

### BIG IDEA:

Capable mathematics students do not always reach the Upper 2 Bands in NAPLAN Numeracy. In many cases, these students are skilled in performing calculations and applying rules, but are not proficient problem-solvers.

*Solve IT* provides capable mathematics students with a process for solving problems as well as a bank of problem-solving strategies to use on demand. Students also develop literacy skills that are needed to interpret questions correctly.

*Solve IT* helps schools to build staff and student capability simultaneously. School leaders and Years 2-3 class teachers can access the IMPACT Centre's [Numeracy Squad](#). Your web conference supervisor can co-teach with our online teacher.

### SELECTION CRITERIA:

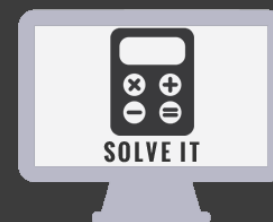
- ✓ Selected students should be achieving results in diagnostic testing that indicate they are likely to reach the Upper 2 Bands in Year 3 NAPLAN Numeracy.
- ✓ Selected students should be operating **at or above** a reading age of 8.0 years.
- ✓ Teacher judgement about a student's suitability for the program should be considered, e.g. an ability to learn independently, work collaboratively and use a computer.

### AUSTRALIAN CURRICULUM:

See page 2 for Australian Curriculum links, NAPLAN online, and assessment/reporting details.

### THE COURSE:

LESSON OVERVIEW		
NO.	TITLE	CONTENT
1	Welcome to <i>Solve IT</i>	<ul style="list-style-type: none"> <li>▪ Introduction to the project &amp; web conferencing technology</li> </ul>
2	eLearn and See/Plan/Do/Check	<ul style="list-style-type: none"> <li>▪ eLearn tour</li> <li>▪ Introduction to See/Plan/Do/Check Thinkboard</li> </ul>
3	Pre-Assessment	<ul style="list-style-type: none"> <li>▪ eLearn Test</li> </ul>
4	Strategies for Addition and Subtraction	<ul style="list-style-type: none"> <li>▪ Inverse relationships</li> <li>▪ Routine and non-routine, single-step problem solving</li> </ul>
5	Strategies for Multiplication and Division	<ul style="list-style-type: none"> <li>▪ Inverse relationships</li> <li>▪ Routine and non-routine, single-step problem solving</li> </ul>
6	Spaced Learning – 'Problem Posers'. All Four Operations	<ul style="list-style-type: none"> <li>▪ Pose problems to deepen problem solving proficiencies</li> <li>▪ Routine and non-routine, single-step problem writing</li> </ul>
7	Strategies for Spatial Reasoning	<ul style="list-style-type: none"> <li>▪ See The Parts – 2D shapes and visualising features/properties of 3D objects</li> </ul>
8	Strategies for Addition and Subtraction	<ul style="list-style-type: none"> <li>▪ Inverse relationships</li> <li>▪ Routine and non-routine, multi-step problem solving</li> </ul>
9	Strategies for Multiplication and Division	<ul style="list-style-type: none"> <li>▪ Inverse relationships</li> <li>▪ Routine and non-routine, multi-step problem solving</li> </ul>
10	Spaced Learning – 'Problem Posers'. All Four Operations	<ul style="list-style-type: none"> <li>▪ Pose problems to deepen problem solving proficiencies</li> <li>▪ Routine and non-routine, single step and multi-step problem writing</li> </ul>
11	Post-Assessment	<ul style="list-style-type: none"> <li>▪ eLearn Test</li> </ul>
12	Celebrate Success and Reflection	<ul style="list-style-type: none"> <li>▪ Review, consolidate and extend on project learning – celebrate success</li> </ul>



## Years 2-3

### Suggested Pathway

**R1**      **R2**      **R3**  
 Year 3 → Year 2 → Year 2

*'This was an excellent learning experience for students who have good computer skills and a high level of basic maths knowledge/ability. The combination of these two makes the project suitable for extending these students.'*

**Supervisor**  
 Year 2 Trial Project 2014

*'It makes me feel good about maths.'*

*'It gives you a lot of different skills like being quicker on the computer and learning math strategies.'*

*'Best thing I have ever done.'*

**Students**  
 Year 2 Trial Project 2014

[How it Works](#)

[Participation Costs](#)

[Primary Main Page](#)

[Register Now!](#)

## Australian Curriculum

### Mathematics

<p><b>Number and Algebra</b>  <b>Number and place value:</b></p> <ul style="list-style-type: none"> <li>Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (<a href="#">ACMNA053</a>)</li> <li>Recognise and explain the connection between addition and subtraction (<a href="#">ACMNA054</a>)</li> <li>Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (<a href="#">ACMNA057</a>)</li> </ul>	<p><b>Number and Algebra</b>  <b>Money and financial maths:</b></p> <ul style="list-style-type: none"> <li>Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents (<a href="#">ACMNA059</a>)</li> </ul> <p><b>Measurement and Geometry</b>  <b>Shape:</b></p> <ul style="list-style-type: none"> <li>Make models of three-dimensional objects and describe key features (<a href="#">ACMMG063</a>)</li> </ul>
---	--

### General Capabilities

<p><b>Numeracy</b>  <b>Estimating and calculating with whole numbers</b></p> <ul style="list-style-type: none"> <li>Understand and use numbers in context</li> <li>Estimate and calculate</li> <li>Use money</li> </ul> <p><b>Using spatial reasoning</b></p> <ul style="list-style-type: none"> <li>Visualise 2D shapes and 3D objects</li> </ul>	<p><b>ICT Capability</b>  <b>Creating with ICT</b></p> <ul style="list-style-type: none"> <li>Generate solutions to challenges and learning area tasks</li> </ul> <p><b>Communicating with ICT</b></p> <ul style="list-style-type: none"> <li>Select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with other</li> </ul>
<p><b>Literacy</b>  <b>Comprehending texts through listening, reading and viewing</b></p> <ul style="list-style-type: none"> <li>Comprehend texts</li> <li>Navigate, read and view learning area texts</li> <li>Interpret and analyse learning area texts</li> </ul> <p><b>Composing texts through speaking, writing and creating</b></p> <ul style="list-style-type: none"> <li>Compose spoken, written, visual and multimodal learning area texts</li> <li>Compose texts</li> <li>Use language to interact with others</li> </ul> <p><b>Word Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand learning area vocabulary</li> </ul>	<p><b>Critical and Creative Thinking</b>  <b>Inquiring – identifying, exploring and organising information and ideas</b></p> <ul style="list-style-type: none"> <li>Identify and clarify information and ideas</li> <li>Organise and process information</li> </ul> <p><b>Generating ideas, possibilities and actions</b></p> <ul style="list-style-type: none"> <li>Seek solutions and put ideas into action</li> <li>Consider alternatives</li> </ul> <p><b>Reflecting on thinking and processes</b></p> <ul style="list-style-type: none"> <li>Reflect on processes</li> </ul>

### NAPLAN Online – ICT Skills Guide

NAPLAN Online requires students to confidently use a computer or device in at least seven ways. As shown below, IMPACT Centre projects develop all seven of these skills and are an excellent way to prepare your students for online testing.

<ol style="list-style-type: none"> <li>Locate and select an answer from a list – YES</li> <li>Type an answer – YES</li> <li>Read the screen and navigate web pages – YES</li> <li>Manipulate objects on screen – YES</li> </ol>	<ol style="list-style-type: none"> <li>Read and comprehend digital texts – YES</li> <li>Plan and compose text using word processing – YES</li> <li>Listen using a headset – YES</li> </ol> <p><b>NB:</b> See <a href="#">DET's NAPLAN Online ICT Skills Guide</a> for details.</p>
---	--

### Assessment

- Pre and post assessment – eLearn Test
- Portfolio – collection of work samples

### Reporting

- Pre and post assessment data are provided to schools, along with student attendance data.
- Qualitative report card comments are provided to schools. We recommend their inclusion as an OLA on semester report cards.

[How it Works](#)

[Participation Costs](#)

[Primary Main Page](#)

[Register Now!](#)