

*Helping Children To Learn
Information Booklet for
Parents*

Numeracy in the Year 5



WALT AND WILF?



A Little bit of Theory..

We want to encourage our students to be actively involved in their learning because research shows that they are more motivated when they understand not just the task but the learning objective of the task. We want them to understand what they are being asked to do and what we hope they will learn in order to help them to make better decision about how they tackle a set task.

Learning is more effective if they are asked to help create the success criteria (*i.e. How will we know we've achieved this?*) because they can be clear about how their work will be judged and what the teacher wants to see in the finished task. By inviting children to help create the success criteria, we are involving them in their own learning and encouraging them to evaluate their performance.

Children need to know why they are learning something so that they can see how their work fits into the "bigger picture".



WALT is short for **We Are Learning...**

These are the learning objectives for the lesson.

WILF is short for **What I'm Looking for...**

These are the success criteria against which the children and teacher judge how well they are doing.



Example of WALT and WILF in Maths	
Year 5	
<p style="text-align: center;">WALT We are learning... To read and represent time as 24-hour time</p>	<p style="text-align: center;">WILF What I'm looking for... I know how to read and represent 24-hour time</p>

You can help by asking your child “**What did you learn today?**” rather than “**What did you do today?**”

Problem Solving Strategies Taught Across Year 5			
Term 1	Term 2	Term 3	Term 4
Part-Part-Whole Patterns Focus on Parts MADt	MADt - (Multiplication and Division Triangle) Part-Part-Whole Patterns Focus on parts	MADt— Multiplication and Division Triangle) Patterns Part-Part-Whole Focus on parts	Focus on Parts Patterns Part-Part-Whole

Part-Part-Whole

All addition and subtraction problems can be represented using the Part-Part-Whole Model. The Part-Part-Whole strategy enables students to identify the correct operation and represent the situation using the appropriate mathematical numbers and symbols.

Part + Part = Whole



This strategy is useful when.....

Patterns

Look at a series of objects, colours or numbers to see if you can find a pattern. The pattern should repeat and may not always be obvious.

Look for a pattern type



This strategy is useful when.....

Focus on Parts

Analyse the component parts that form the object - their shape, size and placement, considering how the components fit and hold together.

See the parts to
match the whole



Benchmark - Angles

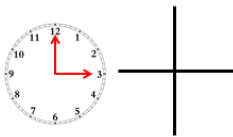
Students are frequently required to compare or classify angles.

Concrete Representation

Semi-Abstract

Abstract

Significant benchmark angles are 90° , 180° and 270° .



Students can be provided with a transparency to overlay on the angle they are comparing



Students sketch reference angles onto angle they are comparing



Students visualise benchmark angles on the angle they are comparing

Benchmark - Time/Location

When calculating elapsed time it is useful for students to benchmark to the next

- hour
- half hour
- quarter hour

Or

- noon
- midnight

Concrete Representation

Students can be provided with a clock face to skip count time

Semi-Abstract

Students represent time on a number line

Abstract

Students visualise benchmark angles on the angle they are comparing

Short Division

Short division is similar to long division, but it involves less written work and more mental arithmetic. The general method for both short and long division is the same, but in short division you write down less of your work, doing the simple subtraction and multiplication mentally. To understand short division, you must have mastered the basic skills of subtraction and multiplication. Short division is ideal when the divisor, the number you are dividing into another number, is less

$$\begin{array}{r}
 16 \\
 5 \overline{) 847} \\
 \underline{5} \\
 34 \\
 \underline{30} \\
 47 \\
 \underline{45} \\
 2
 \end{array}$$

MADt—Multiplication and Division Triangle

Fact triangles are an effective device to memorise because they emphasise fact families.

Multiplication & Division Triangle

NUMBER FACTS

Students will develop fluency and confidence with numbers and calculations by saying number sequences.. The strategies covered in Year 4 are:

- Doubles (extension)
- Near Doubles
- Rainbow Facts (extension)
- Count on 1,2, 3
- Add zero
- Add 10
- Add 100
- Count back 1, 2, 3
- Take zero
- Take 10
- Take 100
- Timetables to 12
- Division from 1 to 12

WARMUPS

Goal: Warmups are designed to promote fluency with core skills in a variety of contexts (to move core curriculum content from short term memory to long term memory).

Usually delivered at the start of a Maths block. A typical numeracy warmup may include:

- Number facts
- Times tables
- Counting
- Four processes
- Place Value
- Rules, formulae
- Maths vocabulary
- Applications on concepts/skills
- Selection of previous work covered

Concepts taught across Year 5 - Australian Curriculum

Term 1

Number and place value

- ◆ make connections between factors & multiples
- ◆ identify numbers that have 2, 3, 5 or 10 as factors
- ◆ represent multiplication using the split & compensate strategy
- ◆ choose appropriate procedures to represent the split & compensate strategy of multiplication
- ◆ use a written strategy for addition & subtraction
- ◆ round & estimate to check the reasonableness of answers
- ◆ explore mental computation strategies for division
- ◆ solve problems using mental computation strategies & informal recording methods
- ◆ compare & evaluate strategies & make generalisations.

Fractions and decimals

- ◆ use models to represent fractions
- ◆ count on & count back using unit fractions
- ◆ Identify & compare unit fractions & solve problems using unit fractions
- ◆ add & subtract simple fractions with the same denominator

Using units of measurement

- ◆ investigate time concepts & the measurement of time
- ◆ read & represent 24-hour time
- ◆ measure dimensions
- ◆ estimate & measure the perimeters of rectangles
- ◆ investigate area metric units, estimate & calculate area of rectangles

Chance

- ◆ identify & describe possible outcomes
- ◆ describe equally likely outcomes
- ◆ represent probabilities of outcomes using fractions
- ◆ conduct a chance experiment & investigate the fairness of a game

Data representation and interpretation

- ◆ build an understanding of data, develop the skill of defining numerical & categorical data
- ◆ generate sample questions
- ◆ explain why data is either numerical or categorical
- ◆ develop an understanding of why data is collected
- ◆ choose appropriate methods to record data, interpret data
- ◆ generalise by composing summary statements about data

Concepts taught across Year 5 - Australian Curriculum

Term 2

Number and place value

- ◆ round & estimate to check the reasonableness of answers
- ◆ explore & apply mental computation
- ◆ strategies for multiplication & division
- ◆ solve multiplication & division problems with no remainders
- ◆ solve problems using mental computation strategies & informal recording methods,
- ◆ compare & evaluate strategies that are appropriate to different problems & explore & identify factors
- ◆ & multiples

Fractions and decimals

- ◆ make connections between fractional numbers & the place value system, & represent
- ◆ compare & order decimals

Patterns and algebra

- ◆ create & continue patterns involving whole numbers, fractions & decimals
- ◆ explore strategies to find unknown quantities

Shape

- ◆ apply the properties of 3D objects to make connections with a variety of two-dimensional representations of 3D objects
- ◆ represent 3D objects with 2D representations

Location and transformation

- ◆ investigate & create reflection & rotation symmetry
- ◆ describe & create transformations using symmetry
- ◆ transform shapes through enlargement & describe the features of transformed shapes

Geometric reasoning

- ◆ identify the components of angles
- ◆ compare & estimate the size of angles to establish benchmarks
- ◆ construct & measure angles

Data representation and interpretation

- ◆ explore methods of data representations to construct & interpret data displays
- ◆ reason with data

Concepts taught across Year 5 - Australian Curriculum

Term 3

Number and place value

- ◆ round & estimate to check an answer is reasonable
- ◆ use written strategies to add & subtract
- ◆ use an array to multiply one- & two-digit numbers
- ◆ use divisibility rules to divide
- ◆ solve problems involving computation & apply computation to money problems
- ◆ multiplies whole numbers & divides by a one-digit whole number with & without remainders

◆

Fractions and decimals

- ◆ makes connections between fractions & decimals
- ◆ compares & orders decimals

Money and financial mathematics

- ◆ investigate income & expenditure
- ◆ calculate costs
- ◆ investigate savings & spending plans
- ◆ develop & explain simple financial plans

Patterns and algebra

- ◆ creates, continues & identifies the rule for patterns involving the addition & subtraction of fractions
- ◆ use number sentences to find unknown quantities involving multiplication & division

Using units of measurement

- ◆ chooses appropriate units for length, area, capacity & mass
- ◆ measures length, area, capacity & mass
- ◆ finds perimeter, problem solves & reasons when applying measurement to answer a question

Location and transformation

- ◆ explore mapping conventions
- ◆ interpret simple maps
- ◆ use alphanumeric grids to locate landmarks and plot points
- ◆ describe symmetry
- ◆ create symmetrical designs & enlarge shapes

Concepts taught across Year 5 - Australian Curriculum

Term 4

Students develop understandings of:

Number and place value

- ◆ apply mental & written strategies to solve addition
- ◆ subtraction, multiplication & division problems
- ◆ apply computation skills, use estimation & rounding to check reasonableness
- ◆ identify & use factors & multiples

Fractions and decimals

- ◆ recognise that the place value system can be extended beyond thousandths
- ◆ compare, order & represent decimals
- ◆ locate decimals on a number line

Money and financial mathematics

- ◆ create simple budgets, calculate with money
- ◆ identify the GST component of invoices & receipts
- ◆ make financial decisions

Using units of measurement

- ◆ read & represent 24-hour time
- ◆ convert between 12- & 24-hour time

Location and transformation

- ◆ use a grid to describe locations on maps
- ◆ describe positions using landmarks & directional language

Geometric reasoning

- ◆ estimate & measure angles
- ◆ construct angles using a protractor

Chance

- ◆ order chance events
- ◆ express probability on a numerical continuum
- ◆ apply probability to games of chance
- ◆ make predictions in chance experiments

Data representation and interpretation

- ◆ design data-collection questions & tools
- ◆ collect data
- ◆ represent as a column graph or dot plot
- ◆ interpret data to draw a conclusion

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Parent and Engagement Committee

Chairperson - June Riley
Parent : Jim Green
Teacher/Parent: Kellie Hanrahan
Teacher: Maree Frederiksen
Chaplain: Niki Durrheim
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