

enVisionMATHS Online Tutorial Guide 5

Tutorial 5.1: Teaching a Foundation to Year 2 Lesson

Introduction

This guide describes a sequence to follow when teaching a Foundation to Year 2 enVisionMATHS lesson.

As there are some differences between components for Years Foundation to 2 and 3 to 6, we are presenting the lessons separately. You will see, however, that the teaching sequence is very similar.

One suggestion is that when you are first introducing enVisionMATHS to your students, take the time to model how each component works. The components have different purposes so it is essential that students have some time to understand how to use them.

Remember ... the teaching sequence is a suggestion. You should feel free to modify it to suit your students and teaching.

Teaching a Foundation to 2 Lesson

Complete details in the planning document (found on the Teacher Resource DVD) and choose a topic and lesson to teach.

enVisionMATHS.		PEARSON	
Year 1 Planning Document			
* SAB 1 = enVisionMATHS Student Activity Book Year 1			
* TRB 1 = enVisionMATHS Year 1 Teacher Resource Booklets			
Australian Curriculum Reference	enVisionMATHS Student Activity Book Year 1	SAB 1* (pg no.)	TRB 1* (Booklet no/pg no)
NUMBER AND ALGEBRA			
Number and place value			
ACMNA012 Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero.			
	1.1 Counting and Writing Numbers 0 to 5	1	1:12
	1.2 Counting and Writing Numbers 6 to 10	2	1:14
	1.3 Counting and Writing Numbers 10, 11, 12	3	1:16
	1.4 Counting and Writing Numbers 13 to 19	4	1:18
	1.5 Counting and Writing Numbers to 20	5	1:20
	1.6 Ordering Numbers Using a Number Line	6	1:22
	1.7 Counting Beyond 20	7	1:24
	1.8 Comparing Two Numbers	8	1:26
	1.9 Ordering Three Numbers	9	1:28
	4.1 Representing Numbers on a Ten Frame	22	4:12
	4.2 Understanding Parts of 10	23	4:14
	9.2 Identifying One More, One Less	61	9:14
	9.3 Counting to 100	62	9:16
	9.4 Comparing Numbers	63	9:18
	9.5 Identifying Before, After and Between	64	9:20
	9.6 Ordering Numbers on a Number Line	65	9:22
	12.1 Identifying Groups (extension NA031)	77	12:12
	12.2 Using Groups of 2, 5 and 10 (extension NA031)	78	12:14
	12.3 Understanding Division as Sharing (extension NA032)	79	12:16
	13.5 Counting Patterns of 2, 5 and 10	84	13:20
	13.6 Understanding Odd and Even Numbers	85	13:22
	13.7 Identifying Patterns on a Hundred Chart	86	13:24
ACMNA013 Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line	1.1 Counting and Writing Numbers 0 to 5	1	1:12

Then find the appropriate teacher resource booklet and familiarise yourself with its contents. Choose the resources you will need from components such as the Activity Zone and the assessment tools.

Introducing the Topic

Introduce the topic using the Topic Engagement Links found on page 6 of the Teacher Resource Booklet. These consist of a range of activities, games, songs, rhymes and books that engage students with the topic and help connect maths concepts to real-life contexts.

Pre-assessment


The focus of assessment in enVisionMATHS is both formative and summative; therefore at this point we suggest that you use the associated Pre-assessment as a tool to determine student knowledge in this particular area of Mathematics.


Topic 1 Numbers and Place Value to and Beyond 20 Pre-assessment


Name



Concept 1: Counting and Writing Numbers to 20

1 Show 17.

a  Seven 10 and 7

 Seventeen Seventy

 7 tens 7 ones

2 How many ways can you make 15?

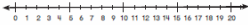
3 How many numbers can you write between 0 and 20 that have a 1 in them?

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Topic 1 Numbers and Place Value to and Beyond 20 Interview Assessment

Name

In this task the student will be asked to describe, compare and order quantities using a number line. The student will need to apply quantitative reasoning to justify answers.
Provide the student with a number line with the numbers 0 through to 20 on it.



1 Ask the student to point to various numbers on the number line.
Show me 10, 20, 5, 15, 12, 14 etc.
Ask: How do you know that number goes there?
Check to see if the student knows where each number goes on the line. Check to see if they can explain why the number goes where it does.

2 Can you show me a number greater than 5? Is that the only number greater than 5? Where on the number line are the numbers that are larger than 5? How do you know that?
Check to see if the student understands the term greater than. Check to see if they understand which numbers are larger than others.

3 Can you show me a number less than 13? What other numbers are less than 13?
Check to see if the student knows and understands the term less than. Check to see if they can identify numbers less than another number.

4 Can you show me the number between 4 and 6? How do you know that is the right number?
Check to see if the student knows and understands the term between. Check to see if they can identify a number that is between two other numbers.

5 Show me the number that is one more than 14. Show me the number that is one less than 16. How did you know that?
Check to see if the student knows and understands the terms one more than and one less than. Check to see if they can identify numbers that are one more or one less than another number.

For Years Foundation to 2, you may also choose to administer the Interview Assessment to determine students' ability to apply reasoning to maths questions and problem solving tasks.

The results from this assessment will guide and support teachers in customising instruction and formulating individual or group learning action plans.

Results and observations can be recorded on the templates provided in the Planning documents section of the Teacher Resource DVD.

Work out your groups and the resources they will use.

Lesson-based Planning

Note that a lesson using the suggested sequence would generally take at least two hour-long Maths sessions to complete.

Familiarise yourself with the notes provided in the lessons section of the Teacher Resource Booklet for the lesson you are teaching.

On the left side of each lesson page you will find a copy of the associated Visual Learning Bridge which can be accessed from the Interactive Whiteboard DVD. This provides you with a quick reference point and offers teacher questions to help support student learning.

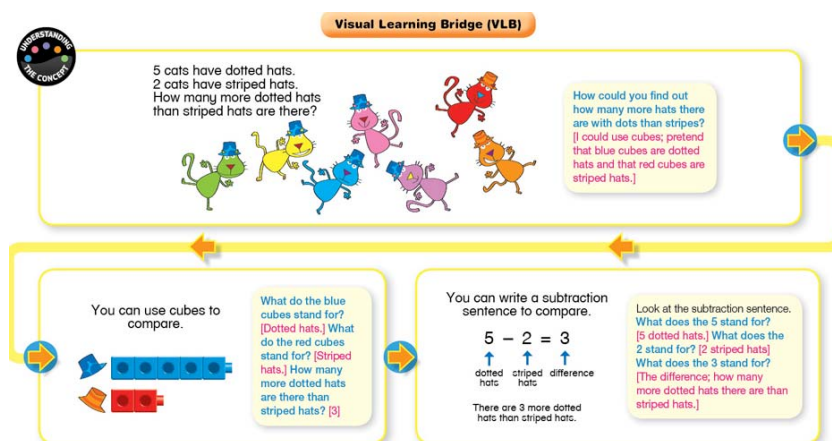
Below this you will find the Topic Focus and Quick and Easy Lesson Overview for this lesson.

Whole Class Teaching

Start each lesson by setting the purpose and developing the maths concept by making connections to students' previous learning. Encourage students to share their thinking and make connections using words, pictures and digital or concrete manipulatives.

Next, watch the Visual Learning Animation on the Interactive Whiteboard DVD to engage students and deepen their maths understanding. While teaching with the animations, stop after certain frames and take time to discuss the mathematics, visual images and connections being made. Encourage students to ask and answer peer questions.

Look at the associated Visual Learning Bridge on the Interactive Whiteboard DVD. Take time to further explore and reinforce students' maths understanding using the questions provided in the Teacher Resource Book.



Continue to explore the maths concept with your students, using the whole class Teaching Focus activity provided. You may choose to make use of Tools4Maths at this point to demonstrate an understanding or particular question.

For students having difficulty understanding particular maths concepts or those requiring more challenging activities, Error intervention and Extension activities and prompts are provided to support individual student needs.

Guided and Independent Response

Students can then work independently (or in small groups or within a guided teacher group) to complete the associated page in their activity book. You will see that the Student Activity Book pages are not full of practice questions. Rather, the instructional design of enVisionMATHS encourages students to apply what they know in response to a group of carefully written questions with plenty of space to show their thinking. The page always ends with problem-solving.

Answers are provided in the Teacher Resource Booklet.

Expanded answers to the problem-solving questions are provided on page 7 of the Teacher Resource Booklet.

Differentiated Small Group Work

At this point you could organise your students to work in like ability or mixed ability groups to revisit, practise or extend their learning.

One group could work with you on a guided activity revisiting the Visual Learning Animation, Teaching Focus activity or Student Activity Book page.

Groups could work on Activity Zone cards (including the digital card using Tools4Maths).

In Foundation to 2, cards are in multiples of 4 so you could have 4 groups working on the same activity or each group could work on something different. There is a red games card for every lesson; 2 to 5 investigations cards per topic and 1 digital card per topic. (As part of your planning, you will need to choose which lessons to use the various cards in, as only the games cards are directly linked to certain lessons, while others are topic linked.)

Students record their Activity Zone learning in their Maths Thinking Skills Books.

You could also have a group completing a specific Replay, Practice or Challenge differentiated worksheet (these worksheets could also be used for homework). There are three worksheets for every lesson.

Whole Class and Individual Reflection

Use the reflection questions provided in the Teacher Resource Booklet to gain some insight into your students' maths learning.

Topic 8 Lesson 4

Reflection

Ask students to talk with a partner. **What are you looking for when you are comparing two groups? How do you find the difference when you compare two groups?** Invite students to share their understandings. Make a class list of what students know about comparing groups to find the difference. Students complete a page of the Maths Thinking Skills Book to reflect on the lesson or one of the learning centre activities they completed.

enVision Games

These games give the students extra practice at comparing two groups of objects. They will encourage students to see that by comparing two groups of objects they can find the difference. They will gain practice at finding how many objects the groups have the same, finding the group that has more than the other group and working out how many more things that group has.

enVision Games ★ 1 enVision Games ★★ 1

Encourage your students to think aloud and share maths strategies, processes and understandings used throughout the lesson. Discuss areas of expertise as well as challenges. Students then have the opportunity to record their reflections in their Maths Thinking Skills Book or present examples of their new learning using Tools4Maths, which is also found on the Interactive Whiteboard DVD.

Assessment

During each lesson, take time to work with small groups and individuals to gauge how students are going with each new maths concept. Take time to record anecdotal notes; including capabilities, challenges and goals. Use the assessment recording formats provided in the planning documents on the Teacher Resource DVD.

After completing each maths concept, have students complete the associated Post-assessment task. This consists of multiple-choice, short-answer and problem-solving questions and will provide you with information about a student's achievement on a particular topic.