

Mathematically Rich Tasks in Primary Schools

Chris Terlich- Dec 5, 2019

The banner features a dark blue background with white and yellow text. On the left, a vertical stack of words includes 'INDUSTRY', 'PEDAGOGY', 'CURRICULUM', 'PROFICIENCIES', 'STEM', 'STUDENTS', 'INDUSTRY', 'PEDAGOGY', 'CURRICULUM', 'PROFICIENCIES', 'STEM', 'MAKING + CONECTIONS', 'STUDENTS', 'INDUSTRY', 'PEDAGOGY', 'CURRICULUM', 'PROFICIENCIES', 'STEM', 'INDUSTRY', 'PEDAGOGY', 'CURRICULUM', 'PROFICIENCIES', and 'STEM'. The central text reads 'MAKING + CONNECTIONS' in white, 'MATHEMATICS' in yellow, and 'NUMERACY' in light blue. On the right, a white cross shape contains the same set of words. To the right of the banner, the text 'MAV19 CONFERENCE' is in white on a light blue background, '5-6 DECEMBER' is in white on a green background, and the MAV logo with 'THE MATHEMATICAL ASSOCIATION OF VICTORIA' is on a light blue background.

INDUSTRY
PEDAGOGY
CURRICULUM
PROFICIENCIES
STEM
STUDENTS INDUSTRY PEDAGOGY
CURRICULUM PROFICIENCIES STEM
MAKING + CONECTIONS
STUDENTS INDUSTRY PEDAGOGY
CURRICULUM PROFICIENCIES STEM
INDUSTRY
PEDAGOGY
CURRICULUM
PROFICIENCIES
STEM

**MAKING +
CONNECTIONS**
MATHEMATICS
NUMERACY

INDUSTRY
PEDAGOGY
CURRICULUM
PROFICIENCIES
STEM
STUDENTS INDUSTRY PEDAGOGY
CURRICULUM PROFICIENCIES STEM
MAKING + CONECTIONS
STUDENTS INDUSTRY PEDAGOGY
CURRICULUM PROFICIENCIES STEM
INDUSTRY
PEDAGOGY
CURRICULUM
PROFICIENCIES
STEM

MAV19
CONFERENCE

5-6 DECEMBER

 THE MATHEMATICAL
ASSOCIATION OF VICTORIA

Don't Break the Bank

Math For Love



- Copy this grid.
- The die will be rolled 9 times. Place your digits on the grid after each roll.
- After the 9 rolls, you will have three 3-digit numbers. You need to calculate the sum of these numbers.
- The object of the game is to get as close to 1000 without going over. If you are over, you have broken the bank!

Presentation Intentions

- To investigate a number of activities and resources.
- Have the opportunity to network with other professionals to share ideas and practice.
- Position yourself as the learner.





ONE TASK FOR ALL

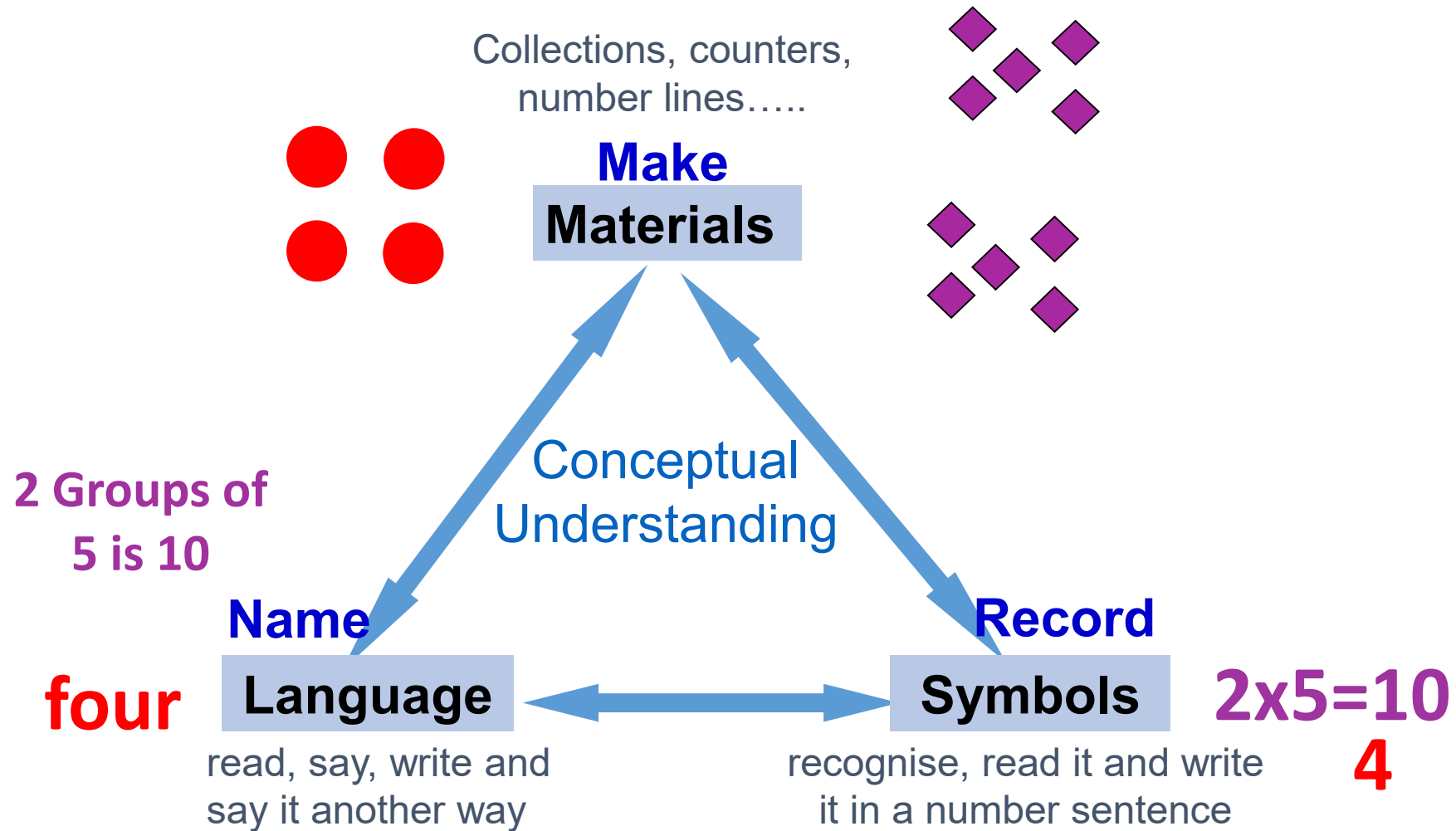
The goal is for them to exit at a point further along the line.



Basic Starting Point:
Everyone can access the learning

High Ceiling:
Keep raising the challenge

All students will find their challenge point





**Children
must hold
math
in their
hands
before
they can
hold it in
their
heads.**



**What are
your
thoughts?**

Counter Toss

ReSolve

How to Play

- Toss your 4 two-coloured counters onto the table.
- You score 5 points for every yellow and 2 points for every red.
- Play 5 rounds, recording your scores as you go.



Counter Toss

ReSolve

What is every possible score?

What if there were 5 counters?

What do you notice?

What if you changed the scoring system?



Cartoon Counting

ReSolve



~~0 1 2 3 4 5 6 7
8 9 10 11 12 13 14 15
16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31
32 33 34 35 36 37 38 39
40 41 42 43 44 45 46 47
48 49 50 51 52 53 54 55
56 57 58 59 60 61 62 63
64 65 66 67 68 69 70 71~~

0 1 2 3 4 5 6 7
10 11 12 13 14 15 16 17
20 21 22 23 24 25 26 27
30 31 32 33 34 35 36 37
40 41 42 43 44 45 46 47
50 51 52 53 54 55 56 57
60 61 62 63 64 65 66 67
70 71 72 73 74 75 76 77
80 81 82 83 84 85 86 87
90 91 92 93 94 95 96 97
100 101 102 103 104 105 106 107
110 111 112 113 114 115 116 117
120 121 122 123 124 125 126 127
130 131 132 133 134 135 136 137
140 141 142 143 144 145 146 147

or

Student Work Sample 2

What would be
your explicit
teaching point
for this
student?

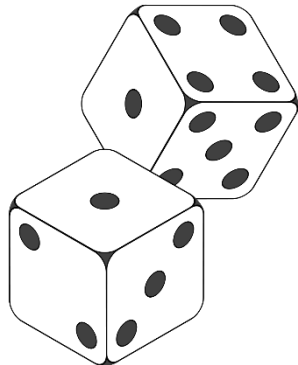
A handwritten number chart on grid paper. The numbers are arranged in rows of 8, starting from 0 and ending at 707. A rectangular box is drawn around the first 10 rows of numbers (0 to 77). The numbers are written in a simple, slightly shaky hand.

0	1	2	3	4	5	6	7
10	11	12	13	14	15	16	17
20	21	22	23	24	25	26	27
30	31	32	33	34	35	36	37
40	41	42	43	44	45	46	47
50	51	52	53	54	55	56	57
60	61	62	63	64	65	66	67
70	71	72	73	74	75	76	77
100	101	102	103	104	105	106	107
200	201	202	203	204	205	206	207
300	301	302	303	304	305	306	307
400	401	402	403	404	405	406	407
500	501	502	503	504	505	506	507
600	601	602	603	604	605	606	607
700	701	702	703	704	705	706	707

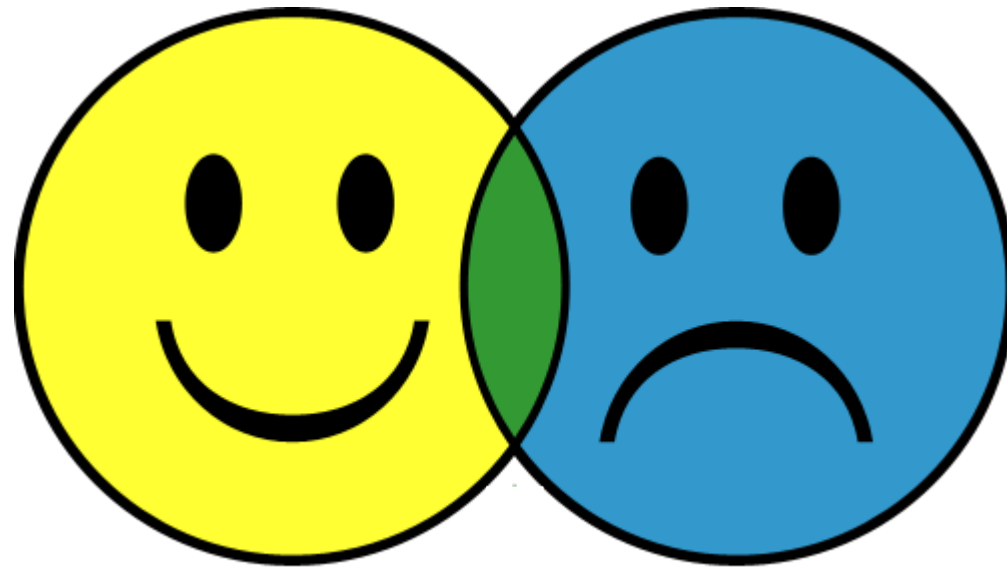
Problem Dice

Maths 300

- Find a partner to play a dice game.
- Player 1 is the older person, Player 2 is the younger person.
- You will roll 2 dice and then find the difference between the two numbers (eg. Roll a 2 & a 5, the difference is 3).
- *Player 1 scores a point if the difference is 0, 1 or 2.*
- *Player 2 scores a point if the difference is 3, 4 or 5.*
- Play 20 games and keep track of your score.



Is this a fair game?
Why/why not?



Can we make it a fair game?

**Thanks for attending this
presentation.**

chris@elevatinglearning.com.au

