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THE MATHEMATICAL
ASSOCIATION OF VICTORIA

Let's get
started! Using
games to
engage
students

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Warm up

- SNAP



Launch: Let's get started!

Using games to engage students



Overview

- Gamers to engage in fluency and reasoning.
- Strategies for differentiation.
 - Enabling and extending prompts

Fluency and Reasoning



Fluency is...

- In F–2, students become fluent as they develop skills in choosing appropriate procedures; and recalling factual knowledge and concepts readily.
- In Years 3–6, students become fluent as they develop skills in choosing appropriate procedures; carrying out procedures flexibly and accurately; and recalling factual knowledge and concepts readily. Students are fluent when they calculate answers efficiently, when they recognise robust ways of answering questions, and when they recall definitions and regularly use facts.

Reasoning is...

- In F–2, students develop an increasingly sophisticated capacity for logical thought and actions. Students are reasoning mathematically when they explain their thinking.
- In Years 3–6, students develop an increasingly sophisticated capacity for logical thought and actions, such as evaluating, explaining and generalising. Students are reasoning mathematically when they explain their thinking, when they adapt the known to the unknown, and when they transfer learning from one context to another and explain their choices.

What's so good about games?



Games are:

- Engaging
- Active/fast
- Aid in developing understanding & fluency
- Promote or can be extended to promote problem solving and reasoning (particularly in strategy-based games)

Explore: More than just what you see

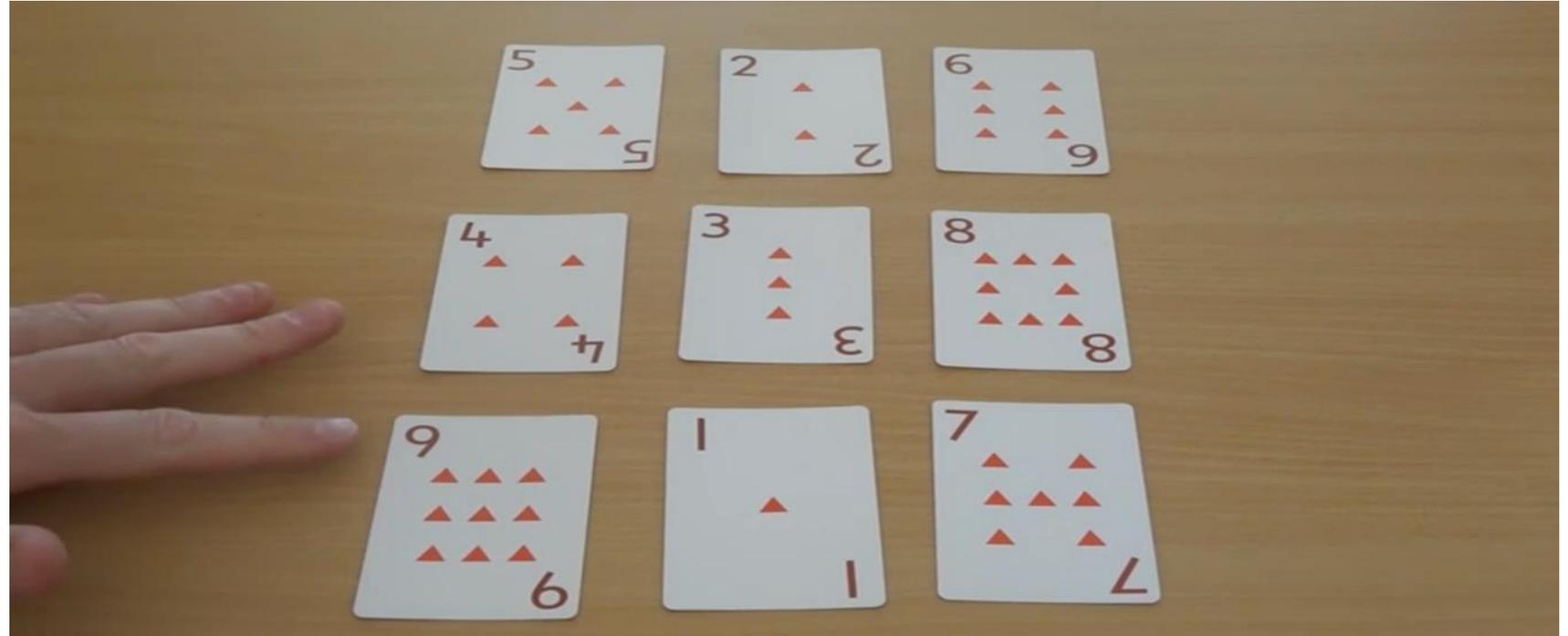


For each of the tasks, what can a teacher ask to make the task

- A fluency task
- A reasoning task
- An investigation

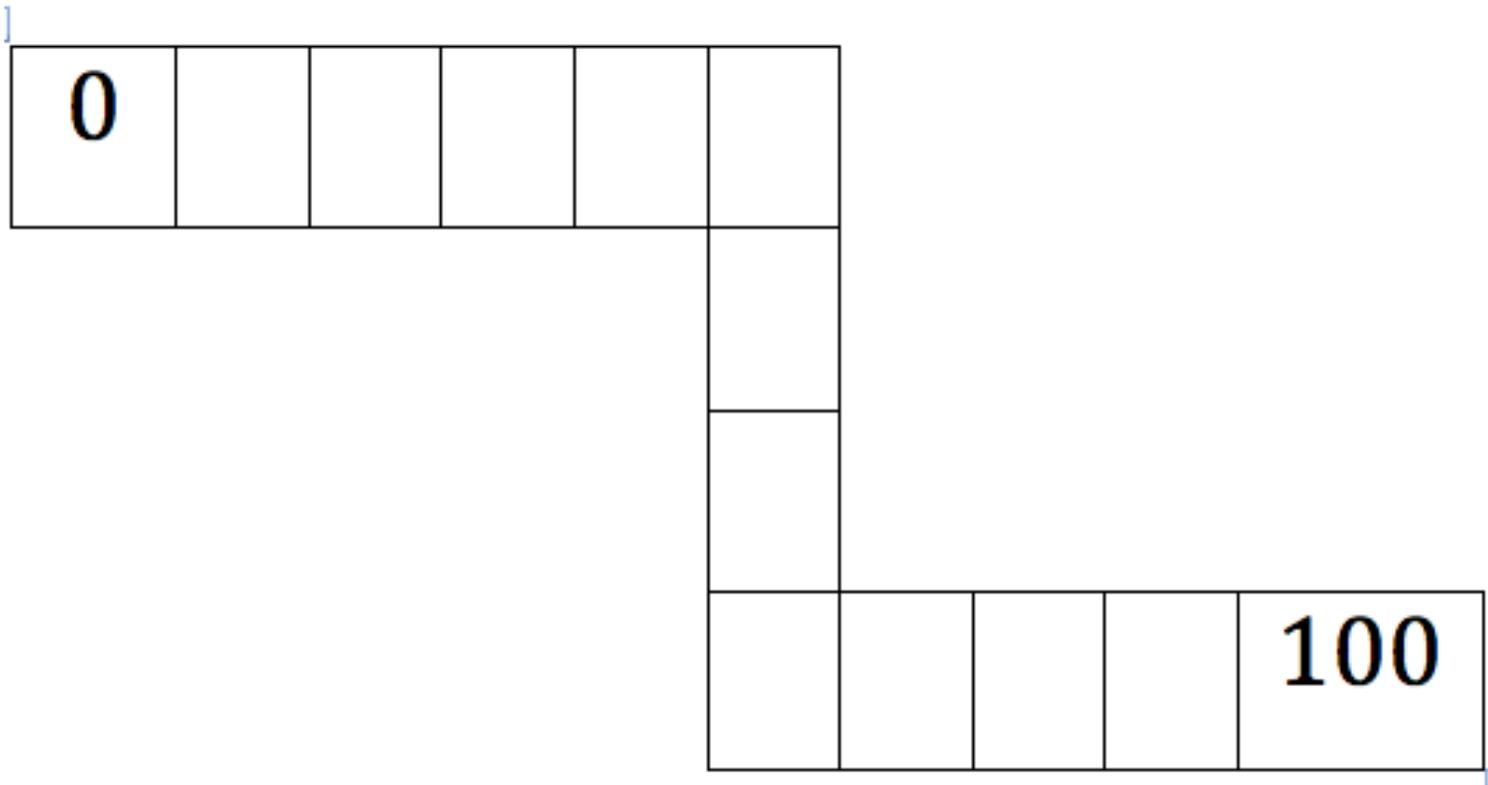
Card games

- Ordering 10
- Stano 9
- Fays nines
- ROWCO
- COMBO



Dice games

Number Paths: Roll 2 dice. Make a 2 digit number. Place your number along the path so that all numbers will be in order. Miss a turn if you can't go.



Enabling prompt?

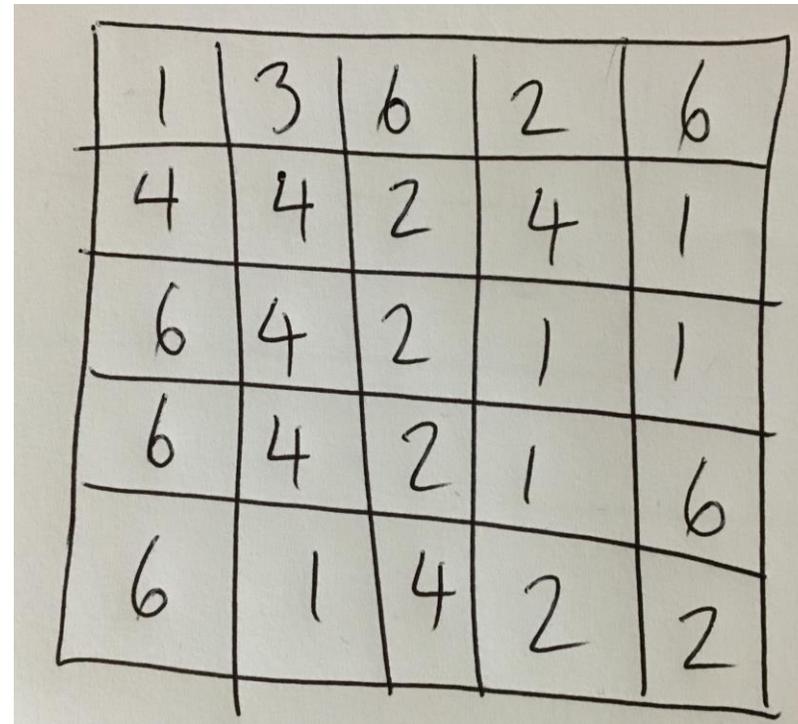
Extending prompt?

Dice cricket

Draw a 6 x 6 grid.

Fill each square of grid with the numbers 1, 2, 3, 4, or 6.

Do NOT use 5!



1	3	6	2	6
4	4	2	4	1
6	4	2	1	1
6	4	2	1	6
6	1	4	2	2

Some dice quickies

- Higher Lower
- Quick attack

Summary: Healthy competition



Negative characteristics of competition

- Jealousy
- Expectations of winning and not dealing with not winning 'well'
- Tantrums, arguments, bragging

Human nature

- A tendency to want to be good at something

Healthy competition



Tips for encouraging healthy competition

- Praise effort and learning not just the end result
- Assist children to deal with not winning
- Focus on the team or overall goals

Questions

