

## Maths Challenges Summer Term 2019-2020

### Week 8

<b>Focus</b>	<b>Challenge 1</b>	<b>Challenge 2</b>	<b>Challenge 3</b>
<p><b>Fractions</b></p> <p>To develop confidence identifying fractions and investigating equivalence</p>	<ul style="list-style-type: none"> <li>Investigate terms wholes, halves and quarters by folding paper shapes</li> <li>First match, then find on request, then independently name key fractions</li> <li>Cut fruit or slices of bread into halves or quarters and match the pieces to a written fraction</li> <li>Find a half and a quarter of given quantities using a range of household items, eg put equal numbers of items on 2 or 4 plates or cushions</li> <li>Practise counting in halves, eg one, one and a half, two....</li> <li>Recap on how to use a calculator to find half or quarter of an even total by dividing by 2 or 4.</li> <li>Cut a slice of bread into 4 strips and make an 'edible fraction wall'-lie a whole strip on a plate, then cut the next strip into 2 and place underneath, the next into 3 and the final piece into 4. Identify halves, thirds and quarters. How many of each fraction are needed to make a whole? We call this 'equivalence'</li> <li>Explore equivalent terms using simple decimals and percentages, eg <math>\frac{1}{2}=0.5=50\%</math> (use terms 'equals', 'is equivalent to' or 'is the same as')</li> </ul>	<ul style="list-style-type: none"> <li>Cut fruit or slices of bread into different fractions and write down, eg 6 pieces is equivalent to 6 sixths (a whole or 1) and one piece is 1 sixth</li> <li>Explore equivalent fractions, decimals and percentages-, eg <math>\frac{1}{4}=0.25=25\%</math></li> <li>Add 2 fractions together using practical resources, eg using a 6 piece chocolate bar....what is one sixth plus 2 sixths?</li> <li>Make edible 'mixed numbers' (wholes plus a fraction), eg 2 whole slices of toast, plus a quarter is written as <math>2\frac{1}{4}</math></li> <li>Find a till receipt and work out what the total would be if all items were reduced by a half (ie '50% off' ) by using a calculator to divide by 2</li> <li>Practise counting forward and back in quarters, eg one, one and a quarter, one and a half....</li> <li>Throw 2 dice and write down the 2 digit number made. Find out what a quarter of this number is using a calculator to divide by 4</li> <li>Make up some word problems (eg If my cousin is 30 years old, what is one quarter of her age?)</li> </ul>	<ul style="list-style-type: none"> <li>Explore equivalent fractions, decimals and percentages using practical resources (eg by cutting up fruit, slices of bread or bread sticks)</li> <li>Add fractions together practically to form a mixed number and record as a fraction, decimal and percentage eg 2 whole slices of toast, plus a quarter is written as <math>2\frac{1}{4}=2.25=225\%</math></li> <li>Explore edible 'improper fractions' and convert to 'mixed numbers', eg 13 quarters of toast=<math>3\frac{1}{4}</math></li> <li>Put a mixed set of fractions, decimals and percentages in order of size-you first need to convert them all to the same form eg 1.5, 50% and <math>1\frac{1}{4}</math> put in order of size= a half (50%), a whole and a quarter (<math>1\frac{1}{4}</math>) and a whole and a half (1.5)</li> <li>Find a till receipt and work out what the total would be if all items were reduced by a quarter (ie '25% off'), by first dividing the total by 4 to find a quarter and then subtracting a quarter from the total</li> <li>Work out a '10% off' discount, by first dividing the total by 10 to find a tenth and then subtracting a tenth from the total .....when you have mastered this extend to 20% off (2x10% reduction), 30% off (3x10% reduction), and then 15% off (by calculating 10%, then adding half of this amount)</li> <li>Make up some word problems (eg If my sister is a fifth the age of my 60 year old neighbour, how old is she?)</li> </ul>