SOLVE IT

Booster Series: Year 7 Numeracy

impact.edu.au/register

BIG IDEA:

Capable mathematics students do not always maintain an Upper 2-3 Band result in NAPLAN Numeracy throughout Years 5-7. 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 Year 7 class teachers can access the IMPACT Centre's *Numeracy Squad.* Your web conference supervisor can co-teach with our online teacher.

SELECTION CRITERIA – U2B or U3B STUDENTS:

- ✓ **U2B groups** are for students who achieved **Band 7 or Band 8** in Year 5 NAPLAN Numeracy 2015. The aim is to maintain or boost their U2B result.
- ✓ **U3B groups** are for students who achieved **Band 6 or Band 7** in Year 5 NAPLAN Numeracy 2015. The aim is to maintain or boost their U3B result.
- ✓ Schools can involve U2B groups, U3B groups or a combination.
- ✓ Schools can form a combined **Band 6-7-8** group to create a full group.

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 Solve IT eLearn*	▪ Introduction to the project and web conferencing technology ▪ eLearn tour
2	*Pre-assessment See/Plan/Do/Check*	▪ eLearn Test **** subject to school readiness*** ▪ Introduction to See/Plan/Do/Check Thinkboard
3	*Strategies for Addition and Subtraction Problems*	▪ Identify addition and subtraction operations using appropriate numbers/symbols ▪ Focus on seeing the parts of the question
4	*Strategies for Addition and Subtraction Problems*	▪ Identify addition and subtraction operations in multi-step non-routine problems
5	*Strategies for Benchmarking*	▪ Identify multiplication/division operations - ratio, decimals, fractions and percentages
6	*Survey and spaced learning*	▪ Mid project survey ▪ Spaced learning elearn exploration, quiz completion
7	*Strategies for Multiplication and Division Problems*	▪ Compare or estimate fractions, percentages, decimals, degrees, and probability
8	*Strategies for Multiplication and Division Problems*	▪ Identify multiplication/division operations - rates, decimals, fractions and percentages
9	*Strategies for Interpreting Graphics*	▪ Identify and investigate issues involving numerical data displayed in graphs and tables
10	*Spaced Learning – Revision of all strategies*	▪ Reinforcement and re-exposure to consolidate and extend prior learning
11	*Post-assessment*	▪ eLearn Test
12	*Where to From Here?*	▪ Review, consolidate and celebrate success

Year 7

Suggested Pathway

R1 → Year 7 → R2 → Year 7 → R3 → Year 7

'The strategies introduced were things generally unknown to the students prior to IMPACT and I have since seen them using these in their general maths and science classes as well (without prompting).

Supervisor – 2016

'Before Solve IT I was pretty good at maths and I struggled a bit with some bits of the questions but now I am excellent at maths and solve it has really helped me improve my maths skills and understanding of questions and how to break them up so I understand them better.'

Student– 2016

How it Works | **Participation Costs** | **Secondary Main Page** | **Register Now!**

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Australian Curriculum

Mathematics

Number and Algebra

Number and place value:

- Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)

Linear and non-linear relationships:

- Investigate, interpret and analyse graphs from authentic data (ACMNA180)

Number and Algebra

Real numbers:

- Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)

Patterns and algebra:

- Simplify algebraic expressions involving the four operations (ACMNA192)

General Capabilities

Numeracy

Estimating and calculating with whole numbers

- Understand and use numbers in context
- Estimate and calculate

Recognising and using patterns and relationships

- Recognise and use patterns and relationships

Using fractions, decimals, percentages, ratios and rates

- Interpret proportional reasoning
- Apply proportional reasoning

Interpreting statistical data displays

- Interpret data displays

ICT Capability

Creating with ICT

- Generate solutions to challenges and learning area tasks
- Use ICT effectively to record ideas, represent thinking and plan solutions
- Generate ideas, plans and processes

Communicating with ICT

- Select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with other

Literacy

Comprehending texts through listening, reading and viewing

- Comprehend texts
- Navigate, read and view learning area texts
- Interpret and analyse learning area texts

Composing texts through speaking, writing and creating

- Compose spoken, written, visual and multimodal learning area texts

Word Knowledge

- Understand learning area vocabulary

Visual Knowledge

- Understand how visual elements create meaning

Critical and Creative Thinking

Inquiring – identifying, exploring and organising information and ideas

- Identify and clarify information and ideas
- Organise and process information

Generating ideas, possibilities and actions

- Seek solutions and put ideas into action
- Consider alternatives

Reflecting on thinking and processes

- Reflect on processes

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.

1. Locate and select an answer from a list – YES
2. Type an answer – YES
3. Read the screen and navigate web pages – YES
4. Manipulate objects on screen – YES
5. Read and comprehend digital texts – YES
6. Plan and compose text using word processing – YES
7. Listen using a headset – YES

NB: See DET's NAPLAN Online ICT Skills Guide for details.

Assessment

1. Pre and post assessment – eLearn Test
2. 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** | **Secondary Main Page** | **Register Now!**

Contact Details: Phone (07) 3727 2888 or email admin@impact.eq.edu.au