Australian Animal Expanded Notation

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These activities were designed to correspond with the book "Braver: A Wombat's Tale" by Suzanne Selfors and Walker Branson. It can also be used to supplement any math program.

NUMBERS IN BRACKETS

These numbers correspond to the concept numbers in Math on the Level. This is a program we use to help teach and track concepts learned for each student. There is a tracking spreadsheet that helps create individualized daily review as well as an online component for printing individualized worksheets and review pages..

Expanded Notation [29]

It's easy for us to imagine what three or even twenty looks like, but when numbers get bigger, up to the millions or even billions, it's much trickier. That's when expanded form comes in. Writing numbers in expanded form helps us get a better picture of such big numbers.

There are multiple ways to write numbers in expanded form. It's important to learn each way - they all teach us something different. Practice writing big numbers in standard and expanded form. As you get the hang of each step work your way down to practice with expanded notation.

Standard Form - how we typically write numbers:

42,398

Expanded Form - this shows the value of each digit:

40,000 + 2,000 + 300 + 90 + 8

Expanded Notation - a step closer to scientific form that helps us understand how numbers work with **10**:

(4x10,000) + (2x1,000) + (3x100) + (9x10) + (8x1)

Expanded Notation with Exponents - standard way to write really big numbers to make them easier to read and understand

$(4x10^{4}) + (2x10^{3}) + (3x10^{2}) + (9x10^{1}) + (8x10^{0})$

More Resources

-Video introduction to all forms: https://www.youtube.com/watch?v=sBAOJ9NdVdM

Expanded Form

- Video introduction to expanded form: https://www.youtube.com/watch?v=4AF7xj7pmWc

- Fun video to practice writing expanded form quickly: https://www.youtube.com/watch?v=GlQqEVcXfTI

Expanded Notation

- Video lesson introducting expanded notation: https://www.youtube.com/watch?v=HJH0gBYhFiA

Expanded Notation with Exponents

- Video lesson explaining expanded notation with exponents: https://www.youtube.com/watch?v=Yuav-w0Ke9U

More Advanced (Scientific Notation):

- Math Antics video about scientific notation: https://www.youtube.com/watch?v=bXkewQ7WEdI&t=519s

-Complete lesson plans on expanded and scientific notation: https://www.uen.org/lessonplan/view/18885

Animal Maximum Populations

Animal	Population
Wombats	138,000
Platypuses	300,000
Forest Mouse	8,000
Tasmanian Devil	149,000
Fairy Penguin	469,760
Eastern Grey Kangaroo	16,057,783

*Numbers may not be accurate

On a white board, the space below, or a separate paper, write the numbers in all the forms you know.

Here's a fun way to practice expanded notation. You can do it all in one day, or spread it out over a few days.

Print off the card sheets on the next few pages. Each number has three empty boxes around it. Write all the number out in expanded form three ways to make a deck of cards.

Once they are cut out you can use them in a few ways:

- Play Memory
- Play Go Fish
- Put them in order from least to greatest.
- Play War

Can you think of other games to play?

753

819

320

777

423

7,556

3,592

3,409

1, 232

98,765

432,100	
5,871	

3,219

365,922

6,898

89,392

238

13,014

40,041

999,999