## Quick Curriculum Guide for Parents (Year Two)

We understand that children as well as parents of children that are home from school may be feeling a bit stressed at the current time. Our aim is to try to make mathematics a little more accessible for you. We have put together a simple overview of some of the Australian Mathematics Curriculum, for each year level from Foundation to Year 6. Please note, most States and territories have made some adjustments to the Curriculum.

We have listed the key ideas that we think could be managed in a home setting for those inexperienced with teaching at home. 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 between children within the same year level.
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.

## \#1 Year Two (Number)

The Australian National Curriculum Says:
Read, write and say numbers to 1000

## What this means

- The child can read three-digit numbers in numerals (e.g. 642) and translate them to words ("six hundred and forty two") and vice versa.
- This does not mean doing calculations with three digit numbers.


## Activity Idea

Write three-digit numbers on sticky notes and have the child arrange them in order.

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## A sample card

## Note the features of these cards:

- The cards show only the pieces of the curriculum that in the opinion of Linda and myself are easily done at home.
- 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 Curriculum is broken up into three main content areas:

- Number and Algebra
- Geometry and Measurement
- Statistics and Probability

It is further broken up into four proficiency strands, which is really the action part of the curriculum:

- Understanding
- Fluency
- Problem Solving
- Reasoning

When children first learn a new concept, they need to develop a good understanding of the topic. This is where skilful teachers make a difference and it is hard to replicate that in a home environment. Parents probably won't have the equipment that is required. However, concepts are 'talked into being' so improving your child's mathematical vocabulary will help.
You can find a book of maths words called My Word Book on our website along with a Junior Illustrated Dictionary and another dictionary for older students called Maths Terms and Tables.

Fluency, as the name implies, is about practising and can be done at home in short bursts by playing focused games. Developing Fluency in Number would include learning the number names and being able to count.

Problem Solving and Reasoning often go together and involve a child thinking about a problem, applying their skills and then explaining how they did the problem. A child's mathematical vocabulary will make a difference. We have placed some free Problems of the Week (POTW) and some Perplexing Puzzles onto our website. We have provided answers and grouped them into rough Year levels.

The full Australian Curriculum: Mathematics can be found at www.australiancurriculum.edu.au/f-10-curriculum/mathematics/

Acknowledgement to Linda Marshall for her assistance developing these notes.

## \#1 Year Two (Number)

The Australian National Curriculum Says:
Number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point ..

## What this means

- Skip counting by 5s; e.g. 57, 62, 67,...
- Backwards by 3s; e.g. 25, 22, 19, ...


## Activity Idea

Calculator activity: Press $+5===\ldots$... and the calculator will count in 5's. Change the first number to start anywhere (e.g. $7+5===$ ).
Count backwards: Try 40-2 = = = ...

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## Year Two (Number)

The Australian National Curriculum Says:
Group, partition and rearrange collections up to 1000 in hundreds, tens and ones ...

## What this means

Partitioning: Splitting numbers up,
e.g.: $\quad 492=4$ hundreds +9 tens +2 ones

$$
492=400+90+2
$$

$$
492=300+192
$$

Rearranging: rearrange your partitions
e.g.: $\quad 90+400+2$

## Activity Idea

Play Place Value Express 202 (Interactive Materials)
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The Australian National Curriculum Says:
Recognise, model, represent and order numbers to at least 1000

## What this means

- The child can read three-digit numbers in numerals (e.g. 642) and translate them to words ("six hundred and forty two") and vice versa.
- This does not mean doing calculations with three digit numbers.


## Activity Idea

Write three-digit numbers on sticky notes and have the child arrange them in order.

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## \#4. Year Two (Number)

The Australian National Curriculum Says:
Explore the connection between addition and subtraction

## What this means

The child can explain all these parts are related,
e.g.: $5+4=9, \quad 5+?=9, \quad 9-?=5 \quad$ etc.

## Activity Idea

Flashcards: Write the three parts of an addition / subtraction fact on a diagram (as above). Cover one part and ask what is missing and all the related facts.

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## \#5 Year Two (Number)

The Australian National Curriculum Says:
Solve simple addition and subtraction problems ...

## What this means

- Without materials answer single digit problems (\#4)
- With materials, answer teen and two-digit problems


## Activity Idea

See Dr Paul Swan video "Place Value: Bundling \& Trading" and play a trading game (e.g. rolling a dice and adding to the collection of popsticks/matchsticks/pencils)

## \#6 Year Two (Number)

The Australian National Curriculum Says:
Recognise and represent multiplication as repeated addition, groups and arrays

## What this means

Links multiplication with:

- Repeated addition
- Groups
- Arrays (e.g. Muffin Tray)


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## Activity Idea

Array: Look at a muffin tray $(4 \times 3)$ or egg carton $(6 \times$ 2), rotate to show $3 \times 4$ and $2 \times 6$, respectively.

## \#7 Year Two (Number)

The Australian National Curriculum Says:
Recognise and represent division as grouping into equal sets and solve simple problems using these representations

## What this means

There are two types of division:

- Sharing: e.g. 12 biscuits shared among 6 children "one for you, one for you..." until they're all divided.
- Grouping: e.g. 80 lollies, making bags with 10 Iollies in each, "how many bags?"


## Activity Idea

Try the two situations above. Read The Doorbell Rang by Pat Hutchins

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## \#9 Year Two (Number)

The Australian National Curriculum Says:
Count and order small collections of Australian coins and notes according to their value

## What this means

Use real money. Children are given a few coins/small notes ( $\$ 5, \$ 10$ ) and work out how much it is altogether.
Small collections: we suggest no more than $\$ 20$.

## Activity Idea

Moneybox count: Empty the money box or coin collection and count it.

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## \#10 Year Two (Number)

The Australian National Curriculum Says:
Describe patterns with numbers and identify missing elements

## What this means

Example: 2, 4, 6, , 10
Describe: the child can explain the pattern is going up by twos
Identify: they can answer that the missing number is 8 .

## Activity Idea

Put out cards in a pattern, e.g. 1, 3, 5, 7, 9, 11 and turn one of the cards 7,9 or 11 over. Ask what's missing.

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## \#1.1. Year Two (Number)

The Australian National Curriculum Says:
Solve problems by using number sentences for addition or subtraction

## What this means

- An addition number sentence would be $5+4=9$.
- Also required here is translating a word problem into a number sentence e.g. "I had 5 lollies and my friend gave me some lollies and now I have 9, how many did they give me?" There are variations of this including subtraction (see Card 4).
- Given a number sentence e.g. $5+4=$ ? write an appropriate word problem "I had five lollies..."


## \#1 2 Year Two (Number)

The Australian National Curriculum Says:
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units

## What this means

appropriate uniform informal units: Not formal (e.g. millimetres) but rather using the same unit in your measurement experiments, e.g. measuring the length of all the books on the bookshelf using paperclips.
Watch for gaps and overlaps between the paperclips (or units)

## Activity Idea

Measure larger items around the home in handspans.

## \#13 Year Two (Measurement)

The Australian National Curriculum Says:
Compare masses of objects using balance scales

## What this means

- This is referring to this sort of balance.
- Comparisons are made in terms of heavier/lighter.



## Activity Idea

Cooking: If using scales, just refer to heavier/lighter rather than reading the value (e.g. 250 g )


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## \#15 Year Two (Measurement)

## The Australian National Curriculum Says:

Name and order months and seasons

## What this means

- How many months in a year? Name them in order.
- How many seasons in a year? Depending on where you live, this may be 4 (spring, summer, autumn and winter) or 2 (wet season and dry season), etc.


## Activity Idea

Refer to calendars on the wall.

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## \#17 Year Two (Geometry)

The Australian National Curriculum Says:
Describe and draw 2D shapes ...

## What this means

- We think they should know both regular and irregular shapes from Triangles to Octagons.
- Can they draw the shape when asked?
- Can they identify the key features, e.g. a triangle has 3 sides, a square has 4 sides the same length.
- Note: Angles are not formalised at this point. You can point them out but don't measure them.


## Activity Idea

- "Draw a three sided shape" \& "Draw a triangle" etc.

[^0]www.drpaulswan.com.au
\#14 Year Two (Measurement)
The Australian National Curriculum Says:
Tell time to the quarter hour using the language of 'past' and 'to'

## What this means

Try to use both analogue and digital clocks. See that, for example, quarter past 2 is the same as $2: 15$, and that quarter to 7 is the same as 6:45.

## Activity Idea

Time Match Quarter Hour Game
(available from drpaulswan.com.au/games)

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## \#16 Year Two (Measurement)

The Australian National Curriculum Says:
Use a calendar to identify the date and the number of days in each month

## Activity Idea

- Use the rhyme, "Thirty days has September, April, ..."
- Use a calendar to look to find and write today's date and to mark in special dates, for example, ANZAC Day, show them written in several ways, e.g. 25 April 2020, 25/4/2020, 25.04.2020.
- Name before and after dates, e.g. "What day of the week was three days before the 2nd of May?"

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## \#18 Year Two (Measurement)

The Australian National Curriculum Says:
Describe the features of three-dimensional objects

## What this means

- Shapes are flat, objects are three dimensional.
- Objects are made up of faces, corners (vertices) and edges



## Activity Idea

Cut up cereal and toblerone boxes and investigate the faces, edges and vertices

## \#19 Year Two (Geometry)

The Australian National Curriculum Says:
Interpret simple maps of familiar locations and identify the relative positions of key features

## What this means

Can interpret rough maps and directions with no reference to scale, compass directions, etc. The maps should properly reflect reality (e.g. the park is on the way home from school).

## Activity Idea

Read out instructions for the child to make an obstacle course. e.g. "Put the ball first, then the box, then the pillow ..."

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## \#~ Year Two (Stats \& Probability)

The Australian National Curriculum Says:
Identify practical activities that involve chance. Describe outcomes as 'likely' or 'unlikely', 'certain' or 'uncertain'

## What this means

Practical activities here means looking at familiar situations e.g. when playing a game they can describe possibilities in one of those four general terms. "It is unlikely that I will roll three sixes in a row."

## Activity Idea

Ask the question "What do you think the chances are that ... "

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## \#20 Year Two (Geometry)

The Australian National Curriculum Says: Identify and describe half and quarter turns

## What this means

Rotate shapes and objects. Do not refer to 'degrees' at this time.


## Activity Idea

Play a game where the child becomes a 'robot', and you 'program' it with statements such as, "take one step forward, make a quarter turn; take 3 steps forward and make a half turn", etc.

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## \#22 Year Two (Stats \& Probability)

The Australian National Curriculum Says:
Create displays of data using lists, table and picture graphs and interpret them

## What this means

The child can sort some objects into different categories, e.g. a child might list toy cars according to colour.
Picture graphs: only do ones where one picture = 1 item.

## Activity Idea

The child makes a list and then creates a table of books according to categories.

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## Further Support

A suggested order for teaching basic addition and subtraction facts (related to card \#4) can be found at www.drpaulswan.com.au/planning

Milestones: Basic Facts Addition \& Subtraction (Free Download)


## Further Support

We've only listed things we think you can do easily at home. At school the teacher would cover more material that we've omitted here. If you're a homeschool educator you'll likely already have activities for these.

Some further activities and assistance can be found in: Junior Illustrated Maths Dictionary



[^0]:    Teaching at Home - Parent Guide

