

PARENT WORKSHOP

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How much of your day revolves around Mathematics?

- What **time** should my alarm go off in the morning?
- Do I have **enough hot water** to wash my hair?
- How much milk do I need if I want an extra cup of tea?
- Will those **boxes** fit into my car?
- What **chance** of it raining tomorrow?

HOW CAN YOU HELP YOUR CHILD WITH MATHEMATICS?

- Talk about real life maths, e.g. house number
- Play maths games
- Share how you use maths at home and at work

WHAT IS THE VICTORIAN CURRICULUM DESIGNED TO DO?

- The basis for curriculum planning in Victorian schools for the P-10 years.
- The means for schools to place their work within a state wide context.
- A common basis for reporting student achievement within broadly defined outcomes.

Growth points in counting

Moving towards growth point 1

- unable to state the sequence of number names to 20
1. counting small collections
 2. using dot cards for subitising
 3. rote counting

Place a counter on each dot on a card

Put dot cards in order

Match dot cards with numeral cards

Students clip pegs on numeral cards to match the numeral

Growth points in counting

Moving towards growth point 2

- rote counts the number sequence to at least 20, but is unable to reliably count a collection of that size

1. conservation activities
2. one-to-one correspondence
3. counting larger collections

Give each child 6 counters, play match my counters, this is good for part/part whole

Ask students to roll a dot dice take that many counters, ie match each dot with a counter

Growth points in counting

Moving towards growth points 3 and 4

- confidently counts a collection of around 20
- counts forwards and backwards from various starting points between 1 and 100; knows numbers before and after a given number
- Choose a number from a bag of numbers, what is the number before, what is the number after this number
- Roll a dice what is the number before, the number after
- Number line activity, roll dice, place that many counters on number line. What number am I now at?
- Students draw their own number line

Growth points in counting

Moving towards growth point 5 and 6

- • Given a non-zero starting point, can count by 2s, 5s, and 10s to a given target
- • Can count from a non-zero starting point by any single digit number, and can apply counting skills in practical tasks.

Students can count on from different starting points, roll 3 or 4 dice, eg 3, 4, and a 5 Use the first two dice as the starting point 34 and the third dice is what they count by eg 5. Or roll a 3, 4, 5, and 3 start a 345 count by 3s

Make a number line. Students are given 10 random 3 digit numbers. They sort them into order to make a number line. They leave enough space between each pair of numbers for them to write one number between each pair.

Concepts: join, combine, take-away, missing addend, and difference

Counting strategies: make-all/count-all, cover and count on

Mental strategies: count on from larger (1, 2 and 3 only), doubles and near doubles, make-to-ten, think of addition ...

Initial recording: vertical to support place-value and avoid premature use of '=' sign ...

Mental computation: open number lines ...

Formal recording: 2 digits and beyond, decimals and fractions (extended recording)

INITIAL RECORDING:

Record vertically to support place-value and commutativity and to eliminate difficulties with the equal sign

For example,

$$\begin{array}{r} 2 \\ \text{and } 3 \\ \hline 5 \end{array}$$

→

$$\begin{array}{r} 2 \\ + 3 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 19 \\ - 8 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 16 \\ - 9 \\ \hline 7 \end{array}$$

INTRODUCE THE EQUAL SIGN:

via well-known equivalences such as:

$$5 + 4 = 6 + 3$$

There are two
numbers on
the right.

HOW CAN WE HELP?

- **Try and demonstrate a positive attitude to maths.**

- Make your child aware of mathematical experiences,

- Include your child in activities that involve math;

shopping, measuring ingredients, counting plates and utensils for dinner, reading the time on an analogue clock.

- In addition to math tools, such as a ruler and a calculator, use handy household objects, such as a measuring cup or containers of various shapes and sizes.

HOW CAN WE HELP?

Wrong answers can be helpful. It is better for students to have a go rather than not try at all. For example, if we are having 10 people for lunch, how many could be men and how many ladies?

- Mental computation.
- Ask children to explain their strategy in solving a problem
- E.g. There are 5 animals including birds in our yard. I counted 16 legs in total. Can you draw the animals?

COMPUTER GAMES

- [At Home With Math](#) nz maths
- Motion Math games
- Find Sums
- http://www.funbrain.com/match/index.html?wtlAC=fb_kids,link-fb

What tips can I use to help my child?

- Be positive about your own math abilities. Try to avoid saying "I was never good at math" or "I never liked math".
- Encourage your child to be persistent if a problem seems difficult.

SEQUENCE FOR TEACHING ALGORITHMS FROM PREPS TO GRADE 6

- There is a developmental sequence for teaching all four processes, addition, subtraction, multiplication and division.
- It is important to have consistency in approach as well as consistency in language used
- So ask your child's teacher the method and language they use when teaching a process

MAKE MATHS FUN

- Play games and do puzzles with your child that involve math.
They may focus on direction or time, logic and reasoning, sorting, or estimating.
- Ask questions like “How long do you think it will take to drive to school?”
- Help your child with concepts like time, days of the week and money

Ideas and tips

Try some of these suggestions to reinforce learning that has taken place at school:

Make the most of your child's out-of-school interests. Football fans, for example, can focus on predicting results and looking at league tables.

Game cards such as Uno, Trionimoes, dominoes are full of numbers and potential calculations.

Ideas and tips

Other games: Monopoly, chess, backgammon and darts. These all use numbers, counting, calculation and scoring. 'Battleships' is a fun way to use graphs. Let's play noughts and crosses.

CHANGES IN MATHS EDUCATION.

- Concrete materials, for example, dice, cards
- Students learn by discovery
- More problem solving
- Relate maths to real life situations
- More emphasis on mental maths
- Teach space and chance and data
- Changes in how we teach fractions and long division.

HELPING YOUR CHILD AT HOME WITH MATHS.

- Building on success is important
- Encourage children to work things out for themselves.
People learn by linking new ideas to ideas that they already have
- Encourage children to discuss their work
- Children need *time to think* and *time to answer* questions
- *Work with your child's teacher!!!*

UNDERSTANDING HOW CHILDREN LEARN MATHEMATICS:

We now know a lot more about **how** children learn mathematics.

Meaningless rote-learning, mind-numbing drill and practice, and doing it one way - the teacher's way, is no longer acceptable!

Concepts need to be experienced, Strategies need to be supported in various ways until they are acquired; and **EVERYTHING** needs to be discussed.

LETTER TO MY CHILD.

*I can teach you things,
but I cannot make you learn.*

*I can allow you freedom,
but I cannot be responsible for it.*

*I can offer you advice,
but I cannot decide for you.*

I can teach you to share,

LETTER TO MY CHILD.

but I cannot make you unselfish.

I can advise you about the facts of life,

but I cannot build your reputation.

I can tell you about drinks and drugs,

but I cannot say “no” for you.

I can teach you about kindness

but I cannot make you gracious.

LETTER TO MY CHILD.

I can model values for you,

but I cannot make you moral.

I can teach you respect,

but I cannot make you honourable.

I can give you love,

but I cannot make you beautiful inside.

LETTER TO MY CHILD.

*I gave you life,
but I cannot live it for you.*

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