PARENT WORKSHOP
Sue Fine
Beaumaris P.S.
2016
Grades 1 - 6
Have you every stopped to think just how much of your day revolves around Mathematics?

- What time should my alarm go off in the morning?
- Do I have enough time to wash my hair?
- How much milk do I need if I want an extra cup of tea?
What is AusVELS 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.
DEVELOPING ADDITION & SUBTRACTION:

**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,
INTRODUCE THE EQUAL SIGN:

via well-known equivalences such as:

5 + 4 = 6 + 3

There are two numbers on the right.
For example:

<table>
<thead>
<tr>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>+ 5</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

“3 ones and 2 ones is 5 ones
4 tens and 5 tens is 9 tens”

<table>
<thead>
<tr>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>+ 3</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

“8 ones and 6 ones is 14 ones, \textit{regroup} or \textit{rename} as 1 ten and 4 ones and record appropriately.
1 ten and 4 tens and 3 tens is 8 tens”

Model with materials (bundling sticks and MAB)
Sequence for Teaching Subtraction from Preps to Grade 6

*Develop subtraction*
– verbal stories, modeling, language of subtraction

*Develop concept of subtraction as*
– *take away*, eg I have 6 apples and I ate 2, how many have I got left?
- *missing addend*, eg I have 6 stamps and I sold some, I have 3 left, how many have I sold?
- *comparison*, eg I have 3 animals Robyn has 2 animals, how many more animals do I have?
SEQUENCE FOR TEACHING SUBTRACTION FROM PREPS TO GRADE 6

- Develop strategies, Count back, count down to, count up from

- Basic subtraction facts, Adding 10, tens facts, inverse to addition

- Thinking in tens, hundreds etc.
  3tens – 7, 3hundreds – 7, etc
SEQUENCE FOR TEACHING SUBTRACTION FROM PREPS TO GRADE 6

- Use vertical recording and symbol
  2 digits             3 digits  no renaming
  - 2 digits           - 2 digits

- renaming 1 ten as 10 ones
  2 digits
  - 2 digits
SEQUENCE FOR TEACHING SUBTRACTION FROM PREPS TO GRADE 6

- 3 digits
  - 3 digits

with renaming in 1’s, 10’s, and both.

1 ten as 10 ones
1 hundred as 10 tens
SEQUENCE FOR TEACHING SUBTRACTION FROM PREPS TO GRADE 6

- 3 digits
  - 3 digits with internal zero
SEQUENCE FOR TEACHING SUBTRACTION FROM PREPS TO GRADE 6

- Subtraction with larger numbers
- Subtraction with decimals
- Subtraction with common fractions, like denominators / unlike denominators
**Sequence for Teaching Multiplication from Preps to Grade 6**

*Before* learning tables students MUST be able to:

- skip count by 2, 4 & 5
- count on
- can operate with numbers
- double
- group in tens
- model and solve simple multiplication and division problems
**Sequence for Teaching Multiplication from Preps to Grade 6**

- Basic facts: **develop understanding** and then speed.
  - X2, double,
  - X10, 10 times bigger,
  - X5, is half 10 times table
GRADE 3

- X3, double plus 1 more,
- X4, double, double,
- X9, X10 – 1 group
GRADE 4

- X6  double 3 times table,
- X7,
- X8
3. **Abstracting multiplication and division**

*Solves multiplication and division problems where objects are not all modeled or perceived.*

**Find the pairs**

Each player has a set of cards 1-10

Player A arranges the cards into 5 pairs and only gives the answers.

1 x 8 = 8  
2 x 10 = 20  
3 x 6 = 18  
9 x 7 = 63  
4 x 5 = 20

Player A says 8, 20, 18, 63, 20

Player B has to guess the equations

Reverse roles
4. Basic, derived and intuitive strategies for multiplication

Can solve a range of multiplication problems using strategies such as commutativity, skip counting and building up from known facts.
GREAT GAME TO TEACH TIMES TABLES

- Multiplication War
  You need 4 sets of cards 1-5, or 1-9 for advanced players. Players divide the cards evenly between themselves. They turn over two cards each and multiply them. The player with the highest product wins all four cards.
5. Basic, derived and intuitive strategies for division

Can solve a range of division problems using strategies such as fact families and building up from known facts
Divide whole numbers and decimals by ones (to 2 decimal places):

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Can I share 4 hundreds among 8? No.
Trade hundreds for tens
Can I share 45 tens among 8? Yes ...
How many left to share? 5 tens
Trade tens for ones
Can I share 58 ones among 8? Yes ...
How many left to share? 2 ones
Rename as tenths
Can I share 20 tenths among 8? Yes ...
How many left to share? 4 tenths
Rename as hundredths
Can I share 40 hundredths? Yes ...
How many left to share? None

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57.25

\[ 8 \overline{)458.00} \]

\[ 8 \overline{)458.00} \]
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\[
8 \overline{)458}
\]

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What tips can I use to help my child?

Be positive about maths!
- Let your child know that everyone can learn math.
- Let your child know that you think math is important and fun.
- Point out the ways in which different family members use math in their jobs.
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.
Involve your child in planning a holiday or day out.

Set a budget and get them to help calculate the cost of tickets and food.

If the trip is to be abroad children can help with the conversion of currencies.
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!!!*
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.
I gave you life,
but I cannot live it for you.