

# enVisionMATHS Online Tutorial Guide 2

## Tutorial 2.1: Planning

### Introduction

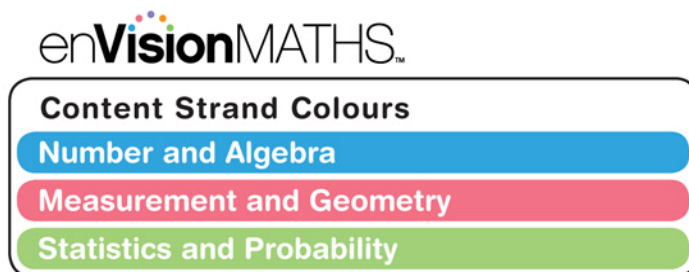
This guide looks at planning for teaching with enVisionMATHS, including how enVisionMATHS aligns with the Australian Curriculum.

### Planning

Let's start looking at planning with enVisionMATHS by demonstrating how it aligns with the Australian Curriculum: Mathematics. You will then see how this aspect of your planning is inbuilt.

### enVisionMATHS and the Australian Curriculum

enVisionMATHS is aligned with the Australian Curriculum: Mathematics content and proficiency strands. Across the program components, the following colours have been allocated to the three content strands:



These colours show at a glance which strand is being focused on.

### Content Descriptions

Specific Australian Curriculum references (content description codes) are listed at the top of each Foundation to 2 and bottom of each 3 to 6 Student Activity Book lesson. They are also provided on page 2 of each Teacher Booklet.

enVisionMATHS also provides a scope and sequence across all 7 levels related to the Australian Curriculum content strands and sub-strands. This is in the Overview and Implementation Guide.

Scope and Sequence

Scope and Sequence

Australian Curriculum Reference	enVisionMATHS Scope and Sequence			enVisionMATHS Scope and Sequence			
	Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	
	Number and Algebra			Number and Algebra			
<b>Number and place value</b>	<b>3.1</b> Counting and Writing 1, 2 and 3 <b>3.2</b> Counting and Writing 4 and 5 <b>3.3</b> Identifying One More Than <b>3.4</b> Reading and Writing 0 <b>3.5</b> Counting and Writing 6 and 7 <b>3.6</b> Counting and Writing 8 and 9 <b>3.7</b> Counting and Writing 10 <b>3.8</b> Ordering Numbers on a Number Line <b>3.9</b> Comparing Numbers to 10 <b>5.1</b> Adding Groups <b>5.2</b> Making Numbers in Different Ways <b>5.3</b> Adding to 4 and 5 <b>5.4</b> Adding to 6 and 7 <b>5.5</b> Adding to 8 and 9 <b>5.6</b> Adding to 10	<b>1.1</b> Counting and Writing Numbers 0 to 5 <b>1.2</b> Counting and Writing Numbers 6 to 10 <b>1.3</b> Counting and Writing Numbers 10, 11, 12 <b>1.4</b> Counting and Writing Numbers 13 to 19 <b>1.5</b> Counting and Writing Numbers to 20 <b>1.6</b> Ordering Numbers Using a Number Line <b>1.7</b> Counting Beyond 20 <b>1.8</b> Comparing Two Numbers <b>1.9</b> Ordering Three Numbers <b>2.1</b> Drawing Addition Stories <b>2.2</b> Adding to 8 and 7	<b>1.1</b> Counting and Writing Numbers 11 to 20 <b>1.2</b> Counting by 10s <b>1.3</b> Using Models for 10s and 1s <b>1.4</b> Reading and Writing Numbers to 30 <b>1.5</b> Using Models to Compare Numbers <b>1.6</b> Identifying Below, After and Between <b>1.7</b> Ordering Numbers <b>1.8</b> Ordering Numbers on a Hundred Chart <b>1.9</b> Making 100 <b>1.10</b> Counting by 10s Past 100 <b>2.1</b> Writing Addition Number Sentences <b>2.2</b> Understanding Addition Stories <b>2.3</b> Understanding More Addition Stories	<b>1.1</b> Reading and Writing Hundreds <b>1.2</b> Reading and Writing Numbers to 1000 <b>1.3</b> Building Numbers Beyond 1000 <b>1.4</b> Understanding Odd and Even Numbers <b>1.5</b> Using Clues to Identify Numbers <b>1.6</b> Using Place Value to Add and Subtract <b>1.7</b> Ordering Three Numbers <b>1.8</b> Comparing Numbers <b>1.9</b> Rounding Whole Numbers <b>2.1</b> Using Mental Maths to Make 10 <b>2.2</b> Adding Tens to a 2-Digit Number <b>2.3</b> Adding Tens <b>2.4</b> Adding Tens and Ones <b>2.5</b> Using Models to Add	<b>1.1</b> Reading and Writing Thousands <b>1.2</b> Reading and Writing 1-Digit Numbers <b>1.3</b> Comparing and Ordering Whole Numbers <b>1.4</b> Rounding Whole Numbers <b>2.1</b> Using Mental Maths to Add <b>2.2</b> Using Models to Add 3-Digit Numbers <b>2.3</b> Adding Whole Numbers <b>2.4</b> Adding Three or More Numbers <b>2.5</b> Using Diagrams to Connect Addition and Subtraction <b>3.1</b> Using Models to Subtract 2-Digit Numbers <b>3.2</b> Subtracting on a Hundred Chart <b>3.3</b> Subtracting 2-Digit Numbers	<b>1.1</b> Representing Thousands in Different Ways <b>1.2</b> Representing Millions in Different Ways <b>1.3</b> Comparing and Ordering Whole Numbers <b>1.4</b> Rounding Whole Numbers <b>2.1</b> Using Mental Maths to Find Missing Parts <b>2.2</b> Rounding and Estimating Whole Numbers <b>2.3</b> Using Mental Strategies to Add and Subtract <b>2.4</b> Adding and Subtracting Large Numbers <b>3.6</b> Asking Questions to Solve Multiplication Problems <b>4.1</b> Finding Factors Using Multiplication	<b>1.1</b> Representing Millions in Different Ways <b>1.2</b> Comparing and Ordering Whole Numbers <b>1.3</b> Understanding Positive and Negative Numbers <b>1.7</b> Multiplying and Dividing by 10, 100 and 1000 <b>2.1</b> Understanding Commutative and Associative Properties of Addition <b>2.2</b> Understanding Multiplication Properties <b>2.3</b> Using the Distributive Property <b>2.4</b> Using Mental Maths to Apply Properties of Operations <b>2.5</b> Understanding Properties and Relationships Between Operations <b>3.4</b> Solving Real-World Problems

A planning document mapping enVisionMATHS next to each content description is provided in each Overview and Implementation Guide and in editable form on the Teacher Resource DVD.

Year 4 Planning Document				
Australian Curriculum Reference	enVisionMATHS Student Activity Book year 4	SAB 4* (pg no.)	TRB 4* (booklet no: pg no.)	
<b>NUMBER AND ALGEBRA</b>				
<b>Number and place value</b>				
NA071 Investigate and use the properties of odd and even numbers	<b>1.1</b> Reading and Writing Thousands <b>1.3</b> Comparing and Ordering Whole Numbers <b>3.2</b> Subtracting on a Hundred Chart <b>4.4</b> Multiplying in Any Order	4 8 28 54	1:12 1:16 3:14 4:18	
NA072 Recognise, represent and order numbers to at least tens of thousands	<b>1.1</b> Reading and Writing Thousands <b>1.2</b> Reading and Writing Larger Numbers <b>1.3</b> Comparing and Ordering Whole Numbers <b>1.4</b> Rounding Whole Numbers	4 6 8 10	1:12 1:14 1:16 1:18	
NA073 Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems	<b>2.1</b> Using Mental Maths to Add <b>2.2</b> Using Models to Add 3-Digit Numbers <b>2.3</b> Adding Whole Numbers <b>2.4</b> Adding Three or More Numbers	14 16 18 20	2:12 2:14 2:16 2:18	

### Proficiency Strands

The proficiency strands of the Australian Curriculum: Mathematics are embedded in the instructional design of the enVisionMATHS program.

#### Understanding

Understanding (that is to build and apply knowledge, make connections) is achieved through the use of Visual Learning Animations and Bridges and videos to explain maths concepts, and through applying this understanding in, for example, Investigations Cards.

#### Fluency

Fluency (that is to develop skills in applying appropriate procedures, recall and apply facts and concepts; to become a mathematician) is in the Guided and Independent Practice in the Student Activity Books, Mental Computation and Minds Cards and through the use of Tools4Maths.

### Problem-solving

Problem-solving (that is make choices, interpret, model and communicate) is in the open-ended problem-solving for every lesson in the Student Activity Books and in the investigations and games cards.

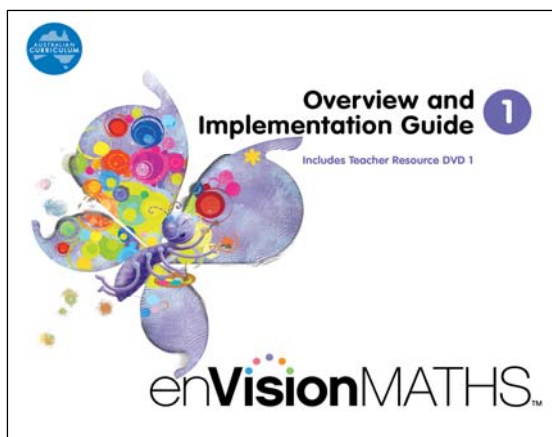
### Reasoning

Reasoning (that is to reason mathematically by analysing, proving, evaluating, explaining, inferring, justifying and generalising) is explicit on Student Activity Book pages in Years 3 to 6; in the Interview Assessment in Foundation to 2 Teacher Booklets and in the Maths Thinking Skills Books.

## enVisionMATHS Planning

enVisionMATHS is designed to fit in with whole-school planning and be flexible so the topics can be taught in the order provided or in the order you decide. Below we outline the planning aids that are provided within enVisionMATHS.

## Overview and Implementation Guide



The Overview and Implementation Guide can act as a broad-level planning tool for each year level. As well as describing each element of the program and providing implementation guidance, each guide provides specific planning assistance.

**Topic 1: Number and Place Value**

Includes Teacher Resource DVD 1

enVisionMATHS™

Diagnostic Pre-assessment: Topic 1

Lessons		
Lesson	SAB* page	TRB† page
1.1 Reading and Writing Thousands	4	12
1.2 Reading and Writing Larger Numbers	6	14
1.3 Comparing and Ordering Whole Numbers	8	16
1.4 Rounding Whole Numbers	10	18

Ongoing assessment • Diagnostic Post-assessment: Topic 1

\* SAB = Student Activity Book 4, TRB = Year 4 Teacher Resource Booklet 1

### Contents Sequence and Timings

The order in which the topics are presented in each year level is the suggested program for the year. What is covered and which resources are available within each topic is provided in the Contents Sequence pages showing all the components for each topic in a visual form mirroring the Suggested Teaching Sequence.

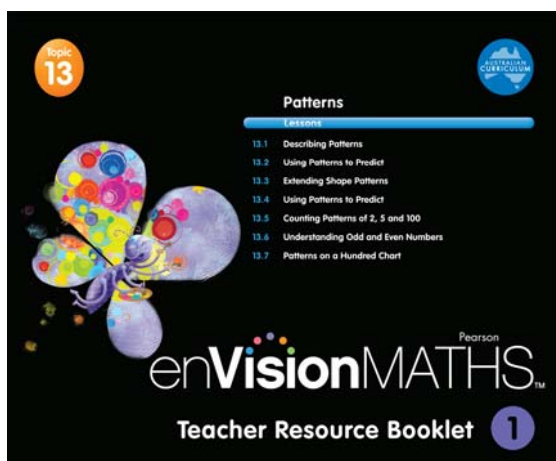
This contents sequence also includes the suggested timing for each topic. These timings are by no means prescriptive and are based on the premise that about 2 to 3 lessons could be covered in a week.

## Vocabulary and Materials

The vocabulary introduced or revised in the student books for each year level is compiled into one list in the appropriate Overview and Implementation Guide. Similarly, all materials recommended for the lessons and activities in each year level have been compiled into one checklist in the appropriate Overview and Implementation Guide. Both these lists provide a reference to aid lesson pre-planning for the year.

## Teacher Resource Booklet

The Teacher Resource Booklet is a complete planning guide at topic level for the program. A teacher starts a topic using their set of enVisionMATHS Teacher Resource Booklets to assist in planning and assessment.



## Topic-based planning

The first section of each Teacher Resource Booklet is dedicated to planning. Each booklet contains:

- Skills Trace and Suggested Teaching Sequence
- Maths Background for Teachers
- Maths Language and information on meeting individual needs
- Outlines and reproductions of all Activity Zone cards for the topic
- Lesson pages reproducing each Student Activity Book lesson page with answers , annotations and guiding information. These pages also provide reproductions of the Differentiated Worksheets for each lesson.
- Assessment overview and photocopiable assessments.
- Note that Foundation to Year 2 lesson pages have a different format.

## Planning Documents

The Teacher Resource DVD is in the back of each Overview and Implementation Guide and contains editable planning spreadsheets related to three year levels to assist with planning the enVisionMaths program throughout the year.

	A	B	C	D	E
1	enVisionMATHS.		PEARSON		
2	<b>Year 3 Planning Document</b>				
3					
4	* SAB 3 = enVisionMATHS Student Activity Book Year 3				
5	* TRB 3 = enVisionMATHS Year 3 Teacher Resource Booklets				
6					
7	Australian Curriculum Reference	enVisionMATHS Student Activity Book Year 3	SAB 3* (pg no.)	TRB 3* (Booklet no:pg no)	
8	<b>NUMBER AND ALGEBRA</b>				
9	<b>Number and place value</b>				
10					
11	ACMNA051 Investigate the conditions required for a number to be odd or even and identify odd and even numbers	1.4 Understanding Odd and Even Numbers	10	1:18	
12		1.5 Using Clues to Identify Numbers	12	1:20	
13					
14					
15	ACMNA052 Recognise, model, represent and order numbers to at least 10 000	1.1 Reading and Writing Hundreds	4	1:12	
16		1.2 Reading and Writing Numbers to 1 000	6	1:14	
17		1.3 Building Numbers Beyond 1 000	8	1:16	
18		1.7 Ordering Three Numbers	16	1:24	
19		1.8 Comparing Numbers	18	1:26	
20					
21					
22	ACMNA053 Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems	1.1 Reading and Writing Hundreds	4	1:12	
23		1.2 Reading and Writing Numbers to 1 000	6	1:14	
24		1.3 Building Numbers Beyond 1 000	8	1:16	
25		1.5 Using Clues to Identify Numbers	12	1:20	
26		1.9 Rounding Whole Numbers	20	1:28	
27		2.5 Using Models to Add	32	2:20	
28		3.5 Subtracting Tens	50	3:20	
29		3.8 Sorting Tens on a Hundred Chart	52	3:22	
30		3.8 Estimating Differences	56	3:26	
31					

These planning documents are simple, flexible Microsoft Excel spreadsheets. They match Australian Curriculum strands and substrands to enVisionMATHS lessons, and provide the relevant Student Book and Teacher Booklet page references for each lesson. Other columns in the spreadsheet are left blank for teachers to customise as they wish.

For detailed programming, a planning spreadsheet for a year level can be used. Teachers would look at this first to satisfy themselves that the curriculum was being covered, then add information to the additional columns, setting out the order in which they will do the topics. Teachers would bring in the content descriptions and resources from other year levels for multi-age classes.