

Semester 2

2024 Dr Paul Swan

Maths Resources Guide

www.drpaulswan.com.au

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Pros, Cons, and What to Know



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POSTER

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Polygons
Any 2D shape with straight sides.

Sides	Name	Regular example	Irregular examples
3	Triangle		
4	Quadrilateral		
5	Pentagon		
6	Hexagon		
7	Heptagon		
8	Octagon		
9	Nonagon		
10	Decagon		

Related Words: side, angle, vertex (corner)

Score this poster **FREE**



SHOP

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Youtube
[youtube.com/DrPaulSwan](https://www.youtube.com/DrPaulSwan)



Article:

The Use of Textbooks in Primary Mathematics

2

I am often asked my opinion about various textbook/workbook series. I try to avoid promoting one book over another but that does not mean that I am anti-textbook. Last century I even co-authored a series of textbooks aimed at the lower secondary level. It was a lot of work, and I learned a lot about writing and the thinking that goes behind creating a textbook.

Here are some thoughts about the use of textbooks that you may wish to consider before purchasing or abandoning a textbook series.

Pros

- Textbooks can reduce teacher workload. I see many teachers downloading all sorts of materials and photocopying sheets and spending a lot of time creating lessons. Textbooks and associated teacher guides can reduce that part of preparation but they do not replace the need to prepare and plan.
- Textbooks provide a coherent approach across a school. Textbook editors try to ensure that terminology used is consistent and the way examples are presented is similar. When random sheets are downloaded from a variety of sources this is not the case.
- Textbooks can support inexperienced teachers or whole schools when a new curriculum is released, so they can come to grips with the new curriculum and any changes that have been made. It is assumed that the authors of the textbook can do a better job interpreting the curriculum document. Be aware that some textbooks are adapted from other curricula, but for the most part maths is maths.

Cons

- Teachers can become slaves to the textbook, letting the book dictate the pace and structure of lessons. Teachers often say they feel pressured to complete the page in the book rather than 'teach the mathematics behind the page'.
- In fairness to textbook publishers the decision to adopt a book is often made by a few people and sometimes hastily so there is no 'buy in'. In many schools I visit teachers report not being provided with the associated professional development required to effectively use the book. An example would be learning to use the bar model as featured in some textbook series. If teachers don't receive the appropriate professional learning then the implementation of the series is likely to fail.
- A textbook is no substitute for quality teaching. Schools still need to spend time and money on upskilling teachers to teach mathematics. Sometimes the budget is spent on buying the books which reduces the amount to be spent on manipulatives and professional development.
- Some teachers feel restricted by the approach used in the book.

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

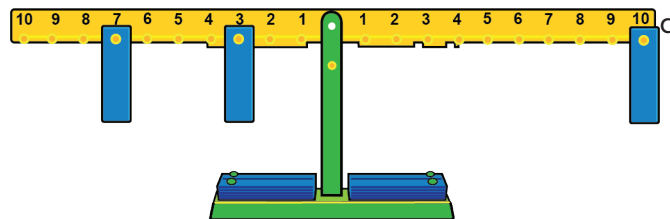
mathsmaterials.com



Learn about maths manipulatives.
Generously supported by Edx Education.

Some considerations

I have noticed that schools often abandon textbook after just a few years and then adopt a new one. A lot of effort is required each time this happens, so it is well worth spending the time thinking about the decision.



No matter how good the textbook page is there are certain things you can't learn from reading and filling out lines on a page. For example, you learn to measure by measuring. Students need to measure with physical tapes, use balance scales to understand equivalence, read scales when cooking and so on.

I will leave the last word to C.M. Fleming (1939) who said:

"No series of books intended for pupils use can take the place of the teacher whose mind is alert to the needs of every pupil. No series of books can crowd between its covers those wider experiences which should be drawn from the pupils' everyday surroundings to bring added interest and meaning to the arithmetic work."

I could help but think how similar this is to advice given by Hattie et al.

"We didn't say throw away textbooks. They are a resource that can be useful. Use them wisely, and make adjustments as you deem necessary to respond to the needs of your students. Remember, it is your students, not the curriculum writers who direct the learning in your room."

References

Fleming, C.M., 1939, Beacon Arithmetic Teacher's Manual, Ginn and Co Ltd.

Hattie, J., Fischer, D. and Frey, N., et al. (2017), p.20. Visible Learning for Mathematics: What works best to optimise student learning. Grades k – 12. California: Corwin

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 at the time of publishing, but mistakes may have been made in production. We also reserve the right to alter prices.

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:

Version 9 of the Maths Curriculum: Highlights

Not all parts of Australia are using version 9, so please consult your own State Curriculum for specifics.

- You won't find a Geometry Strand as it is now called **Space**.
- Reference to basic number facts is found in the Algebra Strand (See **a**)
- Probability starts in Year 3
- More reference is made to digital aspects of mathematics such as:
 - spreadsheets,
 - in the creation of algorithms or step by step procedures,
 - in statistics to create graphs,
 - virtual manipulatives, to help visualise concepts and their use in concert with physical manipulatives

Measurement

- Reading clocks (analogue) begins in Year 2 (For further detail see **b**) A look at the Australian Curriculum Version 9 - Time)
- The use of scaled instruments starts in Year 3 and increases in Year 4
- Perimeter and area and not mentioned until Year 5 and the only mention of a formula is to do with area of rectangles in Year 6
- Financial Literacy has been absorbed into other parts of the curriculum such as the application of number work or the use of spreadsheet (See **c**) A look at the Australian Curriculum Version 9 - Money)

I recommend that you download two posters from the ACARA website (**d**)

- Mathematical Modelling Process: Poster
- Statistical Investigation Process: Poster

This brief look at the Australian Maths Curriculum V9 will hopefully clarify a few things. I will provide more detail in my Quick Curriculum Guides to go with version 9 of the curriculum.

CLASS PLANNING



a A look at the Australian Curriculum Version 9 - Times Tables

CLASS PLANNING



b A look at the Australian Curriculum Version 9 - Time

CLASS PLANNING



c A look at the Australian Curriculum Version 9 - Money

d ACARA Posters





2024

What's New

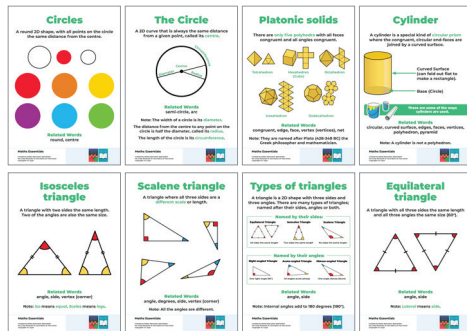
NEW! Maths Essential Posters

A collection of downloadable posters developed by Dr Paul Swan, Dr Jack Bana and Linda Marshall.

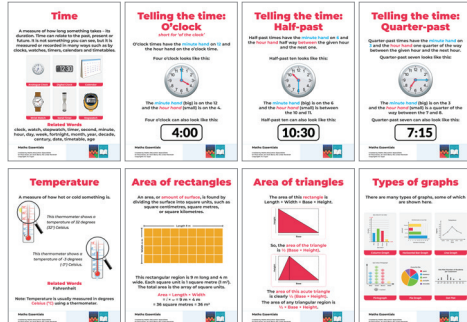
Using these posters in all year levels will ensure a comprehensive, correct, clear and consistent mathematical language across the whole school.

Download the **Polygons** poster from the QR code.

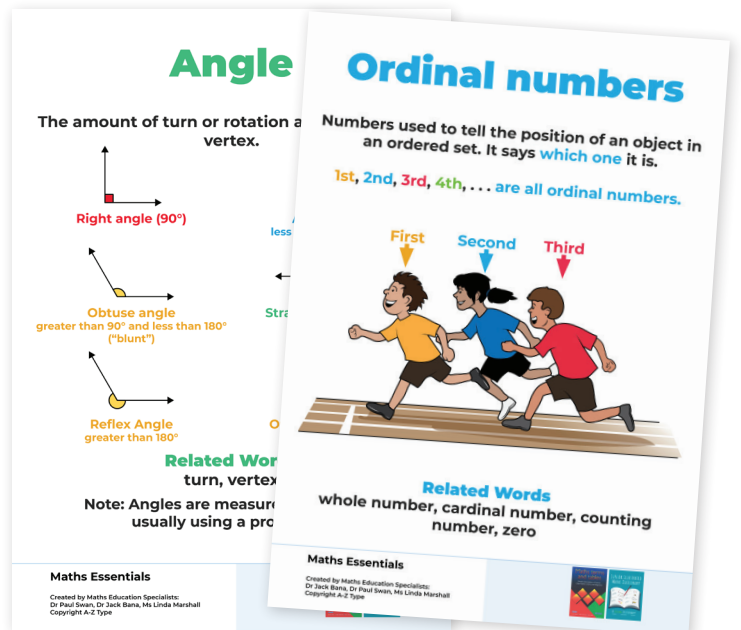
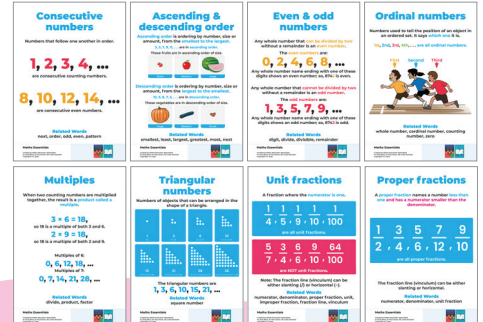
30 Geometry Posters



19 Measurement Posters



30 Number Posters



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.

Watch Warm Ups Video PL:

Mental Warm Ups and Maths Talks



MORE Mental Warm Ups and Maths Talks



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



a Trundle Wheel with Counter Count

DPS3061 (individual) \$49 (inc. GST)

DPS3061 (set of 12) \$539 (inc. GST)



b Linking Cubes Reflection Set

DPS3028 (individual) \$57.20 (inc. GST)

also available: Linking Cubes (set of 500)



c Maths Cubes Construction Set

DPS3011-CK \$50.00 (inc. GST)



d Mini Geometric Solids

DPS3023 \$35.20 (inc. GST)



e 2D3D Geometric Solids

DPS3059 \$99 (inc. GST)



f Long Bead String 1-100 (10 pack)

DPS3005 \$99 (inc. GST)

Larger Set



g Bead String 1-20 (32 pack)

DPS3004-12 \$86.40 (inc. GST)

Larger Set



h Bug Counters

DPS3026 \$44.00 (inc. GST)



i Transport Counters

DPS3026 \$44.00 (inc. GST)



j Dinosaur Counters

DPS3027 \$44.00 (inc. GST)



k Backpack Bear Counters

DPS3024 \$44.00 (inc. GST)



l Two Colour Counters (1000 pc)

DPS3008-1000 \$75.00 (inc. GST)

Larger Set



m Transparent Counters (1000 pc)

DPS3007-1000 \$36.00 (inc. GST)

Larger Set



n Coloured Rods (Set of 74)

DPS3022 \$19.25 (inc. GST)





d

e

c

g

f

n

m



The Literacy Aspect

I often talk about the literacies of mathematics:

- Vocabulary
- Graphics and
- Symbols

Many of the resources we have written target these literacies. Trying to pinpoint exactly where the issue lies is difficult.

Newman Analysis

Anne Newman (1983) devised a five-point error analysis that may be used to help pinpoint where students experience difficulty in solving word problems. Her five probes are listed below:

- **Reading:** Please read the question to me. If you don't know a word leave it out.
- **Comprehension:** Tell me what the question is asking you to do.
- **Transformation:** Tell me how you are going to find the answer.
- **Process skills:** Show me what to do to get the answer. Tell me what you are doing as you work.
- **Encoding:** Now write down the answer to the question. (Newman, 1983, p. 11)

It is worth having a short conversation with a student to work out where the issue lies. Some students never make it past comprehension.

Valuable additional readings:



Solving Word Problems Guide
from www.bondblocks.com



A REVALUATION OF NEWMAN'S ERROR ANALYSIS - Allan Leslie White

A Classroom Example

Consider the example of Jayden (Year 5), who initially responded "two-thirds" to the following fraction question.



This lolly is made with equal sized layers.

The layers are yellow or black.

What fraction of the lolly is made of black layers?

$$\frac{2}{5}$$

$$\frac{1}{2}$$

$$\frac{2}{3}$$

$$\frac{3}{5}$$

When asked to explain his selection, he realised his error and corrected his selection to two-fifths. Jayden stated: "There are three yellow layers and two black layers and the big number goes on the bottom so it's two-thirds." After this he went on to say, "Oh no, that's wrong".

When probed further as to why he had changed his answer, he replied, "Because you have to think about how many parts there are altogether". Despite appearing confident with his initial selection, once asked to explain his selection, Jayden self corrected. The process of explaining and justifying his selection appears to have assisted him to clarify his thinking.

Implications

Teachers are busy and don't have time to speak to every student about every incorrect answer they give, but it could certainly be worth trying some of Newman's probes to work out where the issue lies. I often hear teachers saying that a particular student knows the content but made mistakes in a test. Asking the student to explain their answer may help them see that rushing through a question may not be the best option.

Jayden was a student who should have scored better on the test but he often rushed through questions and got the wrong answer. When asked to explain he often self-corrected. In addition to being taught the literacies of maths, students need to be explicitly taught the way word questions are written – that is, their structure. We teach structures such as narratives and procedural text in English, why not do the same in mathematics?

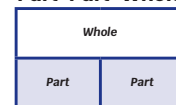
Literacies

Vocabulary
Graphics
Symbols

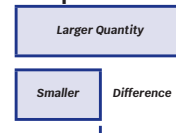
Structure

Comprehension

Part-Part-Whole



Comparison



Reference

Newman, A. (1983). *The Newman language of mathematics kit: Strategies for diagnosis and remediation*. Sydney: Harcourt Brace Jovanovich Group.

Video PL: Solving NAPLAN-style Word Problems – 5 hour course (Individuals and Schools)

This PL course is all about solving the kind of word problem that comes up in standardised testing. Dr Paul Swan and his colleague Narelle Rice systematically demonstrate how to use a diagrammatic (aka Singapore Maths) bar model approaches to solving NAPLAN-style word problems. They analyse the mathematics behind the various questions and explain the understanding and reasoning required to solve them. Covers addition, subtraction, multiplication, division, one- and two- step word problems. Each video in the series comes with sample questions, support posters and documentation. School leaders may ask staff to watch a video, try the ideas and report back before watching the next video.

Includes a **5 hours of video, activities, a 40 page course book, 11 high-quality posters** and certificate.



Bond Blocks Counting to 10 & 20 Kit



For Counting Start Here

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

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



MORE Tier 1 Class Teaching

MORE Tier 2 & 3 Intervention

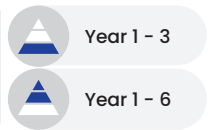
Counting Kit Features

- ✓ 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 Addition & Subtraction



For Addition and Subtraction Start Here

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.

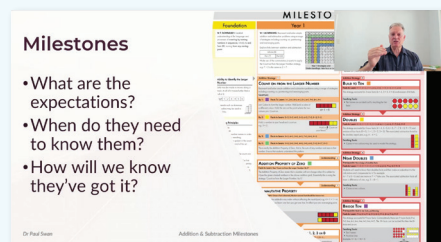
These ~45 minute runtime videos suit the staff meeting timeslot.

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:



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)

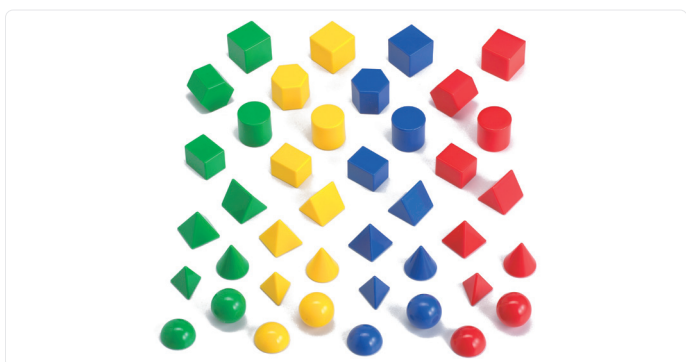
Tens Frames (Box of 16)



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

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

NEW! 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)

NEW! 2D3D Geometric Solids



Geometric Solids, 12 solids with 12 nets. 12 unique shapes, solid & net, 8 cm size. Activity Guide included (see back of box).

DPS3059 \$99 (inc. GST)

Sandtimer



1 minute timer, 16 cm x 7 cm.

An Elizabeth Richards product.

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

Rainbow Sand Timers Set



1, 2 and 5 minute sand timers in three different colours. Sizes: 80mm, 85mm, 130mm tall

JL147 \$22 (inc. GST)

Student Electronic Timer (Set of 5)



Fold out stand & magnetic backed mini stop watch for timing events. Includes batteries (AAA). 7 cm x 6 cm.

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

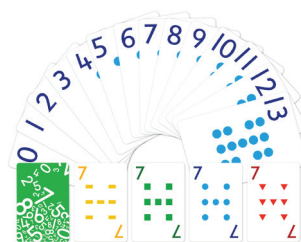
This makes introducing cards to students a lot simpler. You can play all of the traditional card games like snap, fish and more using these easy-to-use cards.

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

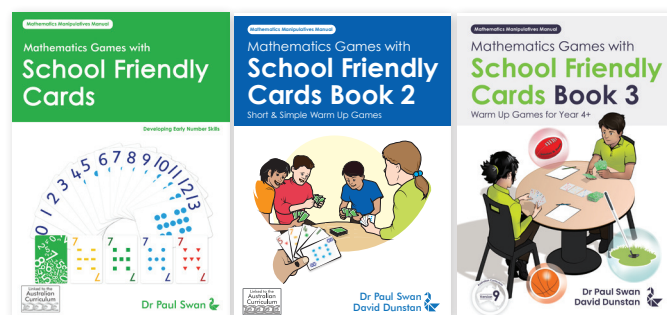
Simple card games are an ideal form of warm up. Activities for games may be found in **Maths Games with School Friendly Cards books 1, 2 and 3**.

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)

DPS1055 Mathematics Games with School Friendly Cards: Book 2 \$28.60 (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



Best Seller

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)



 more games at drpaulswan.com.au/resources

Best Seller

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.

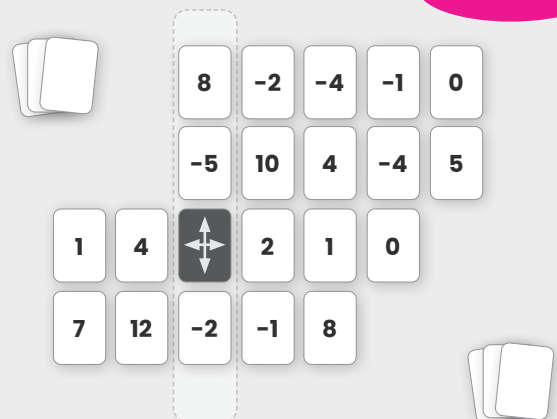


Rowco Single Pack

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

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

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



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.

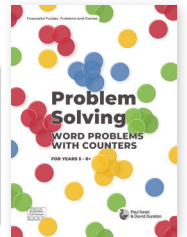
19 mm Transparent Counters



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)

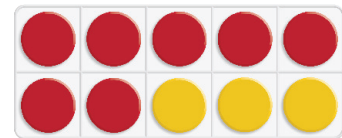
DPS3007-10 (1000 pieces) \$36 (inc. GST)

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 \$18 (inc. GST)

DPS3008-1000 1000 piece set \$88 (inc. GST)

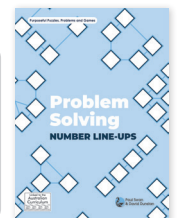
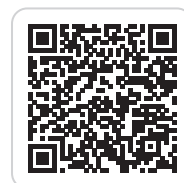
Opaque Counters (20 mm)



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)

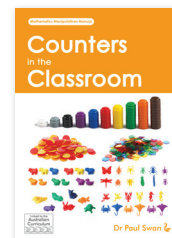
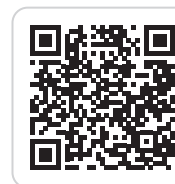




Themed Counters

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

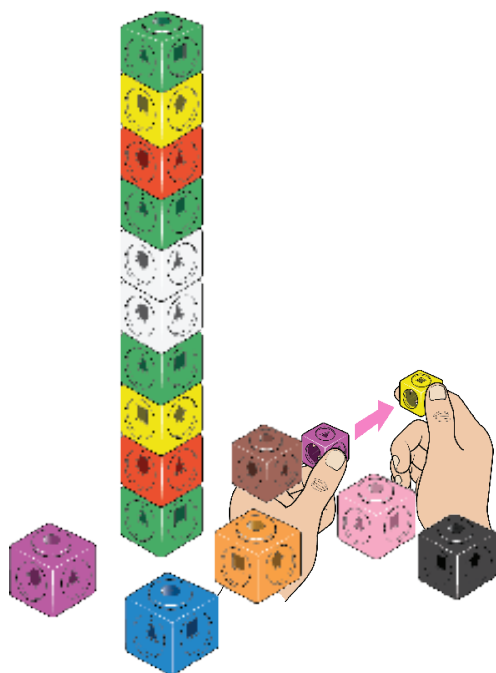
These are quite a sophisticated counters as the bears are weight related (4g, 8g and 12g).

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+

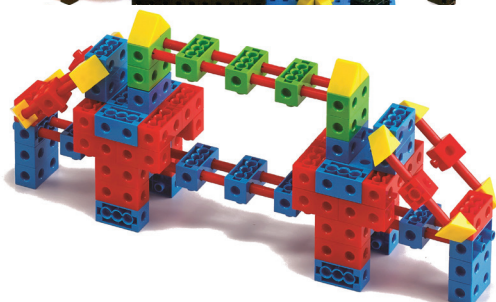
- No shapes embedded on the sides
- Made from harder plastic
- Older students prefer these cubes as they do not appear babyish
- Extendable. Additional support materials such as a baseboard and mirrors can be used

Centimetre Cubes – Ideal for Year 5+

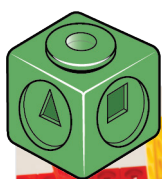
- 1 cm x 1 cm x 1 cm and therefore have a volume of one cubic centimetre. They weigh one gram, displace 1 cubic cm of water, come in ten colours, and join on every side.

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

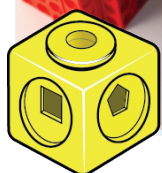
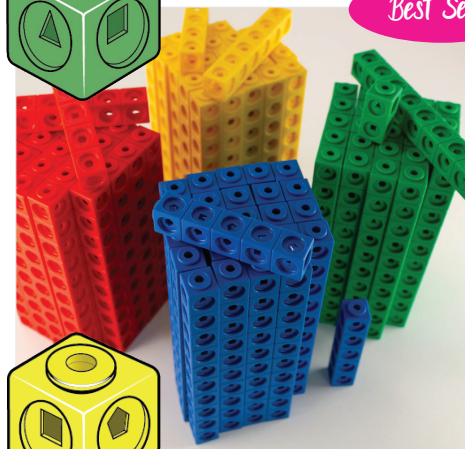
- Some teachers prefer to use 2 cm wooden cubes, either in natural wood or coloured.
- Smaller 1 cm wooden cubes may also be used. These are the same size as the small cubes used in a Base Ten set.



Year 5 Students



Best Seller



Maths Cubes

Soft plastic cubes connect on all sides and have different shapes on each side for easier identification.

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

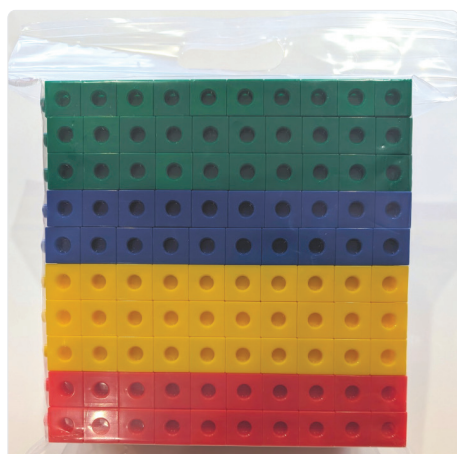
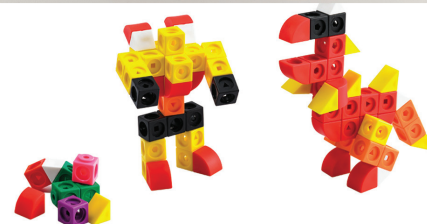
DPS3011-1000 1000pc: \$180 (inc. GST)



NEW! Maths Cubes Construction Set

Includes 200 pieces with an included activity booklet of 26 designs.

DPS3011-CK \$50 (inc. GST)



Linking Cubes (Pack of 500)

This pack includes 500 linking cubes wrapped in a plastic carryable bag in four colours (red, green, blue & yellow).

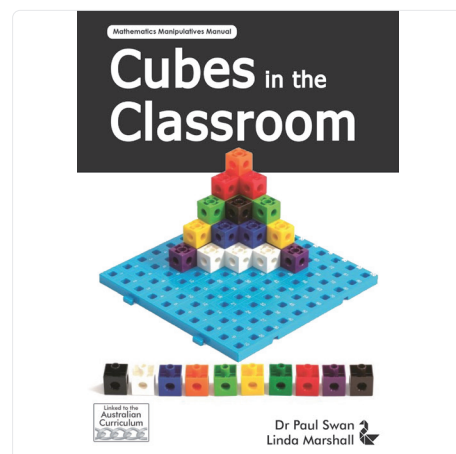
DPS3029 500pc: \$75 (inc. GST)



NEW! Linking Cubes Reflection Set

Explore reflection and spatial awareness. Comes in a box with 100 cubes, base board and mirrors. Activity booklet includes 21 activities..

DPS3028 \$57.20 (inc. GST)



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)



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.

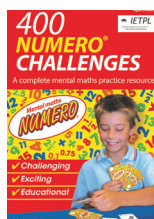
Watch Julie and Paul discuss the effective use of Numero



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.



TWO COLOUR COUNTERS

GAMES AND PUZZLES

Useful for: Counting, patterning, partitioning & making games

Two colour counters (25 mm) are an opaque counter - red on one side and yellow on the other, or green/blue.

The games **Shake and Spill** and **Lulu** are examples of games that may be played with the red/yellow two colour counters.

Numbers or dots may be written on the yellow side with a marker. The counters can then be used to solve puzzles and problems (see KenKen).



TWO COLOUR COUNTERS

drpaulswan.com.au/shop/two-colour-counters



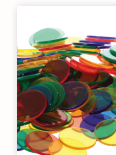
RELATED ITEMS



Activities
Years F - 6



Videos (Shake n Spill, Lulu activities)



Transparent Counters



Specialty Counters

- Dinosaur Counters
- Bug Counters
- Transport Counters
- Bear Counters

drpaulswan.com.au

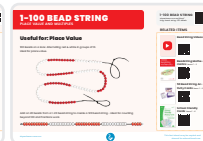


This fact sheet may be copied and shared for educational use.

1-20 Bead String



1-100 Bead String



ROWCO Card Game



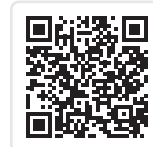
School Friendly Cards



COMBO Card Game



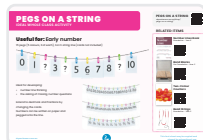
Pocket Dice



Transparent Counters



Pegs on a String



Spinner Arrows



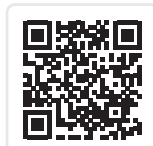
Round Spinner



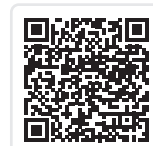
Suction Spinner



Maths Cubes



Write 'n' Wipe Sleeves



Rainbow Pebbles

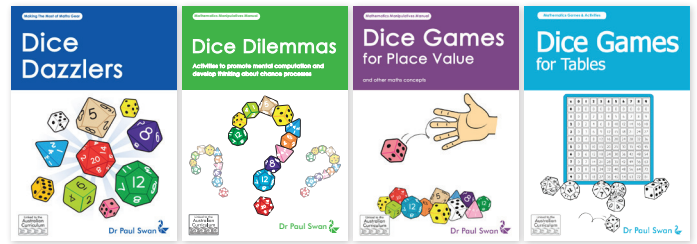




Dice

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.**



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 \$40 (inc. GST)

10-Sided Polyhedral Dice



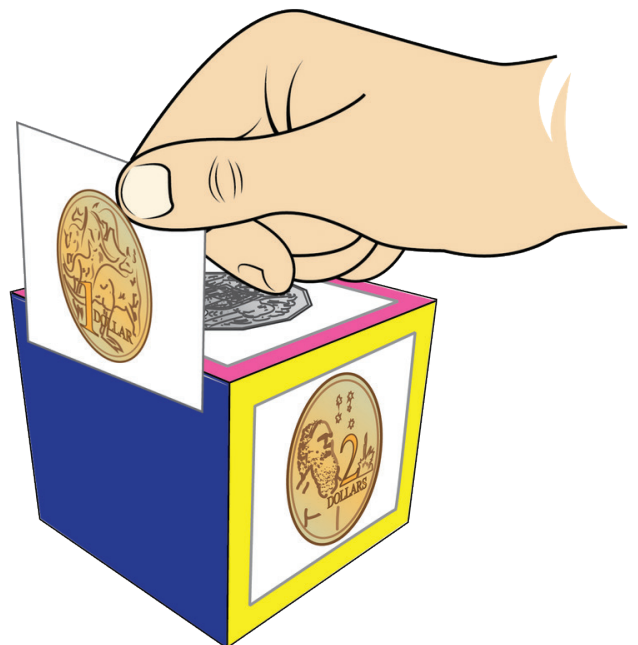
Set of 100

ER10PDAC100 \$50 (inc. GST)

Pocket Dice

ERPCD \$16.50 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.



Spinners

Spinners are great for all kinds of games and number work.



Plastic Spinner Arrows (pack of 40)

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

DPS3009 \$15.00 (inc. GST)



Suction Spinner (pack of 10)

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

DPS3014 \$15.00 (inc. GST)



Best Seller

Round Spinner (pack of 5)

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

DPS3010 \$15.00 (inc. GST)



Picking the right spinner:

- Plastic Spinner - for **Laminated** games
- Suction Spinner - Sticks to **Write and Wipe Sleeves** or **Whiteboards**.
- Round Spinner - General purpose. Sits on top of sheets

Bead Strings



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)

DPS3005-10 \$99 (inc. GST)

Pegs on a String



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

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

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.

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

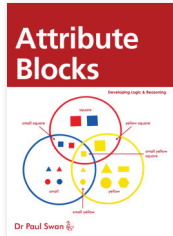
An Elizabeth Richards product.

ERWNW10PA4 (pack of 10): \$33.00 (inc. GST)

ERWNWA35 A3 (pack of 5): \$24.20 (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.



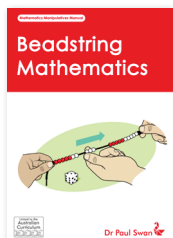
Base Ten Blocks

(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.



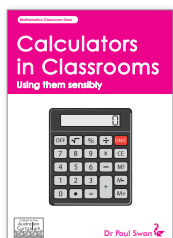
Beadstring Mathematics

(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.



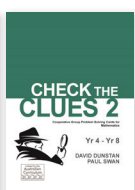
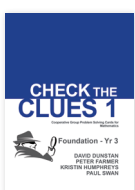
Card Capers

(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

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.

Year 1 – Year 7

eBook \$15

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.



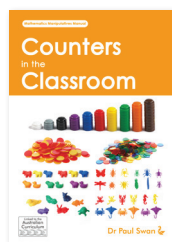
Colour Tiles

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

Year 1+

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.



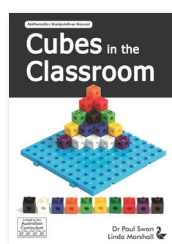
Counters in the Classroom

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

eBook \$22 | Book \$34

Year 1+

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.

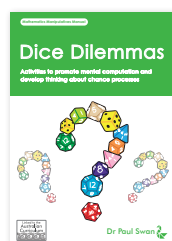


Dice Dazzlers

(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!

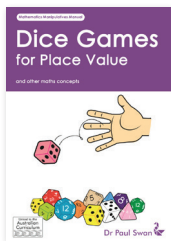


Dice Dilemmas

(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

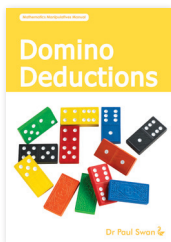
(DPS1022) **Division, Games, Multiplication** • 48 pages

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

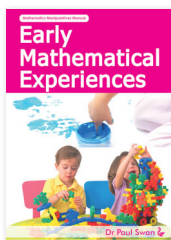
Year 1+

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

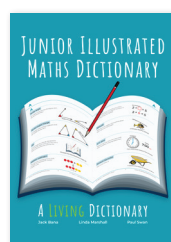
Year 2+

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

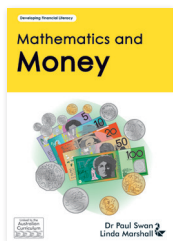


(DPS1027) **Early Number, Number/Algebra** • 90 pages

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).



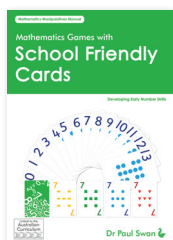
Mathematics and Money

(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



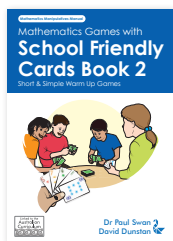
(DPS1047) **Addition, Cards and Card Games, Early Number, Subtraction** • 48 pages

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

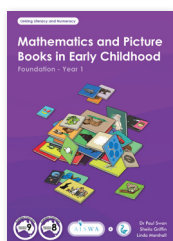


(DPS1048) **Manipulative Manual, Counting, Addition, Subtraction, Multiplication, Division** • 48 pages

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

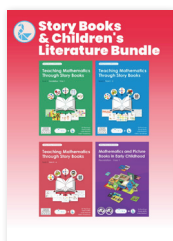


(DPS1054) **Mathematics Literacies**

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.

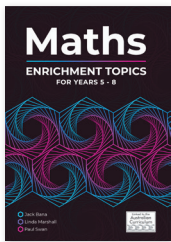


Story Books & Children's Literature Bundle

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**

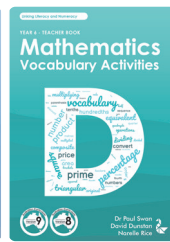
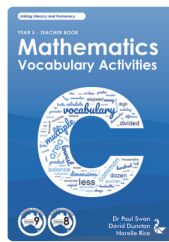
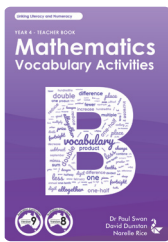
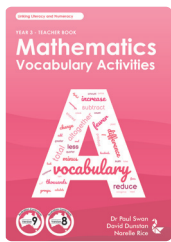
Year 5 – Year 8

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)

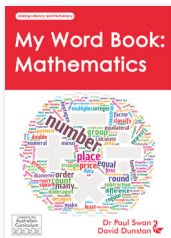
Mathematics Literacies

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.)

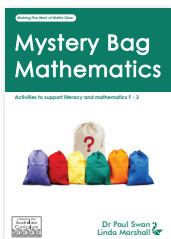


(DPS1033) **Early Number, Geometry, Mathematics Literacies, Money, Number/Algebra, Place Value, Probability/Statistics • 48 pages**

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.



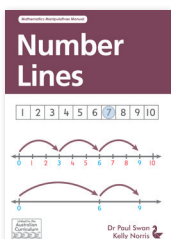
Mystery Bag Mathematics

(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.

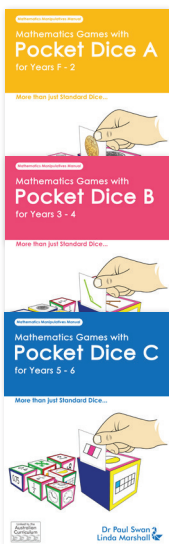


Pattern Blocks

(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

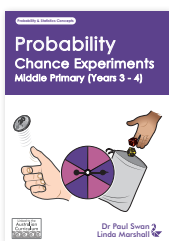
Pocket Dice are large, soft dice with clear pockets on all six faces.

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.

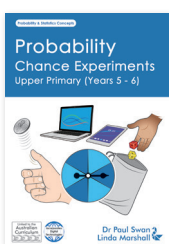


Probability Chance Experiments Middle Primary

(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

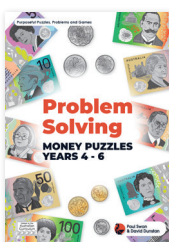


(DPS1043) **Manipulative Manual, Probability & Statistics • 48 pages**

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.

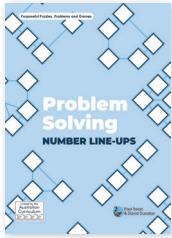


Problem Solving Money Puzzles For Years 4-6

(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.



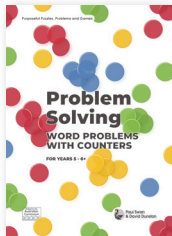
Problem Solving Number Line-Ups

(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.



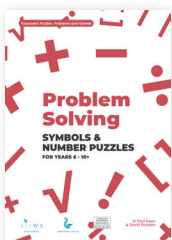
Problem Solving Word Problems with Counters

(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.



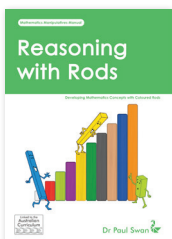
Problem Solving Symbols and Number Puzzles

(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 **eBook \$22 | Book \$34**

Year 1 – Year 6

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 **eBook \$22 | Book \$34**

PP/F – Year 6

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.



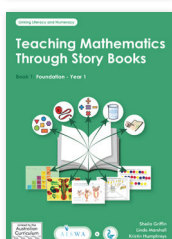
Tackling Tables

(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)

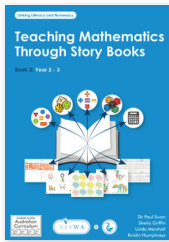
(DPS1051) **Early Childhood, Maths Literacies** • 48 pages

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.



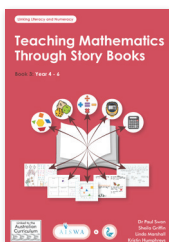


Teaching Mathematics Through Story Books – Book 2 (Year 2 – Year 3)

(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

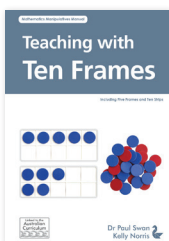


NEW! Teaching Place Value Series

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

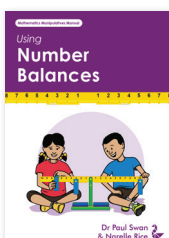
(DPS1056) **Fractions and Decimals, Geometry, Measurement • 48 pages**

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.



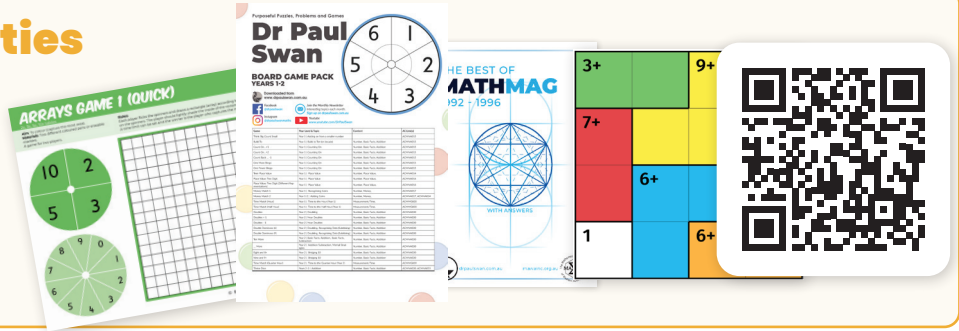
Space prohibits us from listing everything with every item, but it's all worth checking out!

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



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"](#)

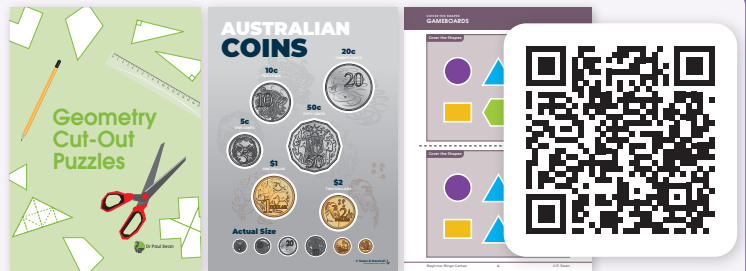


drpaulswan.com.au/videos



Downloadable Items

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



A3 Games

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

