40 Weeks of Math Challenges

Week 31

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

Fraction

Definition:

Is a part of a whole.

1. Look at the picture, what do you notice?
2. Which egg is whole? Which egg has two halves?
3. What other things can be cut in half?
4. Draw a picture showing only half of things
5. Enjoy this story 'In the Half Room' by Carson Ellis.

Fraction

Definition:

Is a part of a whole.

1. Look at the picture, what do you notice?
2. Can you tell me how many pieces this mandarin can be broken into?
3. Can you break this mandarin in half? Why or why not?
4. Put the total number of pieces of mandarin on the bottom of your fraction. This number is the denominator. Chose how many pieces you would like to eat. Put this number on the top of your fraction. This is the numerator.
5. If you eat 2 pieces, the fraction would look like this. $\frac{2}{11}$
6. Draw a picture to show your fraction.

Fraction

Definition:

Is a part of a whole.

1. Look at the picture, what do you notice?
2. How many cars are there altogether?
3. Put this number at the bottom of your fraction, it is the denominator.
4. What fraction of cars are yellow? Count the yellow cars and put this number on the top of your fraction it is the numerator. The fraction should look like this.

$$\frac{2\ \text{(numerator)}}{16\ \text{(denominator)}}$$

5. Write the fractions Showing the red cars, blue cars and white cars.

Fraction

Definition:

Is a part of a whole.

1. Look at the picture, what do you notice?
2. What fraction of the circle shows one month?
3. What fraction of the year is summer?
4. Draw a circle in your math book. Divide it into 12 equal sections. Each section is 1/12 of the whole. You can do this with your protractor. A circle has 360°, to find 1/12 divide 360° by 12 (30°) make a mark for each 30° around the circle and draw in the lines. Label each month of the year.
5. Can you think of another circle, divided into twelve, that we use all the time?