A Guide to...

TEACHER PLANNING

Year → Term → 4 Week Block → Units of Work → Single Lessons

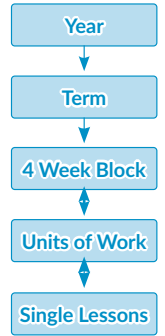## 1 The Year

Get an overall feel for the Year level(s) you will be teaching. Consider also that with various interruptions you may only have 28-30 effective weeks in the year.

2 The Term

This guide contains a term planner. It's recommended that Term 1 begins with a review of the previous year, some assessment and the establishment of routines. Term 2 includes report writing as does Term 4, so it's always a good idea to reserve some easier topics or revision for these periods.

3 The 4-Week block

The 4-week block is block of time within the term filled with a collection of lessons that connect to each other. Using 4-week blocks helps in planning, making connections and review/assessment.

4 The Unit of Work (series of lessons)

Some topics will require several lessons in order for students to best understand a concept. **Curriculum Threads Charts** can assist in developing units of work.
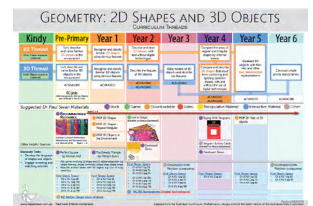
5 The Lesson

The lesson is where your planning is put into action. Having a lesson plan can improve student outcomes and make planning easier.

As always, consult the most up to date version of the curriculum in your state or territory.

1. The Year

The best place to start your planning is to figure out what the year will look like.

That involves asking:

1) What do the students need to learn this year?

2) What should the students should have learned last year?

Year 3 Quick Curriculum Guide

The free downloadable **Quick Curriculum Guides** available from drpaulswan.com.au list what children will need to know by year level.

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.

Year

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Term

↕

4 Week Block

↕

Units of Work

↕

Single Lessons
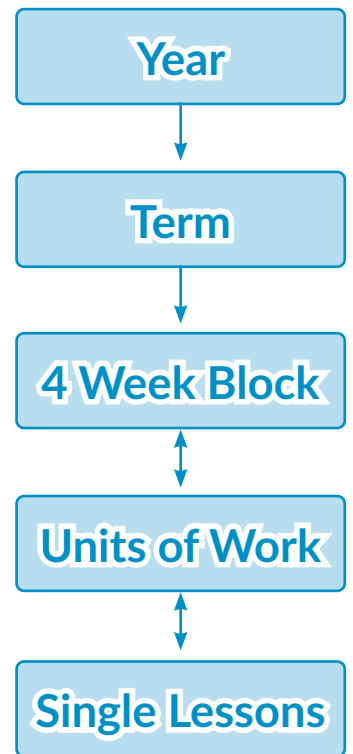
2. The Term

Terms are roughly ten weeks long, but by the time you factor in various interruptions you will realistically only have about eight weeks of effective instruction per term.

Students will have been off school for weeks by the start of the new year and may have forgotten a few things. It makes sense to spend a few weeks at the start of the year reviewing what the students should know. For example, a Year 4 teacher may first look at the **Year 4 Quick Curriculum Guide**, then the Year 3 guide for what to review. You can't review everything - the best things to review are the starred ⭐ items. There can also be some value in looking forward. The Year 4 teacher in this example might look at the **Year 5 Quick Curriculum Guide** to see what fractions content is listed there to know what *not* to do this year.

A review also helps you:

• work out the abilities of the students as a cohort and as individuals.

• review key maths concepts taught in the previous year.

• establish routines.

Remember that Term 2 and Term 4 include report writing, so assessments need to be completed before certain times in order to be used for the report. Some years also need to mark out time for NAPLAN.

Taking all the above into account, one flexible way to plan is to use **4-week blocks**.

3. The 4-Week Block

A good way to plan your term is using four-week blocks. A four-week block is made up of a series of units of work and allows you to plan such that you able to:

Term 1	
Week 1	
Week 2	4-week Block: previous year review
Week 3	
Week 4	
Week 5	
Week 6	**4-week Block #1**
Week 7	*Multiple connected units of work*
Week 8	
Week 9	*Final week: Assess content from the block*
Week 10	Summative and Formative Assessment of Term 1

- break up your plan easily while keeping flexibility

- make connections between topics

- balance mentally taxing lessons with easier ones

- easily review the effectiveness of the previous four weeks with summative assessment at the middle and end of the term.

It's recommend that your first 4 week block is used for review for reasons previously stated.

For other blocks once you have your topics in mind take a look at the **Curriculum Threads Charts** available on www.drpaulswan.com.au.

Example 4-week block

- Unit of work (2 lessons) on Addition (Number)
- Unit of work (2 lessons) on 2D Shape (Geometry)
- Lesson on multiplying and dividing by 10, 100 & 1000
- Make connections between all the above by following up with a lesson applying those skills to solve measurement and perimeter problems.
- Lesson on symmetry (easier work to balance out the tough stuff)

etc.

- At the end of the four-week block, assess. Remedy issues with important ⭐ concepts.

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4. The Unit of Work

The unit of work is a series of lessons on a particular topic.

Here are some good sources for units of work:

- QLD Education Dept: https://education.qld.gov.au/curriculum/learning-at-home/mathematics

- NZMaths: https://nzmaths.co.nz/units-work

- AAMT ReSolve: https://www.resolve.edu.au/teaching-resources

A **Curriculum Threads Chart** visually represents how a topic 'threads' through the years. You can see what was taught in previous years and how the topic continues in the following years. It can be a valuable organising tool to see if a topic begins or ends in your year level.

Available online for free at drpaulswan.com.au/planning
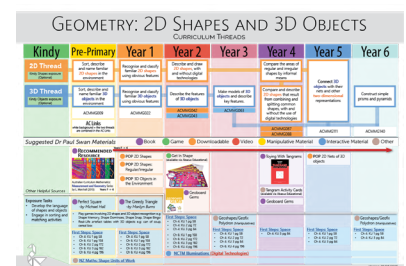
Term 1

Week 1	**4-week Block: previous year review**
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	**4-week Block #1**
Week 7	*Multiple connected units of work*
Week 8	
Week 9	*Final week: Assess content from the block*
Week 10	**Summative and Formative Assessment of Term 1**

Term 2

Week 1	**4-week Block #2**
Week 2	*Multiple connected units of work*
Week 3	
Week 4	*Final week: Assess content from the block*
Week 5	
Week 6	**4-week Block #3**
Week 7	*Multiple connected units of work*
Week 8	
Week 9	*Final week: Assess content from the block*
Week 10	**Summative and Formative Assessment of Terms 1 & 2**

Term 3

Week 1	**4-week Block #4**
Week 2	*Multiple connected units of work*
Week 3	
Week 4	*Final week: Assess content from the block*
Week 5	
Week 6	**4-week Block #5**
Week 7	*Multiple connected units of work*
Week 8	
Week 9	*Final week: Assess content from the block*
Week 10	**Summative and Formative Assessment of Terms 1 - 3**

Term 4

Week 1	**4-week Block #6**
Week 2	*Multiple connected units of work*
Week 3	
Week 4	*Final week: Assess content from the block*
Week 5	
Week 6	
Week 7	**Full year review**
Week 8	
Week 9	
Week 10	

5. The Lesson

Research has proven that planning lessons that are taught improves that chance students will learn the concept being taught. Sullivan (2011) presents 6 key principles specifically for the teaching of mathematics in his curriculum framing paper. A more general set of principles known as the High Impact Teaching Strategies (HITS) operate across all learning areas. Of the 6 Sullivan principles below, the starred ones **also** appear in research about HITS. These principles could therefore be considered extremely important.

1. **Articulate goals** ⭐
   - Explain the purpose of the lesson to students and ensure they know what they are expected to do.

2. **Making connections (build on what you know)**
   - Make explicit connections to previous content. This is easier if you link units of work where possible.

3. **Fostering engagement**
   - Student engagement involves more than just the students looking at the teacher. Engagement can be fostered when activities provide a challenge for the students. Choice and relevance to daily life also play a part in engaging students. Catherine Attard's website engagingmaths.com illustrates three components of engagement.

4. **Differentiating challenges**
   - You cannot teach 32 individual lessons at once. What you can do is take an activity and alter the content, the process or the product to differentiate it for varying abilities.

5. **Structuring lessons** ⭐
   - Following a lesson structure keeps things moving and ensures important elements aren't missed.

6. **Promoting fluency and transfer (practice)** ⭐
   - Sullivan recommends fluency lessons and then regularly-spaced practice, sometimes referred to as warm ups and mental maths. See **Milestones** (below) for basic fact fluency support.

The lesson plan on the following page is a useful proforma for creating lessons with (1) and (5) built-in.

References: Sullivan, P. (2011). Teaching Mathematic: using research-informed strategies. Melbourne: ACER. Download: https://research.acer.edu.au/aer/13/

A Guide on High Impact Teaching Studies may be downloaded from https://www.education.vic.gov.au/school/teachers/teachingresources/practice/improve/Pages/hits.aspx

Milestones

Try out the free **Milestones** documents which detail a system for teaching and learning basic facts fluency (Sullivan key principle 6).

The Milestones web view, available online for free at drpaulswan.com.au/planning lists the specific applicable games, books and materials that I've made for each milestone, as well as listing the relevant free downloads on the site.
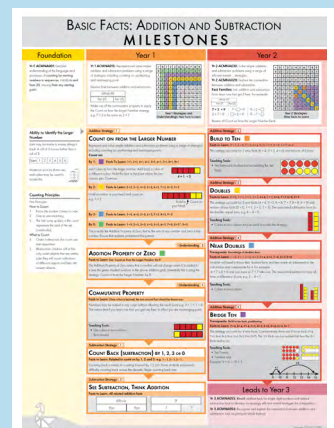
Lesson Plan Model

A lesson plan is the structure (not the content) of a lesson. Using a lesson plan means that both the students and the teacher know what the purpose of the lesson is.

Sample Lesson Plan:

Warm Up / Mental Component Fluency

10 min

The best warm ups:

- have a clear focus / purpose,
- can be differentiated easily,
- require minimal setup,
- have simple rules or instructions

See **"A Guide to Warm Ups"** for more information, including a list of quality warm ups

Tune In

10 min

- Use phrases like: "We are Learning Today..." (WALT), "What I am Looking for..." (WILT)
- Have a Lesson Focus
- Introduce the vocabulary for the lesson (this can be done in many ways - see **"A Guide to Mathematical Vocabulary"** for a large range of ideas.
- Link to prior learning

Lesson Body - Focus

30 min

- Class groupings vary according to the nature of the task or opportunity for practice. At times teachers will work with individuals, pairs, groups (3-6) or the entire class.

Lesson body: different lesson types require different approaches

- Understanding: Explicit Teaching
- Fluency: Teach, Practice, Apply
- Problem Solving: teacher modelling, student solving similar problems. Eventually students have to solve without being shown, otherwise they are not problem solving.
- Reasoning: students explaining, describing, discussing & investigating. Where possible have them use the language from the tune in.

Reflection (Plenary)

10 min

- Lesson review involving students using the language of the lesson to explain what they have learned. This part of the lesson assist with formative assessment.

Similar structures exist and are the same in concept, such as "Launch-Explore-Discuss."
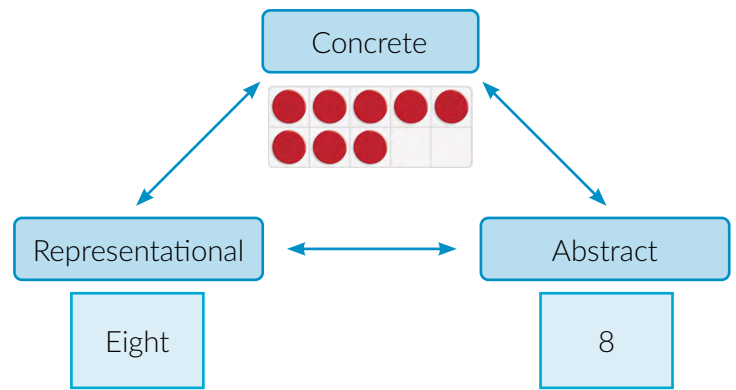
ELPS

The teaching of mathematics typically follows a CRA approach

Concrete: physical manipulatives.
(For a comprehensive explanation of various common manipulatives see www.mathsmaterials.com)

Representational: Images, picture, screen

Abstract: Symbols

In our experience many students have difficulty moving from the concrete experience to the representational aspect of the concept, so we recommend a variation to the CRA model called ELPS.

The acronym ELPS, developed by Liebeck (1991) is a good reminder to teachers to emphasise the language component when teaching a new concept or revising one that was previously taught.

Experience

Language

Picture

Symbols

Providing 'Experiences', especially when supported with the appropriate language, helps students to make meaningful mathematical connections. ELPS may be used to help diagnose where a break down in undertsanding may occur. For example a student might struggle to understand or interpret the symbol or symbols used when reading mathematics and may be encouraged to draw a diagram or explain what it means in words or show what the base concept using materials. The teacher can then listen and watch to see whether the pictures and language match the mathematical idea.
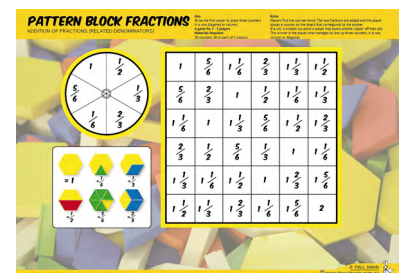
Example: Fractions

For example, when teaching students about fractions, concrete materials such as Pattern Blocks might be used to develop the concept. Language such as 'equal parts of a whole' and numerator and denominator might be linked to the experience. Pictorial images may be drawn and later again linked to the symbols.

Finally symbols are used to explain what has taken place (recording). This process could take a series of lessons (a unit of work) or even several units of work spread out over the year.

The game Pattern Block Fractions links Concrete, Representational and Abstract

References

Liebeck, P. (1991). *How children learn mathematics*. Penguin
This book is available in digital form at: https://archive.org/details/HowChildrenLearnMathematics-PamelaLiebeck