40 Weeks of Math Challenges

Week 16

These visual math challenges have been created to intrigue and inspire your children. They are designed to be hands on, open-ended inquiries, to challenge them to think deeply about the world around them.

Each week a new set will be released with four levels.

- Preschool
- Years 1/2 (approx. age 6-8)
- Year 3/4 (approx ages 8-10)
- Year 5/6 (approx. ages 10-12)

I hope you enjoy exploring the ideas with your children! The challenges don't require any special resources, however your children will need a 'Math Journal' to record their discoveries. Any notebook will work, but if you can, try to encourage them to use a Grid book.

Find me on Instagram @jo_mathinnature and Nature Study Australia

Divisibility

Definition:

Is the breaking of the whole into parts, or separating into groups.

1. Look at the picture, what do you notice?
2. How many pieces of mandarin can you see?
3. The next time you eat a mandarin see how many pieces you can divide it into.

Divisibility

Definition:

Is the breaking of the whole into parts, or separating into groups.

1. Look at the picture, what do you notice?
2. How many pieces can one garlic bulb be divided into?
3. Is this an even or odd number? Even numbers can always be broken into two groups with no leftovers. So any number that ends in 0, 2, 4, 6, or 8 can be divided by 2. We say even numbers are divisible by 2.
4. Write some numbers in your journal that are divisible by 2.

Divisibility

Definition:

Is the breaking of the whole into parts, or separating into groups.

1. Millipedes have 4 legs per segment.

2. A way to work out if large numbers are divisible by 4 is to check if the last two digits of the number are divisible by 4. For example the largest millipede has 2**56** legs. 56 can be divided by 4 therefore 256 can be divided by four. (Check by dividing 56 in half = 28, and then 28 in half = 14)

3. Can you draw a millipede with 28 legs, how many segments does it have? Draw some other sizes of millipede in your journal.

Divisibility

Definition:

Is the breaking of the whole into parts, or separating into groups.

1. I like to think that this mantis is deep in thought! Maybe he is trying to figure out why we can use a clever trick to find out if a number is divisible by 9!

2. Take any number, keep adding it's digits until you get a single digit. If it is 9 you have found out that the original number is divisible by nine.

3. 23,013 (2+3+0+1+3 = 9) YES 23,013 is divisible by 9! How cool is that! If you get a double digit answer, just add again. 4,716 (4+7+1+6 = 18, 1+8 = 9) YES 4,716 is also divisible by 9.

4. Can you find some more? Check with a calculator.