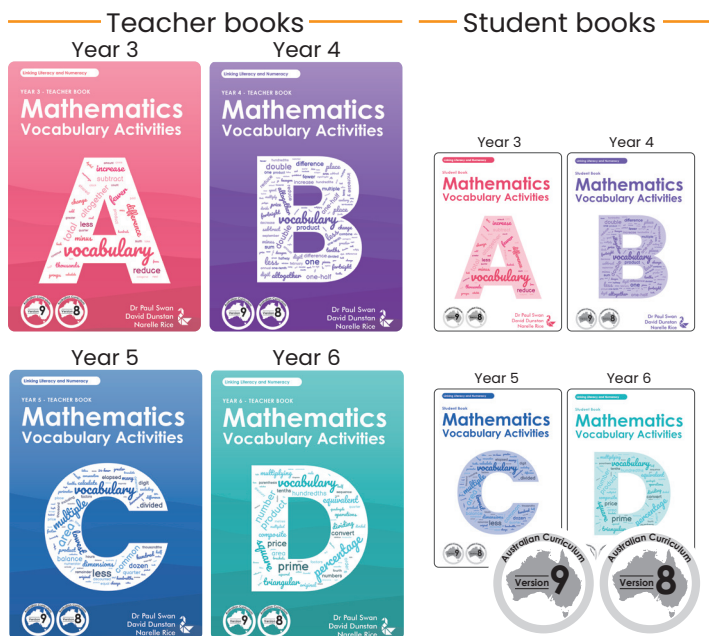


Mathematics Vocabulary Activities Series

Maths Literacies, Vocabulary • 40 pages

Years 3 – 6

Teacher Books: \$38.50 (inc. GST) | Student Books: \$7.70



In this series students **read a sentence and complete the mathematics**. The words match appropriate language lists for that year level.

Each book contains 28 ten-question sets. The sets are self-checking through use of the on-page 1-120 number board where a pattern is formed from the answers to the questions. Includes planning ideas for teachers and a 'likely difficulties' section to identify the cause of common student mistakes. The *student book* includes only the question sets in black and white.

Bundles

Personal Set



Teacher
Books



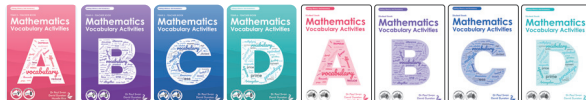
Year Level (3/4/5/6)



+ eBook
+ Powerpoint



Whole School Set



+ eBooks
+ Powerpoints



10

Name: _____ Date: _____

Vocabulary: add, greater than, increase, more, sum, total

1. Add eight and eleven.
2. Increase nineteen by five.
3. The sum of five and six.
4. Total seventeen and nine.
5. Seven and eight.
6. Eight and twelve more.
7. Ten greater than eighteen.
8. Five and five and six and six.
9. Double eight and add one.
10. Increase seven by six.

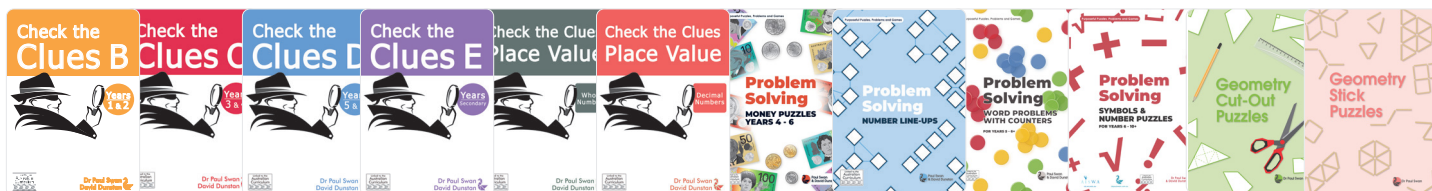
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

© P. Swan, D. Dunstan & N. Rice

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Self Checking Answers!

1	35, 34, 33
2	44, 54, 64
3	36
4	66
5	42
6	46
7	32
8	56
9	52
10	62





Differentiation is referred to as a **High Impact Teaching Strategy**. To be clear; there is no empirical research evidence that indicates that one class taught with differentiation in place performs better than one without. There is, however, a *moral purpose* to our teaching, that we should do our best to cater for the diverse range of students in our care.

Tomlinson (2014) identifies four forms of differentiation. To see how they may be applied in Tier 1 teaching in Mathematics see the summary in the QR code below and her book "The Differentiated Classroom."

Some teachers interpret differentiation to mean providing different work for students according to their ability. This can become a self-fulfilling prophecy, where students in the 'bottom group' do poorly. This is sometimes referred to as the 'Matthew Effect' – the poor get poorer. There is plenty of research about the impact of having high expectations.

In mathematics most people think of differentiation in terms of the content, but consideration needs to be given to the:

- process,
- product and
- learning environment.

For differentiation to work well, the teacher needs to have a good understanding the subject and ways of teaching it, often referred to as pedagogical content knowledge.

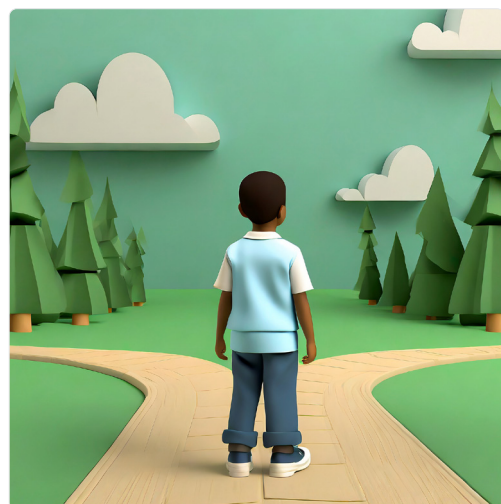
Formative assessment will need to guide the various adjustments made to the teaching.

Intervention

Whilst differentiation can help many students access the year level curriculum, there comes a point where more than differentiation is required to help a student. That is, targeted small group (4 students Tier 2) *intervention* is required.

It is unreasonable to expect that you can differentiate your way out of serious gaps in learning. Also, **even within an intervention program there should be scope for differentiation.**

Most jurisdictions refer to the RTI Triangle, which indicates that even with high quality, differentiated Tier 1 teaching there are still likely to be 15 percent of students requiring Tier 2 intervention (small group 4 students) and 5 percent who will require constant and ongoing Tier 3 intervention.



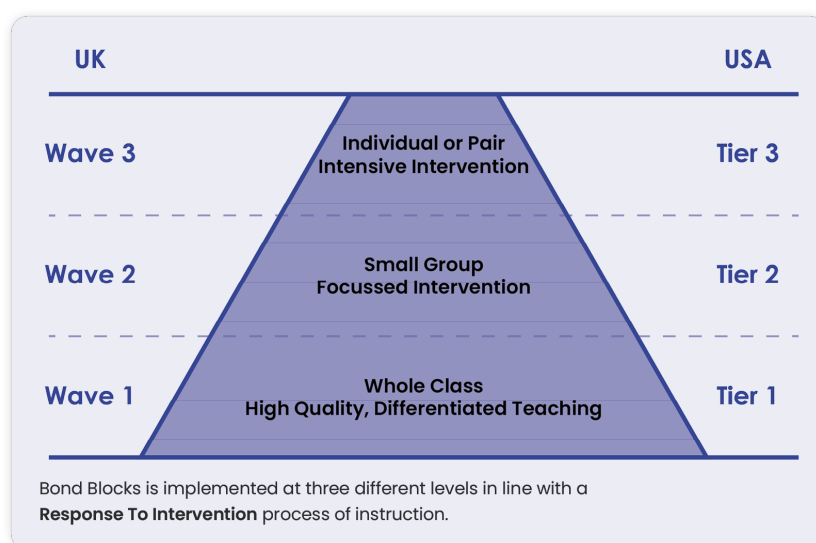
Tomlinson, C. A. (August, 2000). Differentiation of Instruction in the Elementary Grades. ERIC Digest. ERIC Clearinghouse on Elementary and Early Childhood Education.



P Swan: Teaching for Differentiation Video PL Course

Effective Intervention

The Grattan institute summarised key findings for effective intervention and stated that intervention needs to occur outside the time currently devoted to that learning area. That is, intervention occurs on top of tier 1, whole class teaching. **Maths intervention cannot occur in maths lesson time**, otherwise the students needing intervention will further miss out on key content and understandings.



Intervention is costly in terms of resourcing, staff time and room allocation. This is partly why we designed the Bond Blocks Intervention Kit. After a teacher has administered the placement test they can allocate students to small groups and an Education Assistant can run the four 8 – 10 minute sessions per week using the teaching videos and lessons. Each intervention lesson includes options for differentiating not only the content but the process e.g. desk visuals.

Skilled teachers or Education Assistants will also need to alter the product and learning environment to meet the needs of diverse learner.



www.bondblocks.com
www.drpaulswan.com.au

From the Grattan Institute Report
'Tackling under-achievement: Why Australia should embed high-quality small-group tuition in schools'

GRATTAN
 Institute

on the topic of Tier 2 Intervention efforts:

The good news is that the opportunity to boost learning and bridge these gaps is in plain sight. **Small-group tuition – in which educators work with just a few students at a time in short, highly focused sessions about three times a week over one to two school terms – is among the most effective learning interventions available. Delivered well, it can add, on average, an extra four months of learning over a year, helping many students catch-up.**

exactly how Bond Blocks does things!



Read more salient points we've pulled from the Grattan Report

Bond Blocks www.bondblocks.com
www.drpaulswan.com.au

From the Grattan Institute Report
'Tackling under-achievement: Why Australia should embed high-quality small-group tuition in schools'

on the topic of Tier 2 Intervention efforts:

Schools sectors should [...] **embed high-quality small-group tuition within a broader 'response to intervention' model.**
 This requires schools to **focus on prevention and early identification** of learning gaps.

Use Bond Blocks as part of the warm up in Years 1 to 3 to prevent students needing Intervention. Identify learning gaps using the Bond Blocks Placement Test

Bond Blocks www.bondblocks.com
www.drpaulswan.com.au

From the Grattan Institute Report
'Tackling under-achievement: Why Australia should embed high-quality small-group tuition in schools'

on the topic of Tier 2 Intervention size:

Effective small-group tuition involves a tutor working with **groups of about three students** over at least 10 weeks to boost their learning and help them get back on track. Typically, small-group tuition is done with groups of two-to-five students at a time. Groups of more than 6 or 7 students tend to be less effective.

Bond Blocks Tier 2 Intervention group sizes are generally 2 – 4 students.

Bond Blocks www.bondblocks.com
www.drpaulswan.com.au

From the Grattan Institute Report
'Tackling under-achievement: Why Australia should embed high-quality small-group tuition in schools'

on the topic of Tier 2 Intervention efforts:

Studies estimate that typically **about 20 per cent of students will need additional intensive learning support** on top of universal classroom instruction, to develop foundational literacy and numeracy skills.

• cites Bruin and Stocker (2021); D. Fuchs and L. S. Fuchs (2017); and Harniss et al (2012).

Bond Blocks supports both Tier 1 classroom teaching and Tier 2 Intervention efforts

Bond Blocks www.bondblocks.com
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From the Grattan Institute Report
'Tackling under-achievement: Why Australia should embed high-quality small-group tuition in schools'

on the topic of Tier 2 Intervention efforts:

Schools can find it hard to maintain fidelity to effective small-group tuition programs when inevitably confronted with unplanned interruptions, absences, and other real-world difficulties

Which is why all the Core Bond Blocks lessons are modelled on video for every Teacher, Educational Assistant and Parent to use

Bond Blocks Counting to 10 & 20 Kit

For Counting Start Here

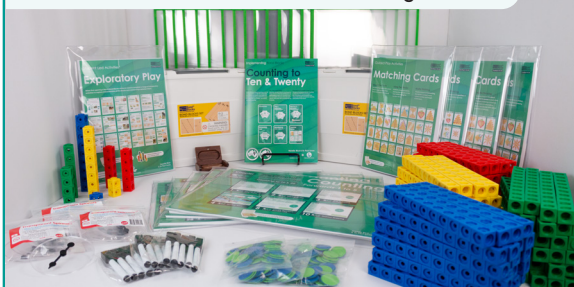


Pre-F / F

Pre-F - Yr 6

Bond Blocks Counting to 10 & 20 Kit

Pre-Foundation and Foundation Counting Content



By itself, serves:

Whole Class Teaching (Tier 1)

One class (24 students) Pre-F / Foundation

Intervention (Tier 2 and 3)

One intervention group (4 students) Pre-F - Yr 6

\$1595

(includes GST)

Kit Includes:

- 6 sets of Wooden Bond Blocks
- 191 Activities & PL
- Materials Included
- and the below features

MORE Tier 1 Class Teaching

MORE Tier 2 & 3 Intervention

For each **additional** class
(e.g. Class 2, 3...)

Counting Kit Class Add-On



For each **additional** intervention
group of four students

Counting Kit Intervention Add-On



Counting Kit Features

- ✓ Tier 1 Class Teaching for Pre-Foundation / Foundation
- ✓ Tier 2 and 3 Intervention for Pre-Foundation to Year 6
- ✓ No Subscriptions
- ✓ Whole School Licence: Activity PDFs included - print as needed
- ✓ Professional Learning Included
- ✓ Testing & Monitoring
- ✓ Counting skills sequence
- ✓ Assessment skills checklists
- ✓ Planners for Tier 1 Class Teaching
- ✓ Planners for Tier 2 & 3 Intervention
- ✓ 46× Teacher-Led Activity Boards
- ✓ Modelled on Video for Explicit

Teaching

- ✓ 17× Exploratory Play Activity Cards
- ✓ 128× Guided Play Activity Cards
- ✓ EYLF aligned
- ✓ Curriculum linked (AC, ABLEWA, Vic A-D, NSW)
- ✓ Created with evidence-based methodology
- ✓ Differentiated
- ✓ Developed to support learning difficulties
- ✓ Support for Educational Assistants
- ✓ Mathematical language specified
- ✓ Concrete-representational-abstract approach

Bond Blocks Core Kit

For Addition and Subtraction Start Here

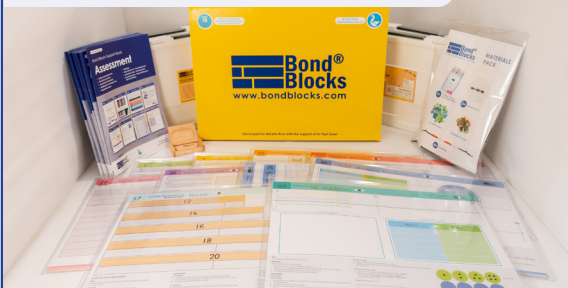


Year 1 - 3

Year 1 - 6

Bond Blocks Core Kit

Year 1 to 3 Addition and Subtraction Content



By itself, serves:

Intervention (Tier 2 and 3)

One intervention group (4 students) Year 1 - 6

\$2288
(includes GST)

Kit Includes:

- 4 sets of Wooden Bond Blocks
- 108 Activities & PL
- Materials Included
- and the below features

ADD Tier 1 Class Teaching

MORE Tier 2 & 3 Intervention

For each class
(e.g. Class 1, 2, 3...)

Core Kit - Class Add-On



Whole Class Teaching (Tier 1)

One class (24 students) Year 1 - 3

For each **additional** intervention group of four students

Core Kit - Intervention Add-On



Core Kit Features

- ✓ Tier 1 Class Teaching for Years 1 - 3
- ✓ Tier 2 and 3 Intervention for Years 1 to 6
- ✓ No Subscriptions
- ✓ Whole School Licence: Activity PDFs included - print as needed
- ✓ Professional Learning Included
- ✓ Testing & Monitoring
- ✓ Planners for Tier 1 Class Teaching
- ✓ Planners for Tier 2 & 3 Intervention
- ✓ 108× Teacher-Led Activity Boards
- ✓ Modelled on Video for Explicit Teaching
- ✓ Curriculum linked (AC, ABLEWA, Vic A-D, NSW) & sequenced
- ✓ Created with evidence-based methodology
- ✓ Differentiated
- ✓ Developed to support learning difficulties
- ✓ Whole School Approach
- ✓ Support for regional schools
- ✓ Support for Educational Assistants
- ✓ Mathematical language specified
- ✓ Concrete-representational-abstract approach

My Philosophy: PL should never be a disembodied voice reading off a boring powerpoint!

I aim to not only be engaging, but also to leave you with something practical you can use in your school.



PL Calendar: drpaulswan.com.au/professional-learning

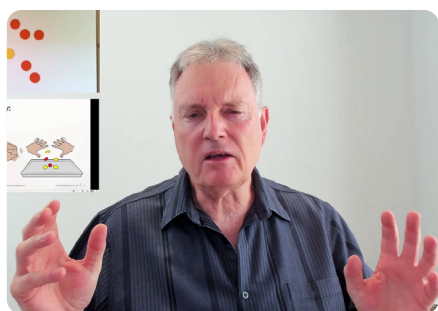


Live & Videoconference PL

The best first place to look is my website (use QR code above) to see if there are any public PL events near you.

For events with your school, reach out at paul@drpaulswan.com.au.

Fair warning – many prime dates will already be booked by the time you read this! Luckily there are some other options:



Pre-Recorded Video PL

Access world-class professional learning on-demand. These engaging sessions provide schools with the flexibility to **watch and re-watch** for a full year from purchase.

Visit www.drpaulswan.com.au and take a look at the Video PL section or read the next page. Completed courses award certificates for participating staff.

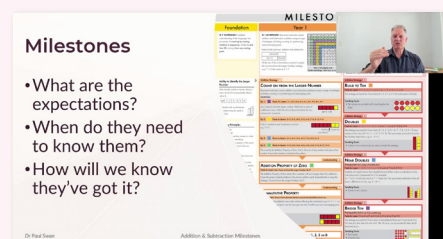
These ~45 minute runtime videos suit the staff meeting timeslot.

Free videos can also be found at drpaulswan.com.au/videos including webinars on common materials

About Video PL

Running sheets, equipment lists and handouts are included so that teachers do not simply watch the video but actively participate in the PL.

Visit www.drpaulswan.com.au and take a look at the Video PL section.



Some of the Video PL courses available:

 Mental Warm Ups and Maths Talks	 Comprehension of Word Questions Vocabulary	 Basic Facts with Milestones Introduction	 MORE Mental Warm Ups and Maths Talks	 Geometry
 Measurement	 Classroom Maths Games	 Solving NAPLAN-Style Word Problems Includes Course Guide & Posters	 Teaching for Impact: Differentiation	 Engagement and Working without Worksheets



NEW! Coloured Rods (74 pieces)



a.k.a Cuisenaire Rods, Fraction Rods, Colour Rods.
Pack of 74 rods for early addition to fractions.

DPS3022 (74 piece) \$19.25 (inc. GST)

NEW! Tens Frames (Box of 16)



16 ten frames & 200 two-colour counters in a hinge-lid box.

DPS3015 (Set of 16) \$52.80 (inc. GST)

NEW! Sandtimer



1 minute timer, 16 cm x 7 cm.

An Elizabeth Richards product.

ERST1 (1-minute) \$19.25 (inc. GST)

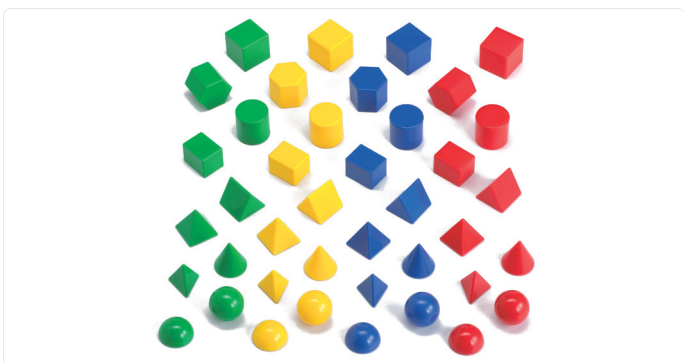
NEW! Student Electronic Timer (5)



Fold out stand & magnetic backed mini stop watch. Includes batteries (AAA). Use in maths, science & athletics to time events. 7 cm x 6 cm.

T1J127-5 \$65 (set of 5) (inc. GST)

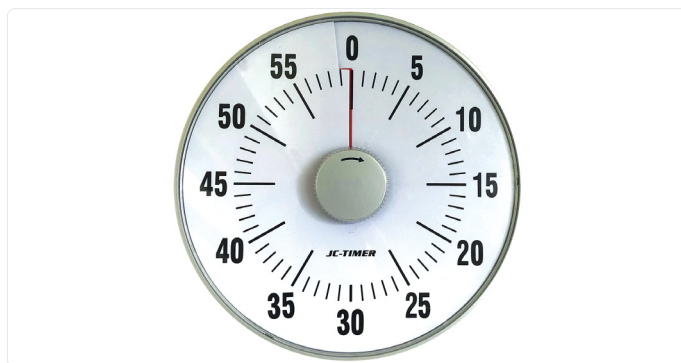
NEW! Mini Geometric Solids



10 solids, 4 colours, 40 pieces. Ideal for a group of four students each with a set of ten solids – one colour each, so 8 sets will suit a class of 32.

DPS3023 \$35.20 (inc. GST)

Magnetic Countdown Classroom Timer



This clock matches the way a normal clock works, unlike many countback clocks.

An Elizabeth Richards product.

ERMCCCT \$55 (inc. GST)

**Best Seller**

School Friendly Cards

School Friendly Cards are just playing cards but without any of the links to gambling.

There are no picture cards – Just numbers to 13 (including a zero card).

There are no suits, just shapes configured in standard subitising patterns and four different colours.

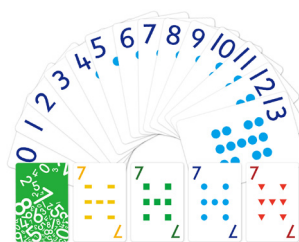
This makes introducing cards to students a lot simpler. You can play all of the traditional card games like snap, fish and more using these easy-to-use cards.

DPS3003 Individual pack: \$5.50 (inc. GST)

DPS3003-8 8 pack set: \$44 (inc. GST)

DPS3003-12 12 pack set: \$66 (inc. GST)

DPS3003-100 100 packs: \$500 (inc. GST)



School Friendly Cards

School Friendly Cards
(Pack of 8 or 12)

School Friendly Cards Books

Simple card games are an ideal form of warm up. Activities for games may be found in **Maths Games with School Friendly Cards book 1** and **Book 2**.

These cards may be used in small puzzles. See drpaulswan.com.au/resources where you can download two booklets of School Friendly Card puzzles and associated PowerPoints that you can show as part of a Warm Up.

DPS1047 Mathematics Games with School Friendly Cards: Book 1 \$34 (inc. GST)

DPS1048 Mathematics Games with School Friendly Cards: Book 2 \$34 (inc. GST)



Jumbo School Friendly Cards

An extra large version of School Friendly Cards ideal for use with young children (on the floor) or demonstrating to a whole class.

DPS3003-J \$16 (1 pack) (inc. GST)



Jumbo School Friendly Playing Cards



Combo Card Game



Year 3+



Combo



Combo 8 or 12 pack

A game for 2 – 4 players, COMBO is designed to get students using all of the basic operations (+ – x and ÷).

Play a number of different games with the same pack of cards! COMBO (the original game), COMBO: One More One Less, COMBO: Total 20, Total 18 and Total 10 can all be played using the rulesheets downloaded from the drpaulswan website. Videos for how to play each game can be found at drpaulswan.com.au/videos

DPS3002 Individual pack: \$5.50 (inc. GST)

DPS3002-8 8 pack set: \$44 (inc. GST)

DPS3002-12 12 pack set: \$66 (inc. GST)



Best Seller



more games at drpaulswan.com.au/resources

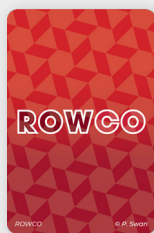
Rowco Card Game



Year 2+

Rowco (Rows and Columns) is a strategy played between pairs of students.

Players scan either a row or column to determine the best move, even several steps ahead. Players will be adding numbers and be exposed to negative numbers while using reasoning to maximise their score.



Rowco Single Pack

DPS3001 Individual pack: \$5.50 (inc. GST)

DPS3001-8 8 pack set: \$44 (inc. GST)

DPS3001-12 12 pack set: \$66 (inc. GST)



Best Seller



Video explanation of how to play ROWCO
youtube.com/drpaulswan

Teacher Tip: Once students are familiar with the standard game of ROWCO, change the rules so that players are aiming for the smallest total or the total closest to zero.



Counters

Counters come in different sizes, shapes, and colours so it can be confusing as to what counters are best to use in different activities.

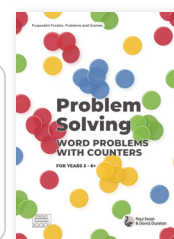
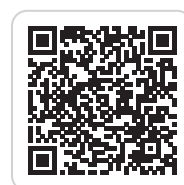
19 mm Transparent Counters



Number Board									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Good for:

- playing **games** (see through to the board)
- developing problem solving and reasoning



DPS3007 (100 pieces) \$4 (inc. GST)

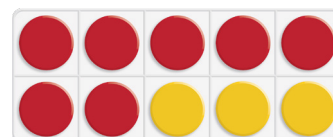
DPS3007-10 (1000 pieces) \$36 (inc. GST)

Two-colour Counters (25 mm)



Good for:

- putting on a tens frame



- playing games like **Shake n Spill** and **Lulu**
- writing on with a permanent marker

DPS3008 200 piece set \$15 (inc. GST)

DPS3008-1000 1000 piece set \$ (inc. GST) available from April

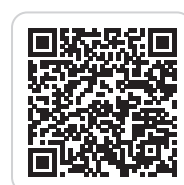
Opaque Counters (20 mm)



Good for:

- writing on to be used in problem solving puzzles (like Problem Solving Number Line-ups or KenKen puzzles)

(sorry we currently don't stock these)

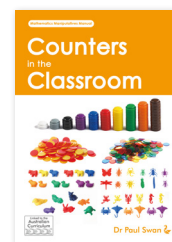
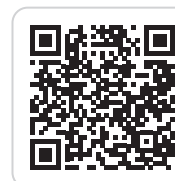




Themed Counters

Themed counters are the ideal manipulative to use:

- when applying the Abstraction Counting Principle (see Counting Principles);
- for sorting and classifying activities. Start with transport counters as they are more familiar to children and easier to name. You will need clear sorting areas such as bowls and some labels;
- when linking themes to mathematics lessons.



Transport counters

Six types of transportation: bus, car, train, helicopter, plane and tug boat

Six colours: red, orange, yellow, green, blue & purple.

Approx. 4 cm, 72 counters

DPS3025 72 piece set \$44 (inc. GST)



Dinosaur counters

Eight dinosaurs: Brachiosaurus, Euoplocephalus, Parasaurolophus, Spinosaurus, Stegosaurus, Triceratops, Tyrannosaurus rex.

Six colours: red, orange, yellow, green, blue, and purple. Approx 5 cm, 128 counters

DPS3027 128 piece set \$50 (inc. GST)



Bug Counters

Twelve Bugs: ant, caterpillar, cockroach, lady-bird, dragon fly, fly, locust, rhinoceros beetle, scorpion and stag beetle.

Six colours: red, orange, yellow, green, blue, and purple.

Approx. 6 cm, 72 counters.



DPS3026 72 piece set \$44 (inc. GST)



Backpack Bear Counters

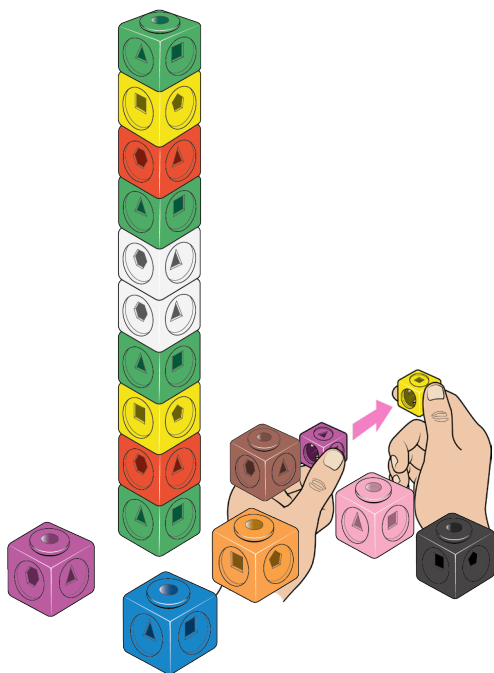
These are quite a sophisticated counters as the bears are weight related (4g, 8g and 12g).

The bears come in three sizes and six colour: red, orange, yellow, green, blue, and purple. In addition to counting them and classifying with them they may be used on a balance scale for informal measuring activities.

DPS3024 96 piece set \$44 (inc. GST)



Pre-Foundation Students



Unifix Cubes – Ideal for Pre-F / Foundation *aka Unifix® and UniLink®*

- These cubes connect on one face.
- They are the simplest kind of cube for the youngest students.

Maths Cubes (10 colours) – Ideal for Pre-Foundation+

Multilink, Interlocking, Linking or Math Cubes:

- These cubes join on all sides.
- 2 cm in size (hence why they are often called 2 cm cubes) which means they are 2 cm x 2 cm x 2 cm (a volume of 8 cm³).
- Made from a soft plastic,
- Good tolerances: require just the right amount of fine motor skill to click together and pull apart.
- The shapes shown on each face add to educational value of the cube.
- Cubes that join on all sides provide more options when constructing.

Maths Cubes (4 colours) – Ideal for Year 2+

- Restricting the number of colours will help students focus on early number concepts. For example, if learning to count on 2, from 5 a student might build a stick of five blue cubes and then join on 2 red cubes. The two distinct colours will highlight the addition process.

Linking Cubes – Ideal for Year 4+

- No shapes embedded on the sides
- Made from harder plastic
- Older students prefer these cubes as they do not appear babyish
- Extendable. Additional support materials such as a baseboard and mirrors can be used

Centimetre Cubes – Ideal for Year 5+

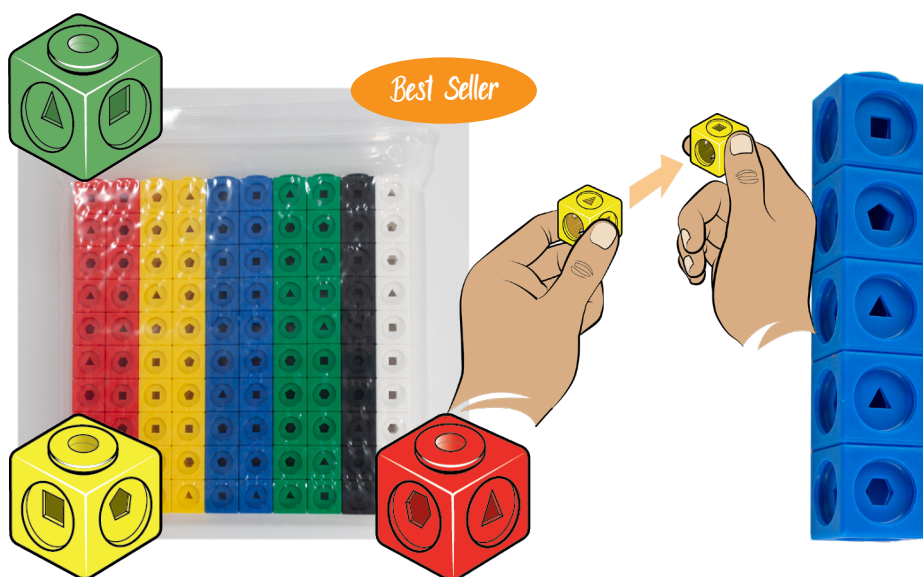
- 1 cm x 1 cm x 1 cm and therefore have a volume of one cubic centimetre. They weigh one gram, displace 1 cubic cm of water, come in ten colours, and join on every side.

Wooden 2 cm / 1 cm Cubes – Ideal for Year 5+

- Some teachers prefer to use 2 cm wooden cubes, either in natural wood or coloured.
- Smaller 1 cm wooden cubes may also be used. These are the same size as the small cubes used in a Base Ten set.



Year 5 Students

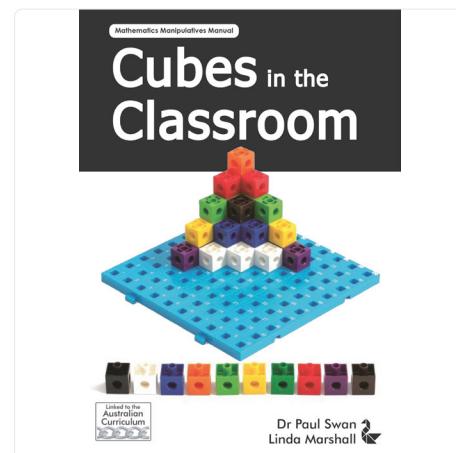


Maths Cubes

This pack includes 100 maths cubes. These soft plastic cubes connect well on all sides and have different shapes on each side for easier identification.

DPS3011 100pc: \$20 (inc. GST)

DPS3011-1000 1000pc: \$180 (inc. GST) - available from May



Cubes in the Classroom Book

Activities with Cubes. See 'books' section at the end of this guide for more info.

DPS1017 Printed Book: \$34 (inc. GST)

Spinners

Picking the right spinner:

- Plastic Spinner - **Laminate** a game and punch a hole.
- Suction Spinner - Sticks to **Write and Wipe Sleeves** or **Whiteboards**.
- Round Spinner - General purpose. Sits on top of **printed / laminated games** or **Write and Wipe Sleeves**.



Plastic Spinner Arrows (pack of 40)

DPS3009 (40 pieces) \$13.50 (inc. GST)

Use these spinner arrows to make your own games. Pair with the downloadable games on the site.

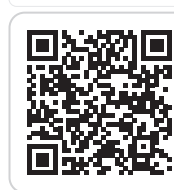


Suction Spinner (pack of 10)

DPS3014 10 spinners \$15.00 (inc. GST)

These spinners stick well to smooth surfaces (including write & wipe sleeves and number boards).

Fact Sheet



Best Seller



Round Spinner (pack of 5)

DPS3010 5 spinner set \$13.00 (inc. GST)

Each spinner has a plastic circular base (92 mm diameter), feet included on a stick-on sheet.



Numero® Cards

Addition, Subtraction, Basic Facts, Multiplication, Division, Fractions & Decimals

Numero® is an excellent mental maths class resource, ideal for differentiating work for all ability levels in your classroom. A class set contains 15 packs of cards.

Numero is ideal for developing addition, subtraction, multiplication, division, fraction, decimal and percentage understanding all in the one game, building from simple to difficult to support various year levels.

DPS3100-15 Class Set (15): \$249 (inc. GST)

DPS3100 Single Pack: \$17.95 (inc. GST)



Numero® has been designed for use by students of all ages, and assists in developing understanding of number concepts and problem-solving skills.

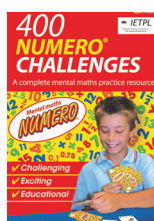
Watch Julie and Paul discuss the effective use of Numero



Numero® Demo Pack

1 pack of giant Numero® cards (A5). Excellent for class and group demonstration.

DPS3100-J \$39.95 (inc. GST)



400 Numero® Challenges

A book full of Numero® challenges at varying levels of difficulty. Perfect for daily or weekly use or for competition training.

DPS3101 \$42.95 (inc. GST)



Learn more about all kinds of manipulatives! Check out the range of fact sheets.

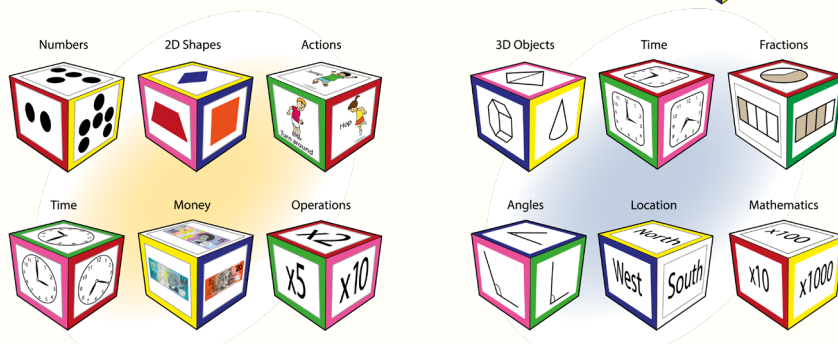
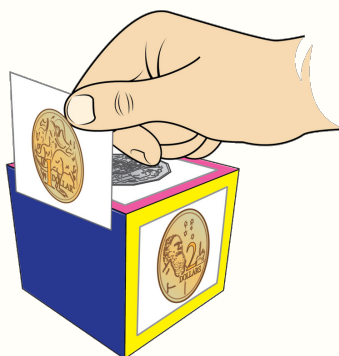
POCKET DICE

INSERT YOUR OWN NUMBERS OR IMAGES

Useful for: Creating a broad range of activities

Pocket Dice are large, soft dice with **clear pockets** on all six faces.

Simply slide in different inserts into the pockets to make new games.



drpaulswan.com.au



RELATED ITEMS



Pocket Dice Sampler
(Downloadable) Various Years



Pocket Dice Book A
Years F - 2



Pocket Dice Book B
Years 3 - 4

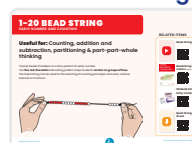


Pocket Dice Book C
Years 5 - 6

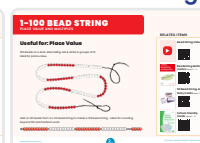


This fact sheet may be copied and shared for educational use.

1-20 Bead String



1-100 Bead String



ROWCO Card Game



School Friendly Cards



COMBO Card Game



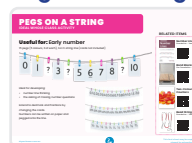
Two Colour Counters



Transparent Counters



Pegs on a String



Spinner Arrows



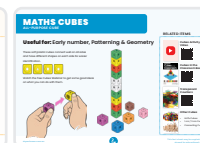
Round Spinner



Suction Spinner



Maths Cubes



Write 'n' Wipe Sleeves



Rainbow Pebbles

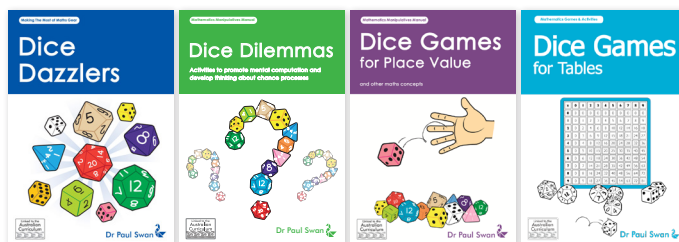




Dice

We have four separate books to help you make the best use of your dice:

- DPS1019 Dice Dazzlers (warm ups),**
- DPS1020 Dice Dilemmas (games),**
- DPS1021 Dice Games for Place Value,**
- DPS1022 Dice Games for Tables.**



Basic Classroom Dice Set



48 dot-dice in four colours and 24 ten-sided dice in two colours. Comes in a durable, hinged container.

DPS3012 \$38.50 (inc. GST)

Teacher Tip:

Really this should be called the essential classroom dice set. Dice are in a clear container with a hinged lid, easy to check all dice have been returned.



6-Sided Dot Dice



set of 100

ERACD100 \$36 (inc. GST)

10-Sided Polyhedral Dice



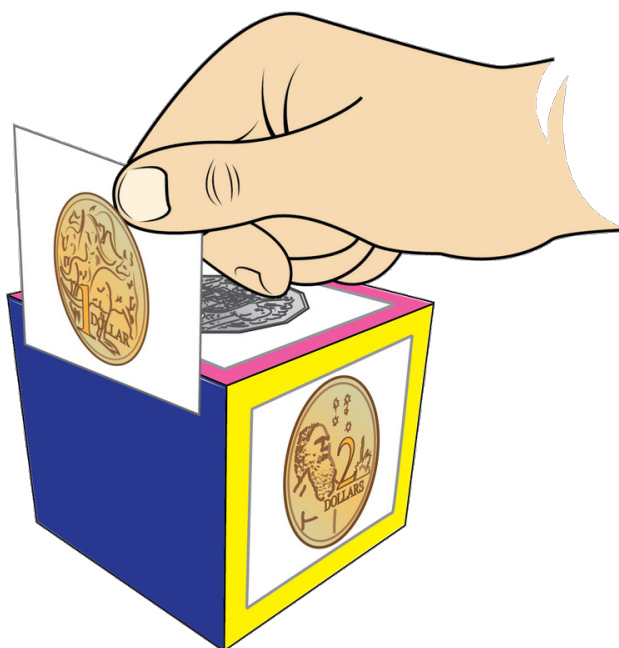
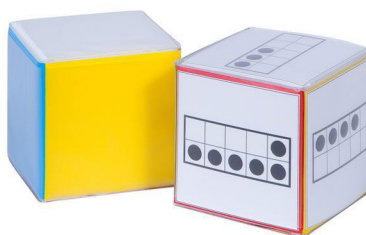
set of 100

ER10PDAC100 \$47 (inc. GST)

Pocket Dice

ERPCD \$10.00 ea (inc. GST)

Pocket Dice can be used for activities and games involving shape, money, time, and more. The **Pocket Dice Books** will get you started.



Teacher Tip:

Pocket Dice are a versatile manipulative. For example; if you want a higher chance of a certain result, you can slide in multiple copies of the same card in different pockets. This will help focus on a specific outcome.



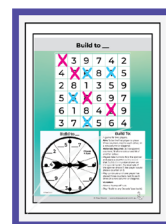
Write 'N' Wipe Sleeves (A4 / A3)



Put A3/A4 sheets in these protective plastic covers, write on and wipe off.

Perfect for small groups, demonstrating, playing games, worksheets and paper and boards (saving you from having to laminate them). You can write on them with a dry erase marker.

An Elizabeth Richards product.



Slide in our downloadable games! Pairs well with **Round Spinners** (DPS3010) to sit on top and play.

ERWNWA35 A4 (pack of 10): \$33.00 (inc. GST)

ERWNW10P A3 (pack of 5): \$24.20 (inc. GST)

Bead Strings

Typically, these come with 20 beads on the string in a 5 red, 5 white configuration. You can also buy 100 bead strings in a 10 red 10 white place value configuration.



Bead String 1 - 20

20 Beads on a lace:
Alternating red and white in groups of 5.

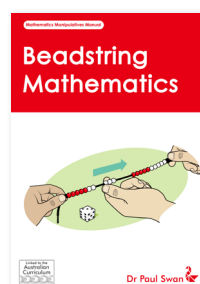
DPS3004 (single) \$3

DPS3004-10 (10 pack) \$27 (inc. GST)

Long Bead String 1 - 100

100 Beads on a lace:
Alternating red & white in groups of 10. Ideal for place value.

DPS3005 \$12 (inc. GST)



Beadstring Mathematics

This book shows how to move from counting to calculating using a simple twenty beadstring.

DPS1003 \$34 (inc. GST)

Teacher Tip: I like to add an extra 20 beads to create a 120 bead string as many students count 109, 200.

Teacher Tip: Try Bead String Tug of War 

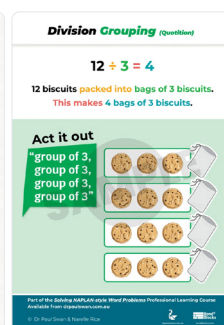
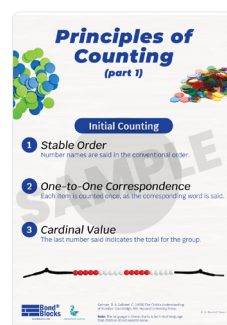
Pegs on a String



Teach number line principles with pegs on a string. *Number cards not included.

DPS3016 \$13 (single) (inc. GST)

Posters



Clean teaching-focused posters.

Variety of posters \$5-10 (inc. GST)

Dr Paul Swan Books. eBooks are also available online with options for schools and institutions that allow for wider photocopying and storage options. Add an eBook copy to any printed book for an additional \$10. Purchase at www.drpaulswan.com.au



Attribute Blocks

(DPS1000) **Maths Literacies, Problem Solving • 48 pages**

Ages 5+

eBook \$22 | Book \$34

Attribute Blocks are shapes (5 types) that come in two different sizes, three colours and two thicknesses. These various attributes allow students to perform simple to more complex sorting tasks as outlined in this book. Students will learn some basic coding ideas as well as how to problem solve and think logically.



Barrier Games

(DPS1001) **Geometry, Mathematics Literacies, Measurement • 48 pages**

Year 1+

eBook \$22 | Book \$34

This book is full of Barrier Game activities (think Battleship). Students will be using expressive and receptive language as they describe what to build or draw. Changing what is placed on either side of the barrier will change the mathematics involved. Altering the language expectations will help teachers differentiate the task for different groups of students.



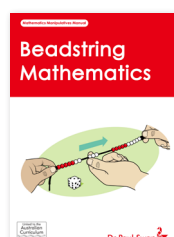
Base Ten Blocks

(DPS1002) **Addition, Division, Multiplication, Place Value, Subtraction • 36 pages**

Year 1+

eBook \$19 | Book \$28.6

Base Ten Blocks or MAB (Multibase Arithmetic Blocks) are used to improve students' understanding of Place Value. This book will help teachers make the most from using these blocks. Move from place value to calculation using the blocks in conjunction with ideas in this book. This book also illustrates how concepts such as percentages may be explained using Base Ten Blocks.



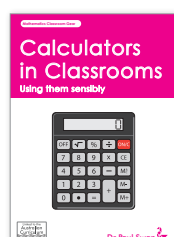
Beadstring Mathematics

(DPS1003) **Counting, Addition, Subtraction, Multiplication, Place Value • 48 pages**

Years F – 3+

eBook \$22 | Book \$34

This book shows how to move from counting to calculating using a simple twenty beadstring. While the one hundred beadstring is featured most of the activities and games are played with a standard twenty beadstring.



Calculators in Classrooms

(DPS1005) **Number/Algebra, Problem Solving • 48 pages**

Year 2+

eBook \$22 | Book \$30.80

Calculators are often depicted as eroding students' basic number skills. The focus of this book is building students' number sense so that they use calculators sensibly. A section called "Beat the Calculator" is designed to encourage students to use their mental skills first. There are also sections on problem solving and generating patterns.



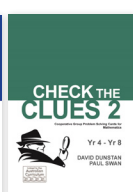
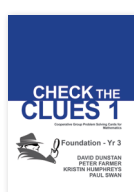
Card Capers

(DPS1006) **Addition, Card Games, Geometry, Multiplication, Place Value • 48 pages**

Year 1+

eBook \$19 | Book \$29.50

Standard playing cards are a cheap and versatile resource that can be used for short and simple warm up games to develop fluency with basic number facts. Students will need to learn a few basic rules and then they will be up and playing. Recording sheets are provided to use as evidence of student progress.



Check the Clues 1 & 2

Year 1 – Year 7

eBook \$15

These eBooks have been created to encourage students to use their Problem Solving and Reasoning skills, two of the Proficiency Strands of the Australian Curriculum. Check the Clues 1 eBook is suited to younger children Years 1 to 3 and Check the Clues 2 is aimed at students in Years 4 to 7.

Check the Clues Series: Books A – E (DPS1008 to 1012) **eBook \$31 | Book \$45** PP/F+



Based on **Polya's four step approach to Problem Solving**, students work in groups of four to solve word problems.

[\("Check the Clues" videos online\)](#) 

Improve mathematical literacy of your students while solving problems. Linked to the Australian Curriculum.

Answers and teacher notes provided.



Check the Clues Place Value: Whole Numbers & Decimals (DPS1013 & 1014) **Place Value, Problem Solving, Mathematical Vocabulary • 48 pages**

Year 3 – Year 7
eBook \$22 | Book \$34

These two books help students build a better understanding of solving word questions, while at the same time improving student's Place Value understanding.

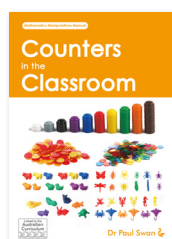


Colour Tiles

(DPS1015) **Addition, Fractions/Decimals, Multiplication, Probability/Statistics • 48 pages** **eBook \$22 | Book \$34**

Colour Tiles are a deceptively simple mathematics manipulative ideally suited to developing the concept of area, symmetry and the development of fraction knowledge. It's amazing what you can do with them.

Includes word problem solving cards.

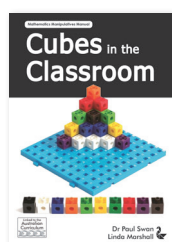


Counters in the Classroom

(DPS1016) **Addition, Subtraction, Division, Multiplication, Probability/Stats • 48 pages**

Year 1+
eBook \$22 | Book \$34

Find out how you can derive the most from using counters by reading this book. Includes word problem solving cards. **Topics include:** Counting, Sorting and Classifying, the four operations, Problem Solving and Reasoning, Spatial Problem Solving, Probability and Statistics and Solving Word Problems.

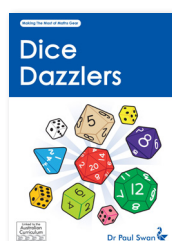


Cubes in the Classroom

(DPS1017) **Geometry, Measurement, Probability/Statistics • 48 pages**

Year 2+
eBook \$22 | Book \$34

Cubes are the ideal manipulative for developing spatial understanding. This book reveals how cubes can be used to teach Geometry and Measurement concepts such as volume and surface area, as well as early addition, subtraction and even probability and statistics. All types of cubes that join on multiple sides are considered. Includes examples of Problem Solving Cards.

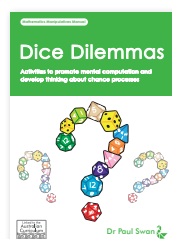


Dice Dazzlers

(DPS1019) **Addition, Basic Facts, Division, Games, Multiplication, Place Value, Probability/Statistics, Subtraction • 48 pages**

Year 1+
eBook \$19 | Book \$29.50

Dice Dazzlers contains short, simple games, ideal for warm ups. Each game makes use of commonly available dice and the book provides templates for playing boards and score sheets. Games focus on number recognition and ordering, place value, arithmetic, operations, multiplication facts, square and prime numbers, early exploration of chance, plus more!

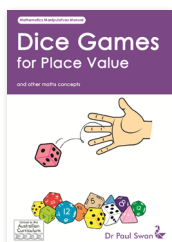


Dice Dilemmas

(DPS1020) **Addition, Basic Facts, Division, Games, Multiplication, Place Value, Probability/Statistics, Subtraction • 48 pages**

Year 1+
eBook \$22 | Book \$34

The collection of games and activities in this book have been designed to make use of commonly available dice. Each page shows the type of dice and how many are needed for any activity.



Dice Games for Place Value

(DPS1021) **Division, Games, Multiplication, Patterns, Place Value** • 48 pages

Year 2+

eBook \$22 | Book \$34

Dice Games for Place Value and other maths concepts is packed full of great ideas for developing the concept of place value. Other games focus on ideas such as rounding, percentages, multiples and patterns.

All games use simple, readily available dice and are easy to play. The rules are easy to follow and the games may be played in 10-15 minutes or extended into a full lesson.



Dice Games for Tables

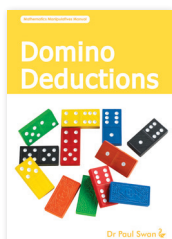
(DPS1022) **Division, Games, Multiplication** • 48 pages

Year 2+

eBook \$22 | Book \$34

An ideal companion to Tackling Tables. Filled with games and ideas for helping children to learn the basic multiplication facts. This book makes use of the doubling strategy to learn and consolidate basic multiplication fact knowledge.

All games have been classroom tested. All games use commonly available dice. Game boards are provided ready to copy and use in class.



Domino Deductions

(DPS1023) **Addition, Early Number, Place Value, Problem Solving** • 48 pages

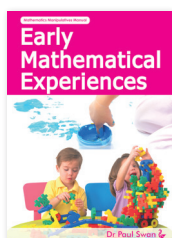
Year 1+

eBook \$19 | Book \$29.50

Domino Deductions shows how a standard set of dominoes may be used as a tool for learning some basic number facts as well as for problems solving.

Includes teacher ideas, reproducible pages, background material and answers.

Extend many of the ideas using Double 9, 12 and 15 dominoes.



Early Mathematical Experiences (eBook Only)

(DPS1024) **Early Number, Geometry, Measurement, Probability/Statistics** • 72 pages

PP/F – Year 1

eBook \$26

Early Mathematical Experiences includes a variety of 'play-based' experiences that lay the foundation for learning mathematics. Background explanations are provided along with the associated language to use when providing young children with the experiences. While children are participating in these experiences they will be developing fine and gross motor skills. This richly illustrated book will help teachers draw the most from the mathematical experiences.



Geoboard Gems

(DPS1025) **Fractions and Decimals, Geometry, Measurement** • 48 pages

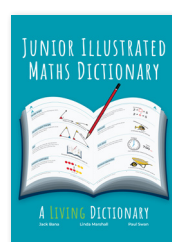
Year 2+

eBook \$19 | Book \$29.50

The ideas contained in this book may be used with physical and virtual geoboards.

Geoboards are ideally suited to developing Geometry and Measurement concepts.

The mathematics behind the various tasks and activities in the book is clearly explained. Reproducible cards are provided that help students develop Geometric Reasoning. Answers are provided.



Junior Illustrated Maths Dictionary

(DPS1026) **The Living Mathematics Dictionary**

Year 1 – 3

eBook \$19 | Book \$29.50

This dictionary covers all of the maths terms and concepts required in the junior primary years.

Each word is clarified with engaging illustrations. The book is a very useful reference for both teachers and parents, but it is primarily intended for children to use individually in Years 1 – 4. It is expected that students will make it a Living Dictionary by adding their own supporting comments in the spaces provided, and also retain it from one year to the next.



Make it Count

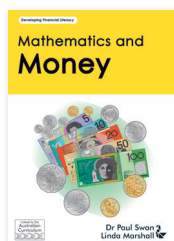


(DPS1027) **Early Number, Number/Algebra** • 90 pages

PP/F – Year 1

eBook \$31 | Book \$45

Make it Count contains intentional teaching activities to develop counting skills. It is based on research of how children learn early number concepts and features a map of development and a series of checklists so that teachers can monitor progress. This book includes a variety of practical ideas and games suited for young children. A set of colour game-boards that teachers may copy for use in their classrooms is included. (Also available in A3 from www.drpaulswan.com.au).



Mathematics and Money

(DPS1028) **Games, Money, Problem Solving** • 64 pages

Year 1+

eBook \$26 | Book \$41.00

Designed to help children come to grips with money in an age where they rarely see a physical transaction. Participation in the games and activities contained in the book will help children develop their financial literacy as children pass through a series of money milestones. See also Problem Solving Money Puzzles.



Mathematics Games with School Friendly Cards



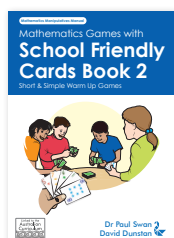
(DPS1047) **Addition, Cards and Card Games, Early Number, Subtraction** • 48 pages

PP/F – Year 3

eBook \$22 | Book \$34

Contains games to be used with School Friendly Cards. The cards have no link with gambling as they are simply numbered from 0 – 13 and use simplified shapes and colour rather than Hearts, Clubs, Spades and Diamonds to indicate suits.

The games and activities in this book are designed to help young children learn key early number concepts while playing simple card games. As students play with these cards they will be developing fluency. Many of the games are ideal for warm ups.



Mathematics Games with School Friendly Cards Book 2: Short & Simple Warm Up Games

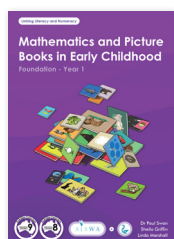


(DPS1048) **Manipulative Manual, Counting, Addition, Subtraction, Multiplication, Division** • 48 pages

PP/F – Year 4

eBook \$22 | Book \$34

The games in this book use a single deck of School Friendly cards, are based around simple rules, and can be played in 10 minutes. They are designed to be used routinely as part of a warm up program. Recording sheets have been provided for some games so that teachers have the opportunity to assess student learning.



NEW! Mathematics and Picture Books in Early Childhood – Foundation to Year 1

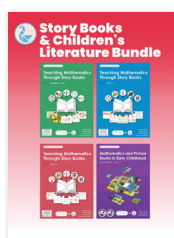


(DPS1054) **Mathematics Literacies**

PP/F – Year 4

eBook \$26 | Book \$41

Mathematics and Picture books in Early Childhood provides an exciting opportunity to captivate a child's curiosity, nurture their passion for mathematics, and facilitate the establishment of mathematical relationships. This educational resource uses high-quality picture books and incorporates four enriching mathematical activities for exploration. While the primary emphasis is on Foundation and Year 1 levels, many of these books can be used effectively with students ranging from Kindergarten to Year 2.

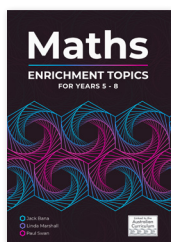


Story Books & Children's Literature Bundle

Get all four books!



View bundle online at drpaulswan.com.au



Maths Enrichment for Years 5 – 8

(DPS1029) **Fractions and Decimals, Geometry, Measurement, Multiplication, Number/Algebra, Probability/Statistics, Problem Solving • 144 pages**

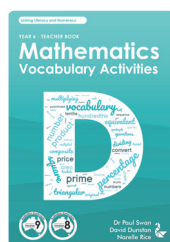
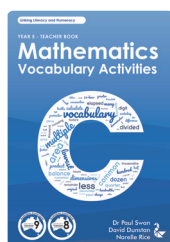
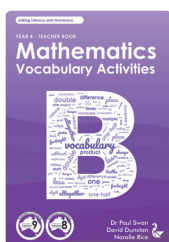
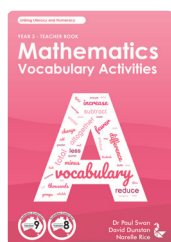
Year 5 – Year 8

eBook \$26 | Book \$41

Written by Dr Jack Bana, Ms Linda Marshall and Dr Paul Swan, this book presents to students interesting maths topics that are often missed in standard classroom lessons. There are 17 separate topics, each with a detailed coverage. Every topic has worksheets that can be copied for students. Answers are provided for all worksheets. Topics span a wide range of interests and difficulty levels.

NEW! Mathematics Vocabulary Activities Series

Year 3 – Year 6+



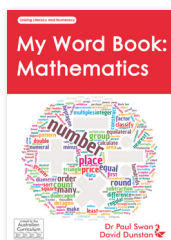
(DPS1080 to DPS1087)
Mathematics Literacies

Teacher Book \$38.50

Also available as a kit with eBook

In this series students read a sentence and complete the mathematics. The words match appropriate language lists for that year level.

More information: See page 4



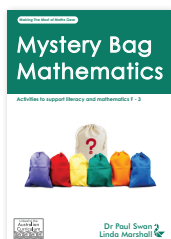
My Word Book: Mathematics (1st ed.)

(DPS1033) **Early Number, Geometry, Mathematics Literacies, Money, Number/Algebra, Place Value, Probability/Statistics • 48 pages**

PP/F – Year 7

eBook \$19 | Book \$29.50

Clearly many students struggle with the literacy elements of word problems in mathematics. In order to improve comprehension of word problems students will need to improve their mathematical vocabulary. This book provides a framework to help teachers focus on specific mathematical vocabulary. Features: Lists for all of the Curriculum Substrands; organised by year level; a focus on vocabulary required to complete questions & lists of essential vocabulary that has already appeared in NAPLAN.



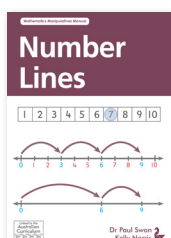
Mystery Bag Mathematics

(DPS1034) **Activities to support literacy and mathematics F-3 • 44 pages**

PP/F – Year 3

eBook \$22 | Book \$34

Learn how to fully utilise the Mystery Bag in your class with this comprehensive book. Build Mathematical Vocabulary as students place their hand into the bag and use oral language to describe the features of what they feel. A variety of Curriculum content from Foundation to Year 3 is covered. Topics include: addition, subtraction, multiplication and division, counting, money, measurement (length), geometry (2D shape and 3D objects) and probability. Each activity includes specific mathematical vocabulary to use.



Number Lines

(DPS1035) **Manipulative Manual, Early Number, Number/Algebra • 52 pages**

PP/F – Year 4

eBook \$22 | Book \$34

One of the most common tools for teaching number concepts is the number line. It is one of the most common graphics that students will see in mathematics. This book shows how an understanding of number lines may be built from the early years on.



Numeracy with Number Boards

(DPS1036) **Addition, Division, Multiplication, Place Value, Problem Solving, Subtraction • 48 pages**

Year 1+

eBook \$22 | Book \$34

You will be amazed at the different number concepts that can be developed using a variety of number boards. This simple but effective tool is ideal for spotting number patterns and learning place value concepts. All you need is a number grid and some counters or whiteboard number grids and some dry erase pens and your lesson will be up and running. Students can record their findings on a paper grid for assessment purposes.



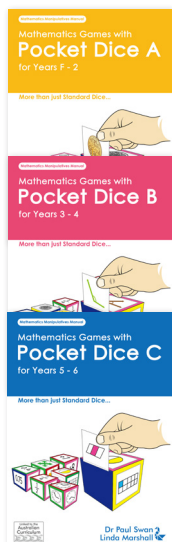
Pattern Blocks

(DPS1037) **Manipulative Manual, Fractions, Geometry, Measurement • 48 pages**

Year 1+

eBook \$22 | Book \$34

Pattern Blocks are a versatile mathematics manipulative. This manual helps teachers gain the most from using them. It covers fundamental Geometry concepts such as symmetry (line and rotational), Measurement ideas such as area and perimeter and Number ideas such as fractions.



Pocket Dice A, B and C

Book A: (DPS1039) **64 pages** | **Book B:** (DPS1040) **48 pages** |
Book C: (DPS1041) **48 pages**

PP/F – Year 6

Book A eBook \$26 | Book \$41.00

Book B & C eBooks \$22 | Book \$34

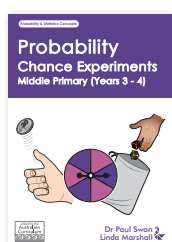
Pocket Dice are large, soft dice with clear pockets on all six faces.

Different inserts are placed in the pockets to provide an unlimited range of options. The dice can be used for whole class activities, or for small group or pairs work.

Pocket Dice Books A, B and C provide ideas, activities and inserts for activities across many aspects of mathematics for Foundation to Year 6.

Book A: Naming numbers, 2D shape, 3D objects, time, basic addition and subtraction facts, place value and money. **Book B:** Geometry – directional language, time, addition and multiplication, money, place value co-ordinates, angles and fractions.

Book C: Probability, grid references, fractions, 12/24 time, division with remainders, transformational geometry – flip slide and turn, and decimals.



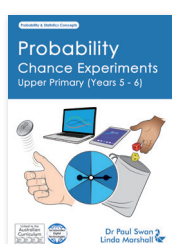
Probability Chance Experiments Middle Primary

(DPS1042) **Manipulative Manual, Probability & Statistics • 48 pages**

Years 3 – 4+

eBook \$22 | Book \$34

With a kit of simple materials (coins, counters, cards, dice, spinners and a draw-string bag), students will be able to try a variety of chance experiments that highlight fundamental ideas of probability. The experiments are designed to model the collecting of data, drawing up a table, making predictions, performing multiple trials, and more.



Probability Chance Experiments Upper Primary

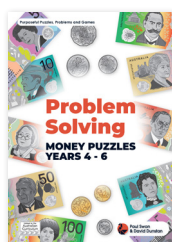
(DPS1043) **Manipulative Manual, Probability & Statistics • 48 pages**

Years 5 – 6+

eBook \$22 | Book \$34

This book builds on the experiments contained in *Probability Chance Experiments Middle Primary* and introduces the ideas of sample spaces – the systematic listing of possible outcomes. Students compare theoretical probability with the results of collecting data through performing experiments and explore percentages. While the experiments are more sophisticated they use the same materials as the *Middle Primary book*.

Digital resources for completing 'long run' experiments are available online.



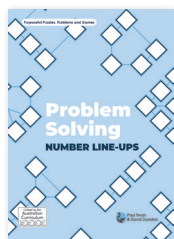
Problem Solving Money Puzzles For Years 4-6

(DPS1044) **Problem Solving • 40 pages**

Year 3+

eBook \$19 | Book \$28.6

Part of the Problem-Solving series. This book requires students to not only work out change, but use clues to determine what coins and notes were given in the change. Teachers may copy the cards and give to students to work on individually or in groups. Answers and comprehensive teaching notes are provided.



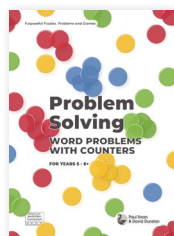
Problem Solving Number Line-Ups

(DPS1045) **Problem Solving** • 48 pages

Years 4 – 7+

eBook \$22 | Book \$34

A problem solving booklet consisting of 28 copiable cards for classroom use. Suitable for middle primary to lower secondary students, these problems develop number skills, problem solving, reasoning and promote algebraic thinking. Teachers are supported with the comprehensive "Strategies Explained", "Answers" and "Answer Variations" sections.



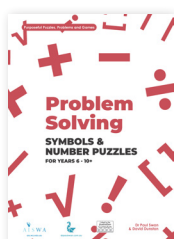
Problem Solving Word Problems with Counters

(DPS1064) **Problem Solving** • 32 pages

Years 5 – 6+

eBook \$19 | Book \$28.60

Part of the Problem Solving Series, Problem Solving Word Problems with Counters includes a series of activity cards where all students need is some red, blue, green and yellow counters. Some sample modelled solutions are provided as well as comprehensive solutions.



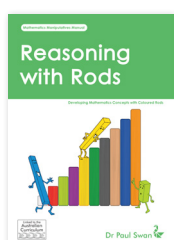
Problem Solving Symbols and Number Puzzles

(DPS1063) **Problem Solving** • 36 pages

Years 6 – 10+

eBook \$19 | Book \$28.60

Problem Solving Symbols and Number Puzzles is based on the famous "Four 4's" puzzle. Students are set the challenges to use sets of numbers and symbols to solve a series of problems. Answers and some sample worked solutions are provided along with guidance for using these puzzles and problems in the classroom. Puzzle pages may be reproduced ready for classroom use.



Reasoning with Rods

(DPS1046) **Addition, Fractions and Decimals, Problem Solving, Subtraction** • 48 pages

Year 1 – Year 6

eBook \$22 | Book \$34

Coloured Rods or Cuisenaire™ Rods are often underutilised in schools. This simple but effective resource will explain how to get the most out of Coloured Rods. There are sections on early number as well as algebra, the development of fraction concepts and tasks that make you think or reason about mathematics.

Includes a set of Rod Riddle Cards that involve solving word problems and building comprehension of mathematics terms.



Rainbow Pebbles Book

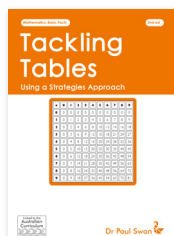
(DPS1049) **Addition, Basic Facts, Early Number, Place Value, Subtraction** • 48 pages

PP/F – Year 6

eBook \$22 | Book \$34

Rainbow Pebbles are a tactile manipulative that may support the development of Science, Technology, Engineering, Art and Mathematics (STEAM).

This manual has been designed to help teachers gain the most from this resource. The links between the various activities and STEAM ideas are highlighted.



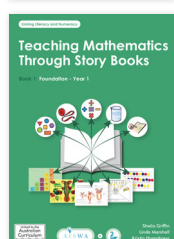
Tackling Tables

(DPS1050) **Division, Games, Multiplication** • 88 pages

Year 2 – Year 5

eBook \$22 | Book \$30.80

The ability to fluently recall the basic multiplication facts is an integral skill. This book provides one of the most comprehensive explanations on how to 'teach' tables. A must for every middle and upper primary teacher in the school.



Teaching Mathematics Through Story Books – Book 1 (Foundation – Year 1)

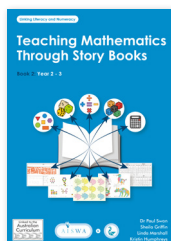
(DPS1051) **Early Childhood, Maths Literacies** • 48 pages

PP/F – Year 1

eBook \$22 | Book \$34

Children's story books are a fantastic tool in every early childhood teacher's toolbox. This book takes 12 of the most popular story books for the Foundation – Year 1 age range and provides a number of mathematical activities for students to do using the story book. Includes 6 extra pages of Assessment Opportunities.



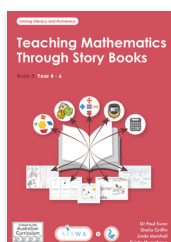


Teaching Mathematics Through Story Books - Book 2 (Year 2 - Year 3)

(DPS1052) **Early Childhood, Maths Literacies** • 64 pages

This book takes 14 of the most popular story books for the Year 2 – Year 3 age range and provides a number of mathematical activities for students to do using the story book; for example investigating the months of the year in Penny Matthews' A Year On Our Farm. The book includes photocopyable resources.

Year 2 – Year 3
eBook \$26 | Book \$41.00



Teaching Mathematics Through Story Books - Book 3 (Year 4 - Year 6)

(DPS1053) **Early Childhood, Maths Literacies** • 56 pages

This book takes 12 of the most popular story books for the Year 4 – Year 6 age range and provides a number of mathematical activities for students to do based off the story book; for example students have opportunities to practise reducing and simplifying fractions in Edward Einhorn's Fractions in Disguise. The book includes copiable resources to make using the activities a breeze. Each story book is given multiple mathematical activity options.

Year 4 – Year 6
eBook \$26 | Book \$41.00

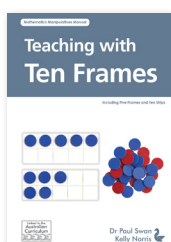


NEW! Teaching Place Value Series

Year 4 – Year 6
eBook \$26 | Book \$41.00

This series of books is designed to support a **whole school approach to the teaching of place value**.

Plans, assessments and activities are provided for each year level. Using these resources teachers will be able to differentiate activities to meet the needs of students.



Teaching with Ten Frames

(DPS1030) **Addition, Basic Facts, Early Number, Place Value, Subtraction** • 80 pages

PP/F – Year 2

eBook \$31 | Book \$45

This book explains how to use five frames, ten strips and then ten frames for developing early number ideas. You may download the boardgames in high quality PDF from www.drpaulswan.com.au, or photocopy & enlarge the ones in the book.



Toying with Tangrams

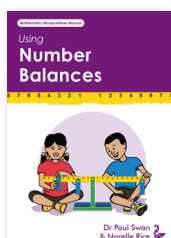
(DPS1056) **Fractions and Decimals, Geometry, Measurement** • 48 pages

PP/F – Year 6

eBook \$19 | Book \$29.50

The Tangram is a puzzle made up of seven pieces; triangles, squares and a parallelogram. These seven shapes may be combined to develop various mathematics concepts such as shape, symmetry, similarity, congruence, perimeter, area and fractions. There is a strong emphasis on the vocabulary associated with each activity. Clear teacher notes and answers are provided.

Free tangram puzzles can be downloaded from www.drpaulswan.com.au/resources



Using Number Balances

(DPS1057) **Addition, Subtraction, Basic Facts, Multiplication** • 36 pages

Year 2+

eBook \$19 | Book \$28.60

This book explains how to use the Number Balance to teach basic number facts. It includes some problem solving puzzles. Focuses on Years 2–4, with extensions for Years 5–6.

There's much more online!



Dr Paul Swan
drpaulswan.com.au

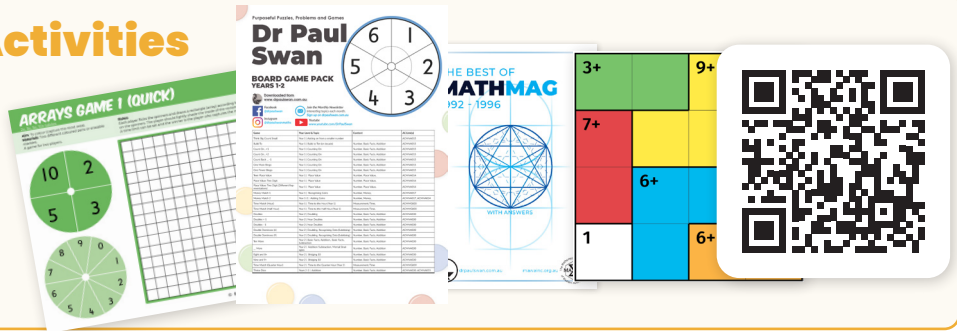
Space prohibits us from listing everything with every item, but it's all worth checking out!

We're trying to keep the number of pages down to save paper, but don't miss these great items on the site:



Free Resources & Activities

- Downloadable Games & Puzzles
- Class Planning helpers
- Booklets & Samplers
- Interactive Materials



Video content:

- ▶ [Early Years Number Concepts: Partition Board](#)
- ▶ [Uses of Different Counters](#)
- ▶ [Number Representation](#)
- ▶ [Shake and Spill 7](#)
- ▶ [Games with Counters - "Lulu"](#)



drpaulswan.com.au/videos



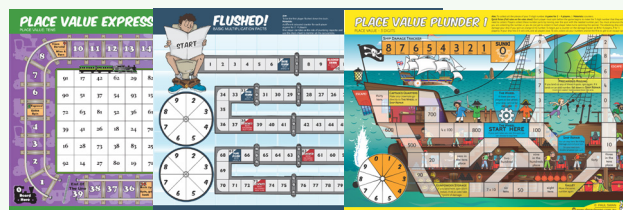
Downloadable Items

- eBooks
- Posters
- Board Games
- Flash Cards
- Mathematical Clipart



A3 Games

- Foundation to Year 5+
- Games on Card
- Download & Print Games



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