Year

## YEAR STARTER PACK

## How to use



## This Year's Content

- Uses content from the Quick Curriculum Guides for Parents \& Teachers, based on the Australian Curriculum
- Take a look at what to do over the coming school year
- Pay extra attention to the items with a star $\hat{\jmath}$, they're very important!



## Last Year's Content

- With weeks of holidays behind them, students will have forgotten a little bit. Using the first few weeks of class to refresh students on this content is a good time investment.
- Take a quick look over last year's content. Recommendation: spend a little bit more time looking back at the items with a star $\hat{\jmath}$.


## Review / Assessment and Year Planning

- Review the starred $\delta$ concepts that were in the previous year's Quick Curriculum Guide with your students.
- We have included 1 assessment item based on an important concept to help get you started at the back of this booklet.


## More Help

- Get some helpful tips on planning - from the full year right down to the individual lesson. See the booklet "A Guide to Teacher Planning"
- Free download at www.drpaulswan.com.au/planning


## Quick Curriculum Guide for Parents and Teachers (Foundation Year)

These Quick Curriculum Guides have been designed to take a look at the Australian Mathematics Curriculum, explain the terminology and provide a few interpretations. This tool has been designed as a document to assist both parents and teachers. The activity ideas only use a minimum of materials, most of which can be found at home and can easily be adapted to the classroom. In places where there is ambiguity, Linda and I have used our professional judgement to put forward what we feel is appropriate for students at this year level.

## About Foundation:

- Unfortunately, most States and Territories use slightly different names to describe the year before Year One at school. We have aimed to be brief and create an document that may be used in different places within Australia. For detailed information see consult the Early Years Learning Framework for the general Principles of Early Years Education
https://www.acecqa.gov.au/sites/default/files/2018-02/ beloning_being_and_becoming_the_early_years_learning_ framework_for_australia.pdf


## For Teachers:

- You are welcome to send home these cards and activities to parents. A great way of organising your term might be cutting up the cards and adding to the activities ideas.
- Please note, some states and territories do not $100 \%$ match the national Curriculum in their state curriculums.


## For Parents:

- Keep in mind this is what children learn over the whole year, not just in one term.
- All children are different, so expectations will vary even between children within the same year level.
- For the listed activities, we think these are all worth trying / could be managed in a home setting even for those inexperienced with teaching at home. We have tried to avoid specialty equipment.
- Even if you're not too sure about teaching, just introducing the idea and some related vocabulary can be a great help.
- Regular routines are beneficial for children. Many of these activities can be repeated, which will help the children retain what they learn. You can do the activity the same way or make slight changes to keep it interesting. It is better to pick one or two activities and repeat them than it is to try them all once!


## Foundation Year

## The Australian National Curriculum Says:

Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point.

## What this means

- Count to 20; 0, 1, 2... 20
- Start at a different number: 7, 8, 9... 20
- Count back from any number: $11,10,9$... 0


## Activity Idea

Use a Number Board* and have your child write in the numbers 0 to 20 , checking as they go.
*(paper version can be downloaded at drpaulswan.com.au)

## A sample card

Note the features of these cards:

- The text from the Australian Curriculum
- The star in the top right
- Filled in: this means this is a topic that in our opinion is vital, perhaps as a building block to concepts in later years.
- Not filled in: while still important, we consider this secondary.
- A simplified explanation of what the curriculum is describing
- A single activity or game idea. Some will reference free games and downloadables that you can find on www.drpaulswan.com.au. The vast majority of these activity ideas can be done at home.

Note: Although we have put the entries of the Australian Curriculum in one box each, they are not equal in terms of their importance or the amount of time needed to provide an understanding. Some entries will only need one of two learning sessions. Others will benefit from more, and need re-visiting a number of times throughout the year.

More activities can be found in Early Mathematical Experiences
More help on mathematical definitions can be found in the Junior Illustrated Maths Dictionary

The full Australian Curriculum: Mathematics can be found at www.australiancurriculum.edu.au/f-10-curriculum/mathematics/
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Acknowledgement to Linda Marshall for her assistance developing these notes.

## \#1. Foundation Year

The Australian National Curriculum Says:
Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point.

## What this means

- Count to 20; 0, 1, $2 . . .20$
- Start at a different number: 7, 8, 9... 20
- Count back from any number: 11, 10, 9 ... 0


## Activity Idea

Use a Number Board* and have your child write in the numbers 0 to 20 , checking as they go.
*(paper version can be downloaded at drpaulswan.com.au)

## \# 2

## The Australian National Curriculum Says:

Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond.

## What this means

Show that 'Seven' is the same as ' 7 ' and seven items


## Activity Idea

"Show one, match two": e.g. Show the numeral 7, match to word and quantity (of a physical item).

Teaching at Home - Parent Guide www.drpaulswan.com.au

## \#4 Foundation Year

## The Australian National Curriculum Says:

Compare, order and make correspondences between collections, initially to 20, and explain reasoning

## What this means

See that a set of 2 paperclips is less than a set of 5 paperclips.


## Activity Idea

Play a game at home comparing collections of buttons, chocolate chips, etc.

Teaching at Home - Parent Guide www.drpaulswan.com.au

## \#6 Foundation Year

The Australian National Curriculum Says:
Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings.

## What this means

Create patterns using materials, e.g.:


## Activity Ideas

Sort any collection. E.g. sort buttons by colour, shape or size.
Do physical patterns clap, clap, stamp, clap, clap, stamp, ...

## \#7

## Curriculum Says:

Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain the reasoning in everyday language.

## What this means

Decide whether items are longer, shorter, taller, holds more/less. No formal measuring tools like rulers, tapes or scales are needed. Comparison is 2 items only. Direct: e.g. student height by measuring back-to-back. Indirect: using a go-between (e.g. wall mark or string)

## Activity Idea

Compare some household items, e.g. which jar holds more, which pencil is longer?

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www.drpaulswan.com.au

## Foundation Year

## Curriculum Says:

Connect days of the week to familiar events and actions

## What this means

Informal discussions on days of the weeks; e.g. on Tuesday my favourite show is on TV, we get take-aways on Fridays, etc.
Children are not expected to know the order of days, (e.g. that Tuesday comes after Monday) at this stage.

## Activity Idea

- Ask simple, informal questions and link the days of the week to events.


## Curriculum Says:

Compare and order duration of events using everyday language of time

## What this means

It takes longer to walk to the fence than to run to the fence.

## Activity Idea

Ask your child which takes longer between two different activities, one which takes a short time and one which takes a longer time, e.g. brushing teeth or watching their favorite show.

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## \#10 Foundation Year

## Curriculum Says:

Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment

## What this means

Can identify circles, squares, rectangles and triangles (2D) and objects like balls (spheres) and boxes (3D Objects)
Activity Ideas


- Find two examples of these shapes/objects.
- Watch PV Storytime on Youtube on these books:

TRIANGLE by Mac Barnett and Jon Klassen SQUARE by Mac Barnett and Jon Klassen

Teaching at Home - Parent Guide www.drpaulswan.com.au

## \#12 Foundation Year

The Australian National Curriculum Says:
Answer yes/no questions to collect information and make simple inferences

## What this means

Inference: based on the data gathered making a reasonable conclusion.
Use familiar situations; e.g. collect information about family eye colours (do they have blue eyes?); preferences (do they like bananas?), etc.

## Activity Ideas

The child can poll friends/family/classmates "do you like chocolate?" Make an inference on that group.

## Quick Curriculum Guide (Kindergarten Year)

These Quick Curriculum Guides have been designed to take a look at the Curriculum, explain the terminology and provide a few interpretations.
Where there is ambiguity, Narelle and I have used our professional judgement to put forward what we feel is appropriate for students at this year level.

## About the Pre-Foundation Year:

Unfortunately, States and Territories use different names to describe the year before Foundation at school. These include "Kindergarten" and "Preschool". In this document we have used the name Kindergarten for school for 3 1/2 to $4^{1 / 2}$ year old children. Please note that some states use this term for Foundation (the year before Year 1).
We have used the Western Australian Kindergarten Curriculum. For more information use this link and click on the drop down box titled "Engage in and extend numeracy in personally meaningful ways".
https://k10outline.scsa.wa.edu.au/home/p-10-curriculum/kindergarten-curriculum-guidelines/learning-developme nt-areas/learning
The WA curriculum is drawn from the national Early Years Learning Framework (EYLF, Commonwealth of Australia, 2009).
https://www.acecqa.gov.au/sites/default/files/2018-02/belonging_being_and_becoming_the_early_years_learning_ framework_for_australia.pdf
As always, consider the curriculum that applies to you. That said, a lot of the information in this guide will still be useful to you.no matter the curriculum you work from.

## For Teachers:

- A great way of organising your term might be cutting up the cards and adding to the activities ideas.


## For Parents:

- Keep in mind this is what children learn over the whole year, not just in one term.
- All children are different, so expectations will vary even between children within the same year level.

Note: Although we have put the entries of the Western Australian Kindergarten Curriculum in one box each, they are not equal in terms of their importance or the amount of time needed to provide an understanding. Some entries will only need one of two learning sessions. Others will benefit from more, and need re-visiting a number of times throughout the year. Some entries, after an initial learning session, can be given incidental mention as the occasion arises. Teachers will use their professional judgements when deciding how long to allow for each of the entries; often combining some of them within one or more learning sessions.

The full Australian Curriculum: Mathematics can be found at www.australiancurriculum.edu.au/f-10-curriculum/mathematics/
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Acknowledgement to Narelle Rice for her assistance developing these notes.

## Guide Format:

- Develop knowledge of number and algebra (connects to the Mathematics Curriculum) - Boxes 1-13

Please note, we have ordered the number and algrabra boxes based on development. For example, if you don't know \#2 (saying the number names in order) then it is very hard to count with one-to-one correspondence (\#3).

- Develop knowledge of measurement and geometry (connects to the Mathematics Curriculum) - Boxes 14-18
- Develop knowledge of statistics and probability (connects to the Mathematics Curriculum) - Boxes 19-21


## Principles of Counting:

- The first five curriculum content descriptions in this document are called the Principles of Counting. We have ordered them based on development.


## How to Count

1. Stable Order: say the number names in order.
2. One-To-One Correspondence: match the counting names to the items being counted.
3. Cardinal Value: the last name said in the count represents the total of the set.

## What to Count

1. Order Irrelevance: the count can start anywhere.
2. Abstraction: children will at first count objects that are similar. Later they will collections of different objects and later still, unseen objects.

## Points of Clarification: Kindergarten \& Foundation

A.

## Consider the following:

Kindy Curriculum: Recite number names in order, initially to 5, then to 10 consistently.
Foundation Curriculum: Count ... initially to and from 20, moving to any starting point. (ACMNA001)
The observation list for getting from Kindy level to Foundation level could be illustrated in the following way:

Kindergarten Curriculum specified

## Count forward 1 to 5 <br> Count forward 1 to 10

These are the progression steps towards satisfying the requirement in the Foundation Curriculum.

Whether these are taught partly in Kindergarten depends on the context of your school and students.

Foundation Curriculum specified.

Count forward from any number to 10
Count backwards from 10 to 1
Count backwards from any number (less than 10)
Count forwards 1 to 20
Count forwards to 20 from any number
Count backwards 20 to 1
Count backwards to 1 from any number (less than 20)

Count forwards and backwards, by one, to 20 from any number

## Points of Clarification: Kindergarten \& Foundation

B. Kindy Curriculum: Recognise numerals initially to 5 and then to 10.

Foundation Curriculum: Connect number names, numerals and quantities including zero, initially up to 10 and then beyond. (ACMNA002)

The jump from Kindergarten to Foundation is:

- connecting the quantity to the number name and numeral.
- the introduction of zero.
- the quantities increase to 20 and beyond.

Kindergarten (1 to 10)


Foundation (0 to 20+)

C. Consider the following:

Kindy Curriculum: Recall what's missing in a number line 1 to 10 ... and begin to order them.
Foundation Curriculum: (There is no specified curriculum descriptor)
Year 1 Curriculum: Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line. (ACMNA013)

To help students reach the related Year 1 content descriptor we suggest that in Foundation students:

- Recall what's missing in a number line from 10 to 20.
- Order numbers from 10 to 20.
- Identify the number before and after, for numbers 1 to 10 , then 10 to 20.


## \#1 Kindergarten Year

## The WA Curriculum Says:

Recite number names in order, initially to 5, then to 10 consistently.

## What this means

- Count aloud from 1 to 5 .
- Count aloud from 1 to 10.


## Activity Idea

- Sing and act out nursery rhymes: eg "One, two, three, four, five once I caught a fish alive..."


## Extension

- Count forward to 10 starting at a different number: 6, 7, 8, 9, 10
- Count backwards from 10 to 1.

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## \#3 <br> Kindergarten Year

## The WA Curriculum Says:

Count objects by using one to one correspondence.

## What this means

- Match the counting names to the items being counted. Only count each object once.


## Activity Idea

- Line up a family of toys, between 4 and 10 . Say to the child, "I wonder how many plates we would need if we gave one plate to each toy. [Pause]. I know, let's given them each one plate and count as we go."


## The WA Curriculum Says:

Know that numbers always happen in a conventional order (stable order).

## What this means

- Apply counting from 1 to 5 using objects.
- Apply counting from 1 to 10 using objects.


## Activity Idea

- Count aloud as you walk up steps.

Tip: Integrate other counting principles. E.g. say one number with each step, at the top relate this to the total, "We walked up 8 steps."

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## \#4 Kindergarten Year

## The WA Curriculum Says:

Name the last number in the count that represents how many in the set (cardinal value).

## What this means

- When counting a set of objects the last number name said tells you how many objects there are in total. E.g. 1, 2, 3, 4, 5, "There are five objects".


## Activity Idea

- After counting a set of objects ask "So how many are there altogether?" If the child goes to recount stop them and say, "Last time what was the last number you said? Now guess how many you think there will be." This will reinforce the link.


## \#5 Kindergarten Year

## The WA Curriculum Says:

Begin to understand that the starting point and order in which you count them does not affect how many (order irrelevance).

## What this means

- You can start counting at any point in the collection, such as in the middle, and you will still end up with the same total.


## Activity Idea

- Ask children to check their counting by counting a different way. E.g. "Check there are 7 teddy bears, but this time start with the red one in the middle?" Model counting from different directions and starting points.


## \#6 Kindergarten Year

The WA Curriculum Says:
Begin to understand that the arrangement, size or differences of the objects doesn't affect how many (abstraction).

## What this means

- Children will at first count objects that are similar. Later they will count collections of different objects.
- Later still, they will count unseen objects.


## Activity Ideas

- Count a set of objects that differ (e.g. in size).
- Count things that cannot be seen such as claps or stomps.


## \#7 <br> Kindergarten Year

## The WA Curriculum Says:

Recognise numerals initially to 5 and then to 10 .

## What this means

- Children can identify a written number by pointing.
- Children can say the word that matches a written number.


## Activity Idea

- "Point to the number four"


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## \#9 Kindergarten Year

## The WA Curriculum Says:

Recall what number is missing in a number line 1 to 10.

## What this means

- Identify one missing number from a number line that is numbered from 1 to 10 .


## Activity Idea



- What number has been hidden?


## Extension

- Identify missing numbers from 1 to 5 , from a sequence of 3 consecutive numbers, where the middle number is missing. E.g. 3, _, 5

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## What this means

- Move written numbers into counting order from 1 to 5 , then 1 to 10 .
- Start with a couple of numbers out of order. Gradually increase the difficulty.


## Activity Idea

- 1-5 cards on a number line (signs, pegs etc.).


Quick Curriculum Guide K

## \#10 Kindergarten Year

The WA Curriculum Says:
Partition small numbers (part, part, whole).

## What this means

- Split a quantity of up to 6 objects into two parts.


## Activity Idea

Shake four two-coloured counters (counters that are red on one side and blue on the other) in a cup. Spill them into a photocopy box lid. Say how many red, then how many blue, and how many in total.


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## \#12 Kindergarten Year

## The WA Curriculum Says:

Compare collections of objects and describe whether there is more, less, the same or not the same.

## What this means

- Given two collections of objects, each collection having 10 or less objects, determine if they have the "same" number of objects or different. If different, identify which collection has "less", and which has "more". Strategies include counting and matching.
Tip
- Initially, children can be confused by similar size piles (e.g. $5 \& 7$ ). Have one be more than double.


## \#13 Kindergarten Year

## The WA Curriculum Says:

Copy and create simple two part patterns.

## What this means

- Given a pattern, children replicate this identically. The repeated section (unit) is made of two parts.



## Activity Idea

- Thread or lace materials.
- Act out patterns e.g. jump, jump, clap, jump, jump, clap

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## \#15 Kindergarten Year

## The WA Curriculum Says:

Describe the sequence of familiar events and routines and use the everyday language of time such as morning, afternoon, daytime.

## What this means

- Familiar routines could include things like breakfast in the morning, lunch in the middle of the day and dinner in the evening


## Activity Idea

An association game where 'breakfast' is linked to morning, 'bedtime' to evening, etc.

## \#16 Kindergarten Year

The WA Curriculum Says:
Use language words to describe duration and relative duration, such as quick, slow, fast, it takes a long time.

## Activity Idea

Look at different sand timers. Classify as taking a 'short' or 'long' time to run out and compare two sand timers together - which is quicker an


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## \#18 Kindergarten Year

## The WA Curriculum Says:

Recognise names, sort and match basic two-dimensional shapes such as square, triangle and circle.

## What this means

- Sorting: given a set of shapes children can take out all of one type.
- Match: physically place two or more of the same shape together.


## Activity Idea

- Place images of squares, triangles and circles on the floor and ask specific children to stand on a specific shape or colour \& shape (e.g. red triangle).


## \#19 Kindergarten Year

## The WA Curriculum Says:

Sort, classify and match objects according to attributes, for example colours, sizes and shapes.

## What this means

- Moving from a single attribute (colour, shape, size) to multiple attributes e.g. red triangle, large circle etc.


## Activity Idea

- Simple sorting with Attribute Blocks


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## \#21 Kindergarten Year

The WA Curriculum Says:
Answer simple questions to collect information, such as using yes/no and group items in response to questions such as favourite pets.

## Activity Idea

- A quick fruit survey conducted by the teacher: "Do you like __" (yes/no). Teacher informally makes groups of fruit counters according to the responses.


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www.drpaulswan.com.au 3

## \#20 Kindergarten Year

The WA Curriculum Says:
Order objects according to one attribute.

## What this means

- Select one attribute such as colours, shape, size, length


## Activity Ideas

- Ask the child to place items in order from smallest to biggest (for example with Rainbow Pebbles).


## Tip

- Don't worry too much about this - ordering doesn't appear again until Year 2!

Quick Curriculum Guide K

## Further Support



Early Mathematical Experiences

Further Support
[HOME ABOUTUS workshops RESEARCH STORE REAONG CONTACTUS
Math Their Way Summary Newsletter
Available throught the Center's Store
Also available in a Kindle edition through
Amazon.com
The pdf copy of the book below is available as a FREE download


Math Their Way Summary Newsletter www.center.edu/NEWSLETTER/newsletter.shtml

## Further Support



School Friendly Playing Cards

## Foundation Review

Developed by Kelly Norris, with some support from Dr Paul Swan, the Screening and Intervention Resource in Early Number (SIREN) kit is a set of games and associated teaching manuals designed to be used with small groups of children. Each set of games and activities focus on key predictors of future mathematics success. Now we have released to update SIREN support materials available as individual or whole school licenses so you can print our whatever you need.

## Free Support



- We produced a simple online testing tool (see www.drpaulswan.com.au/interactive-materials) that pairs with the SIREN materials. Many of the above-mentioned predictors feature in the On Entry and Mathematics Assessment Interviews (MAI). These assessments focus on missing number, number identification type questions, magnitude comparison (which is the bigger number?) questions, subitising and early calculation.
- We recommend you use the free SIREN testing tool to look at these topics.



## Important Note

- Results are not saved online. Be ready to screenshot or write down results if you use the program with a group instead of interview-style.


## Further Assistance

Make it Count: Intentional teaching activities to develop counting skills is the perfect follow-up to Early Mathematical Experiences (listed earlier). Designed for early childhood teachers' right through to Year 2 this book includes a variety of practical ideas and games suited for young children. Clear links between the strategies and the Australian Curriculum are made so that teachers can be sure they 'are on track.' The book includes a set of colour game-boards that teachers may copy for use in their classrooms.

