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THE MATHEMATICAL ASSOCIATION OF VICTORIA

Developing Mathematical Thinkers Through Real-Life Contexts

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WELCOME TO COUNTRY

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We begin today by acknowledging the Wurundjeri people, Traditional Custodians of the land on which we meet today. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples that may be here today.

LED SAFETY TACTILES

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- What mathematical questions could you ask about this image?

- What opportunities does this image provide for learning?

MULTIPLICATION FOCUS (L3)

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- Where can you see multiplication in this picture?
- If these were LEGO pieces, how many studs would there be?
- How many studs in one square?
- How could I count these studs?
- How many lights are on/off?

STUDENT THINKING

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<PHOTO OF STUDENT>
Counting by 1s to counting in groups

<PHOTO OF STUDENT>
Distributive property of multiplication

<PHOTO OF STUDENT>
Calculators

STUDENT THINKING

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- How can teachers promote student-invented strategies?
- What ways can you promote structured classroom discussion?
- What ways can you enhance motivation?
- What ways can students learn from each other?

3-PHASE STRUCTURE

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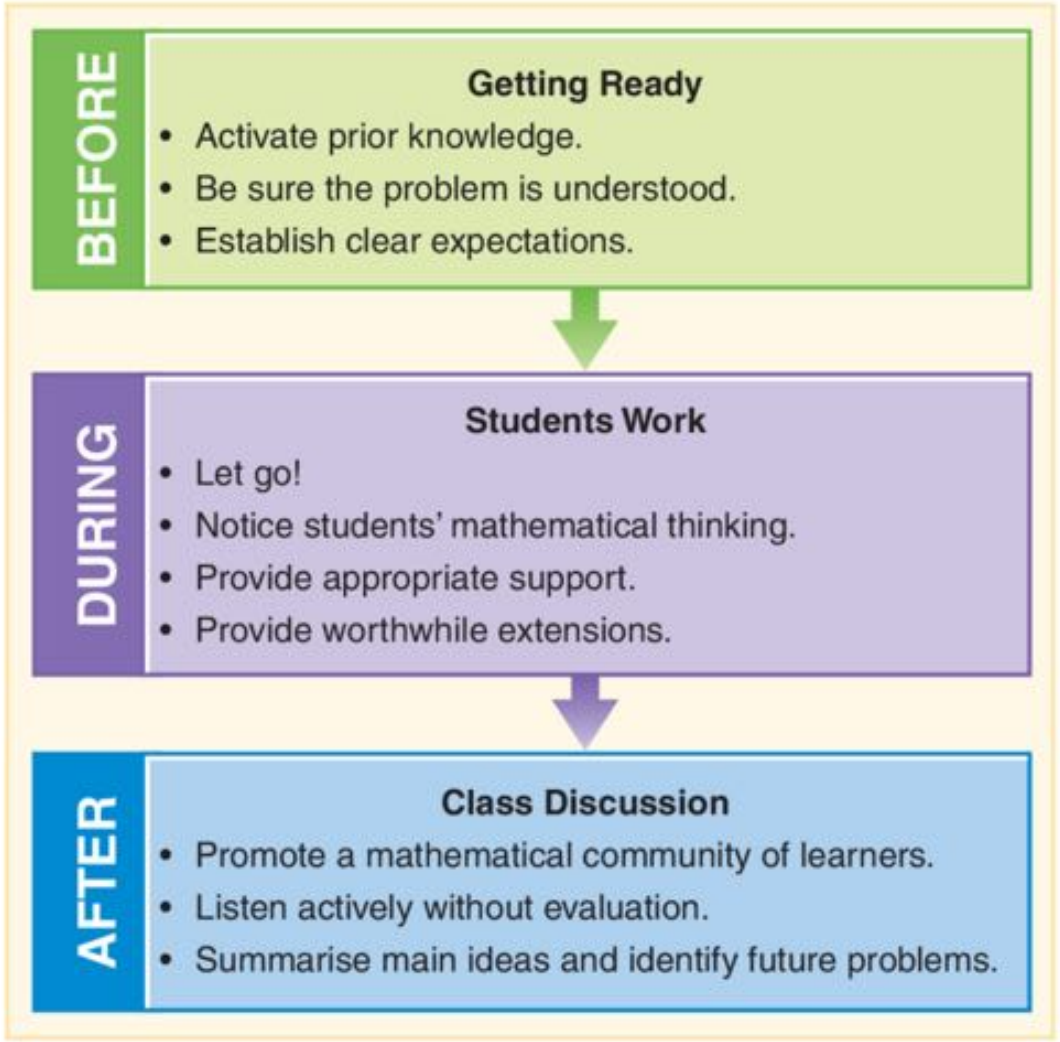

LAUNCH, EXPLORE, SUMMARISE

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(Monash, 2019)

3-PHASE STRUCTURE

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FLIPPING YOU DO, WE DO, I DO

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I DO, WE DO, YOU DO

A STRUCTURED INQUIRY

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- 5-10 minutes for tuning in/ provocation / task instructions (LAUNCH)
- 10-15 minutes for ‘Have a Go 1’ (EXPLORE)
  Opportunity for teacher to observe strategy use of students
- 5-10 minute purposefully selected sharing (SUMMARISE)
- 5-10 minutes for teacher to pose challenge/ focus (RE-LAUNCH)
- 10-15 minutes opportunity for teacher to observe strategy use of students/ small group explicit teaching (RE-EXPLORE)
- 5 minutes for purposefully selected sharing/ summary (reflect, connect, generalise) and possible provocation for next time (RE-SUMMARISE)

WHY?

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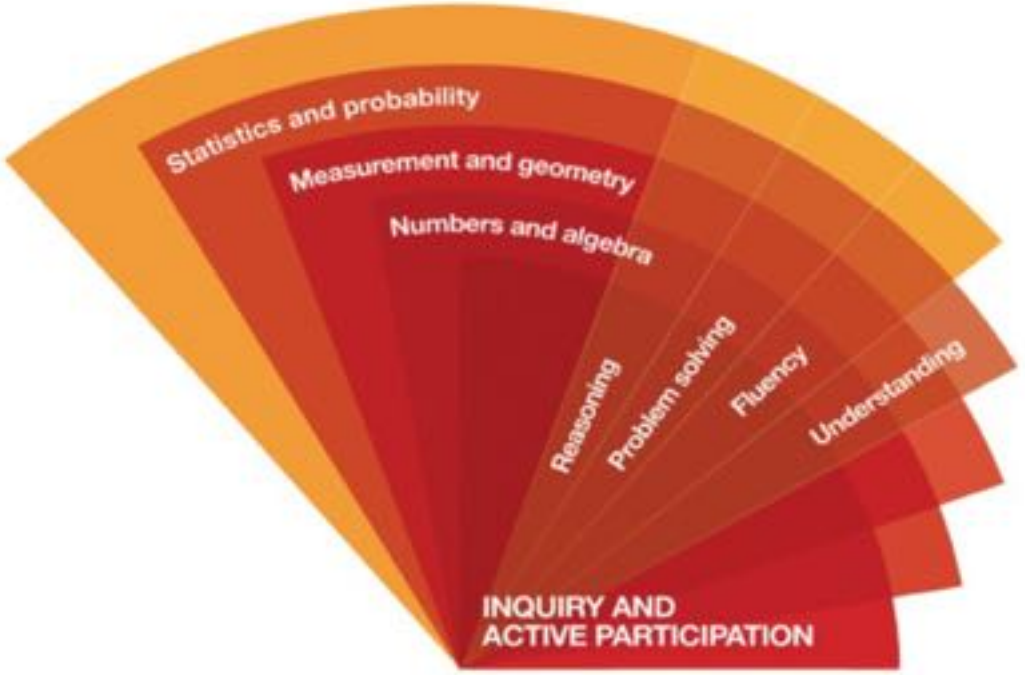
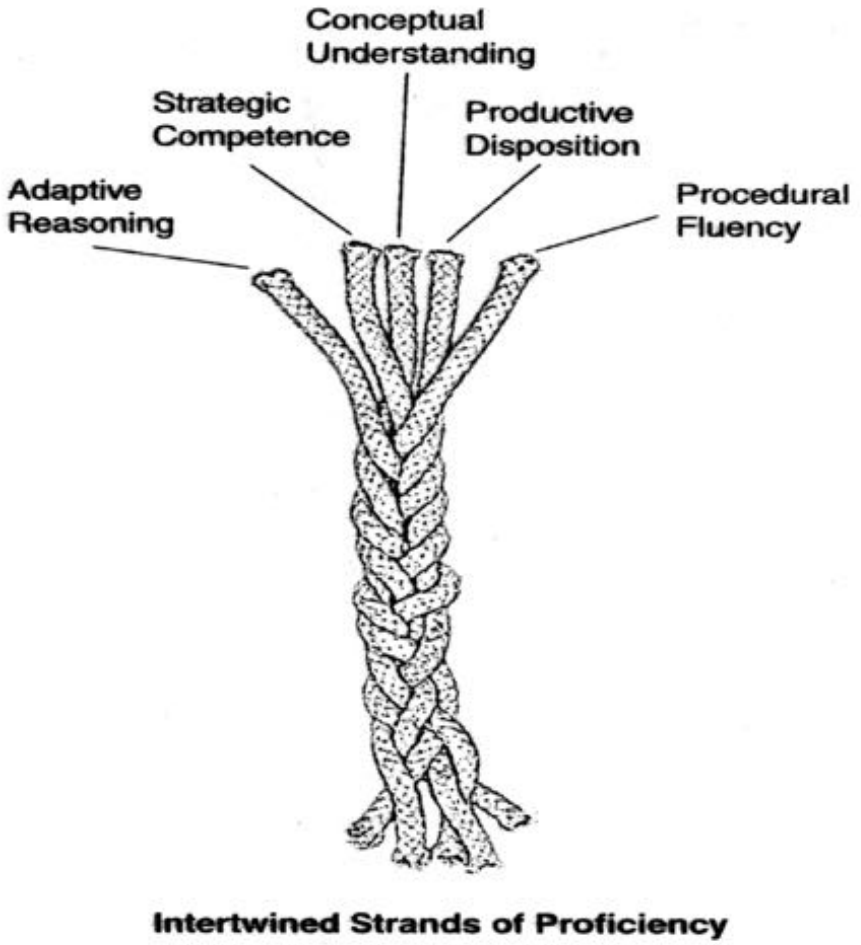
Structure of mathematics curriculum



ACARA (2010)



Intertwined Strands of Proficiency

(Kilpatrick, Swafford & Findell, 2001)

AUSTRALIAN CURRICULUM SHIFT

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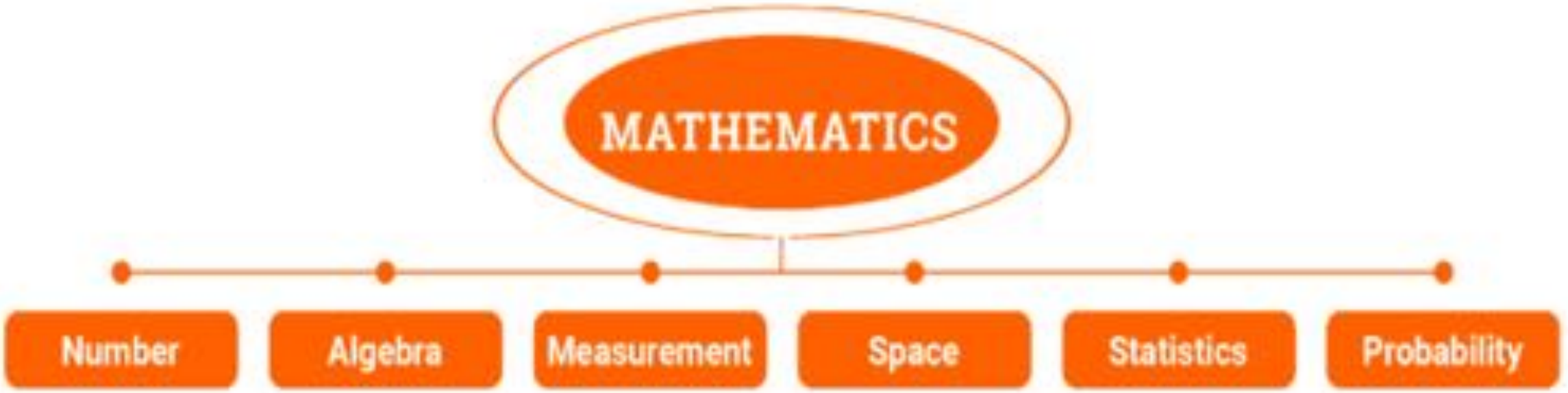

KEY CONSIDERATIONS INCL. PROFICIENCY FOCUS

KEY CONNECTIONS INCL. CAPABILITIES/LEARNING AREAS

CONNECTED TASKS

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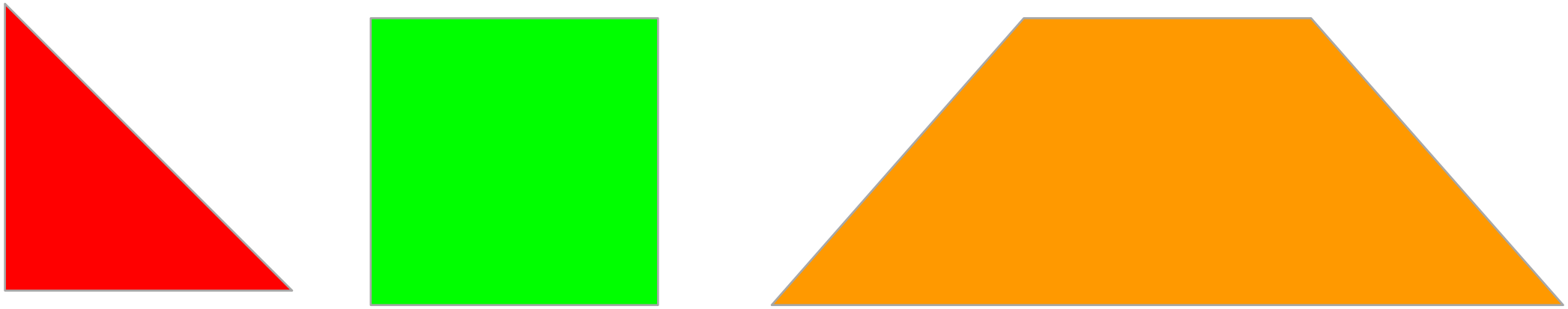

If the triangle is 1 unit, what is the trapezium?

If the square is 1 unit, what is the triangle?

REAL-LIFE CONTEXTS

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What day was I born?



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How many pies a day?

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Once in a lifetime?

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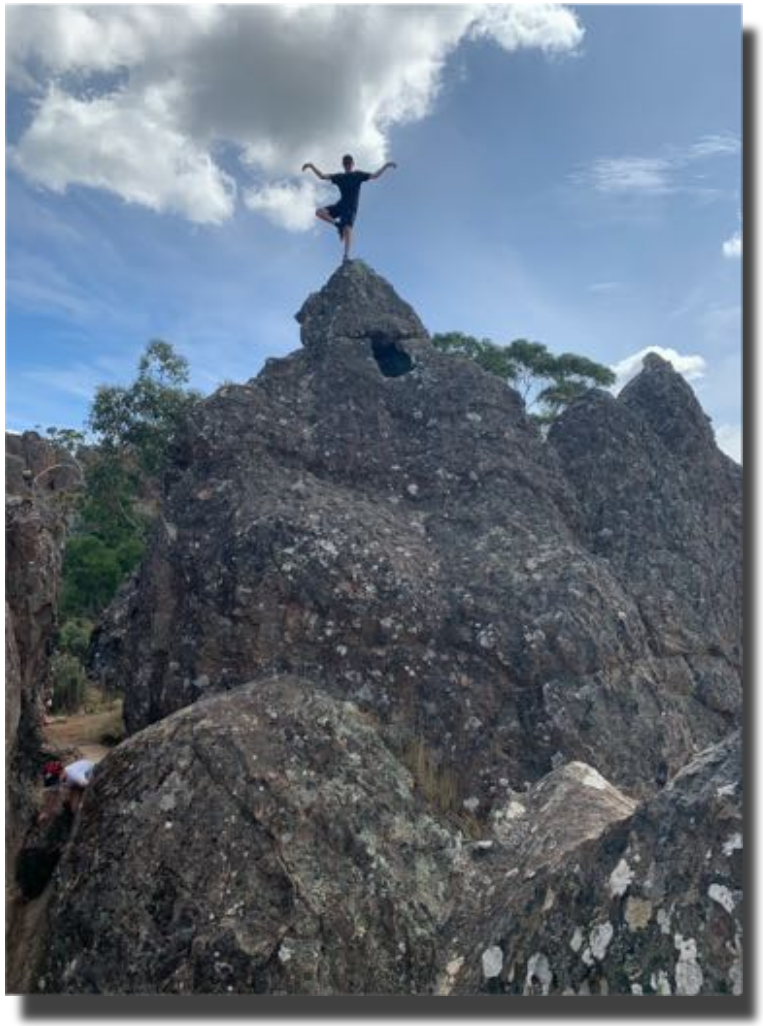
How tall is the rock?



REAL-LIFE CONTEXTS

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REAL-LIFE CONTEXTS

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SUMMARY

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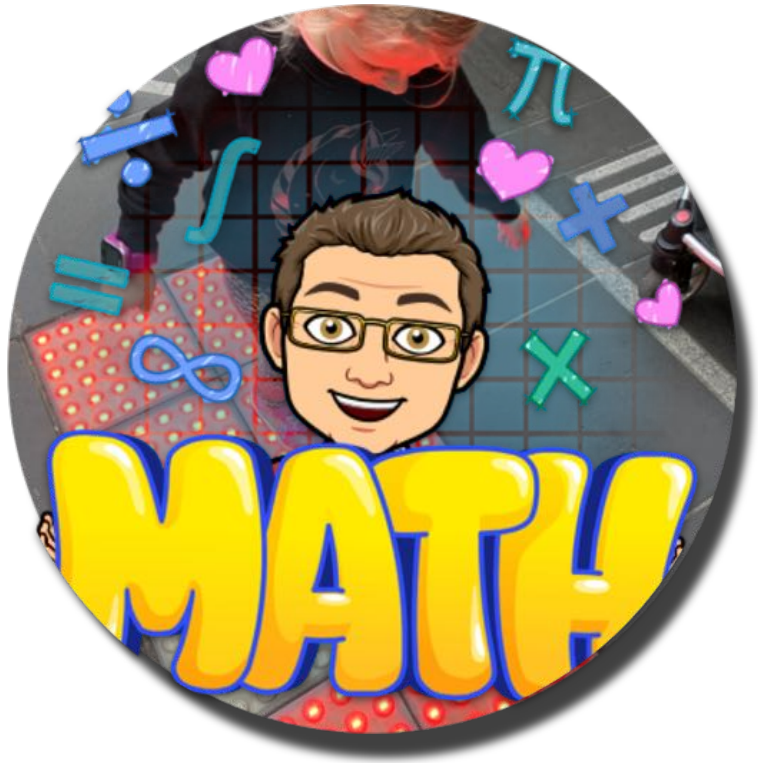

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