

The Number Plate Game

Summary:

My nephew, Franky has a slight obsession with cars. on our way to the park he takes a particular interest in each car's number plate and decides to create a game.

This lesson will take your students on a journey of investigative mathematics, through adding coded letters together to find the most valuable number plate!!

What is your number plate worth?

Year Level:

F-6

Resources:

- Collection of Number Plates (photos or a spot to take photo or see number plates)
- Number Coding System Recording Sheet (Appendix 1)

Lesson:

Introduction/Launch:

Franky and I were on our way to the park when he start talking about the cars in each drive way as we passed, taking particular notice of the number plates.

He wanted to know the value of each number plate and decided to create a game.

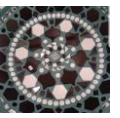
He coded of the each letters on the number plate as a number.

A = 10 B = 11 C = 12

We used his code to work out the total value.

What is the value of this number plate?





Challenge/Explore:

Using Franky's coded letters who can find the most valuable number plate?

What about the least valuable number?

Can you find a number plate that has a value of exactly 50? 100?

Allow time for students to explore and investigate using Franky's code.

You might like to head out to the staff car park (safety precautions put in place of course) and challenge the students to find the most and least valuable teacher number plate.

Your Own Coding System:

Pose the opportunity for students to create a new coding system of their own to find the value of different number plates.

Allow students to chat amongst themselves to discuss other possible letter to number coding systems that they might create.

Examples:

A-5	H-40	O-75	V-110
B-10	I-45	P-80	W-115
C-15	J-50	Q-85	X-120
D-20	K-55	R-90	Y-125
E-25	L-60	S-95	Z-130
F-30	M-65	T-100	
G-35	N-70	U-105	

A	B	C	D	E	F	G	H	I	J	K	L	M
28	25	24	23	22	21	20	19	18	17	16	15	14
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
13	12	11	10	9	8	7	6	5	4	3	2	1

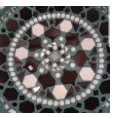
Give students time to investigate and explore using their coding systems.

You might like students to swap ideas and work with another students number to letter code system rather than their own.

What is the value of this number plate?



What is the most and least valuable number plate now?



Reflection:

Discuss and reflect (this can happen throughout the lesson – not just at the end) on what strategies students used to help add the number values together to find the total value of each number plate.

Going Further:

- Students could order their number plate totals in order from smallest to largest
- These numbers could be placed on a number line
- Have students estimate the value of their number plate first
- As a formative assessment towards the end of the lesson or week, you could have examples of number plates scattered over the tables for students to decode and find the value of more number plates.
- Explore other letter/number displays and create codes for these.

Enabler:

- Have some existing codes already created for the students
- Have Franky's code go A=2, B = 4, C -6...

Extender:

- Create a coding system that increases by a more challenging multiple – 7s 8s 9s
- Create a coding system that incorporates decimals/fractions

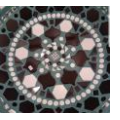
Skills and Concepts:

Number – counting, skip counting, patterns & addition.
Problem Solving

Curriculum Links:

ACMNA015
ACMNA018
ACMNA030
ACMNA073
ACMNA123

Thank you to James and Toby Russo for tweeting the idea that helped bring this lesson together.



My Number Plate Code:

A=	B=	C=	D=
E=	F=	G=	H=
I=	J=	K=	L=
M=	N=	O=	P=
Q=	R=	S=	T=
U=	V=	W=	X=
Y=	Z=	Most Valuable:	Least Valuable: