



MATHEMATICS STAFF MEETING PL

REASONING

FEEDBACK FROM TWILIGHT SESSION

Where to next.....

- ❑ Practical experiences and hands on 17
- ❑ Problem solving/authentic tasks 13
- ❑ Observe other schools/ programs 6
- ❑ Soft skills/collaboration 5
- ❑ Activities for different stages 5
- ❑ Play based 4
- ❑ Vision statement 3
- ❑ Basic number skills 3
- ❑ Games and technology 3
- ❑ Differentiation 2
- ❑ Tracking and Assessment 2
- ❑ Resources 2
- ❑ Integration across KLAs 2
- ❑ Daily 3 1

HOW DO PRACTICAL, HANDS ON EXPERIENCES AND AUTHENTIC PROBLEMS FIT INTO THE SYLLABUS?



Working Mathematically Working Mathematically relates to the syllabus objective:

Students develop understanding and fluency in mathematics through inquiry, exploring and connecting mathematical concepts, choosing and applying problem-solving skills and mathematical techniques, communication and reasoning

As an essential part of the learning process, Working Mathematically provides students with the opportunity to engage in genuine mathematical activity and develop the skills to become flexible and creative users of mathematics.

In this syllabus, Working Mathematically encompasses five interrelated components

- Communicating
- Problem Solving
- Reasoning
- Understanding
- Fluency

WHAT DOES REASONING MEAN?

- ❑ Conjectures – (mathematical hypothesis/mathematical predictions)
- ❑ Generalising – identifying a pattern, commonalities or relationship and extending it beyond the original problem
- ❑ Justifying strategies used and conclusions reached
- ❑ Analysing
- ❑ Investigating
- ❑ Proving that something is true or false
- ❑ Comparing and contrasting – How are they the same? How are they different?
- ❑ Evaluating – Which strategy is the best? Why? Which is the most efficient?
- ❑ Explaining their thinking and their choices
- ❑ Inferring
- ❑ Adapt the known to the unknown

<http://www.3plearning.com/blog/making-sense-mathematics-reasoning-2/>

MENTALLY HOW WOULD YOU
SOLVE THIS PROBLEM?

$$17 + ? = 41$$

YOUR TURN

Show 2 different ways you could solve this problem – you can use pen and paper, concrete materials and/or the interactive apps

Explain to a partner/another group how you worked it out

Take photos/videos of your solutions and upload it to classroom