

**Learning to Love, Loving to Learn**

**Written Policy for Fractions – July 2022**

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| **Year** |  |  |  |
| **R** | **Stage 1**  **Practical activities for halving**  Children will experience sharing and halving in play and problem solving with concrete objects. |  |  |
| **Year 1** | **Stage 2**  **Use the language associated with**   * Understand a half of something is one of two equal parts * Idenify ½ on a clock or ½ a turn * Understand the word ‘fraction’ as equal parts of a whole | **Stage 3**  **Use the language associated with**   * Understand a quarter of something is one of two equal parts * Idenify ¼ on a clock or ¼ of a turn |  |

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| **Year 2** | **Stage 4**  **Name the fractions of ‘one half’, ‘one quarter’ and ‘one third’ in relation to a fraction of a length, shape or set of objects.**  One half   * Practically and with pictures identify objects spilt into one half or not.        * Demonstrate half of a whole   Eg with cubes practically and splitting shapes into two equal parts    One-third and one-quarter   * Identify one third as one whole spilt into 3 equal parts and one- quarter as one whole split into 4 equal wholes     The strawberries are split into four equal parts. Each part is one-quarter.    The rectangle is split into three equal parts. Each part is one-third.   * Find one-third and one-quarter.   Split or colour shapes and objects into thirds and quarters  **Read and write the fraction notation and relate this to a fraction of a length, shape or set of objects.** | **Stage 5**  **Find half of numbers**  **Find or of a number**   * Relate ‘finding half’ to a bar model split into two equal parts.     **Find or of a number**   * **Use a large bar divided into 4 equal parts to practically divide cubes into 4 parts one at a time. Count cubes in each part to work out that ¼ of 12 = 3**      * **Use bar model to divide into 3 or 4 equal parts to find or**       Or more efficiently- | **Stage 6**  **Find and of an object, shape, set of objects, length or quantity**  **Recognise the equivalence of and**  **Use stem sentence**  **‘*The whole is divided into four equal parts and we have \_\_\_ of them.’***          **Equivalence- practically demonstrate equivalence of to** |

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|  | **Stage 7**  **Identifying unit fractions**  **Comparing and ordering unit fractions**         * **One equal part of a whole is called a unit fraction eg , ,** * **Use the generalisation to order unit fractions**   **Use the generalisation**  ***‘The greater the denominator the smaller the fraction.’*** | | | **Stage 8**  **Identifying non-unit fractions**  **Comparing and ordering non-unit fractions**    **Recognise fractions which represent one whole**  **Use the generalisation**  ***‘When the numerator and denominator are the same, the fraction is equivalent to one whole.’***    **Use the generalisation to order non-unit fractions-**  ***‘When we compare fractions with the same denominator, the greater the numerator the greater the fraction.’*** | | | | | **Stage 9**  **Add fractions with the same denominator within one whole.**  **Subtract fractions with the same denominator within one whole.**  Use the generalisation  *‘When adding fractions with the same denominators, just add the numerators.’*      Use the generalisation  *‘When subtracting fractions with the same denominators, just subtract the numerator.’*    When subtracting from one whole, first convert the whole to a fraction. |
| **Year 4** | | | **Stage 10**  **Order, compare mixed numbers**  Quantities made up of both whole numbers and parts can be expressed as mixed numbers    Order mixed numbers thinking about their position on a number line    Compare mixed numbers | | | **Stage 11**  **Add and subtract mixed numbers**  **Add and subtract fractions with the same denominator >1**  Add and subtract mixed numbers. Understand that they can be partitioned and combined in the same way as whole numbers.  Use area models, part-part whole and number lines to demonstrate          **Add and subtract fractions involving improper fractions**  Use models and diagrams    **Write a mixed number as an improper fraction** | | **Stage 12**  **Multiply fractions by a whole.**  Use repeated addition to model initially before proceeding to examples below.    **Find unit and non -unit fractions of a quantity**  **Use bar models to support and short division when necessary** | |
| **Year 5** | | **Stage 13**  **Find equivalent fractions**  **Use diagrams**    Progress to the proportional relationship | | | **Stage 14**  **Simplify Fractions**    Fractions can be simplified by dividing both the numerator and denominator to its simplest form.  Highest common factor is 4    Use the generalisation  *‘A fraction can be simplified when the numerator and denominator have a common factor other than one.’*  *‘To write a fraction in its simplest form, divide both the numerator and denominator by their highest common factor.’* | | **Stage 15**  **Adding and subtracting fractions with common denominators**  Use the generalisation  *‘Related fractions have denominators where one denominator is a multiple of another.’*      **Extend the above to non-unit fractions**  **Add and subtract non-related fractions- the product of the two denominators provides a common denominator**  Multiply the two denominators to give a common denominator  Eg 4 x 3 = 12    Use the generalisation  *‘To add or subtract fractions with different denominators, first convert to fractions with a common denominator.’* | | |

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| **Year 6** | **Stage 16**  **Multiply fractions**  When a fraction is multiplied by a proper fraction, it makes it smaller.  To multiply two fractions, multiply the numerators and multiply the denominators.  Use bar models to demonstrate. | **Stage 17**  **Divide a fraction by a whole number**  **When a fraction is divided by a whole number it makes it smaller.**  **To divide a fraction by a whole number, convert it to an equivalent multiplication** | **Stage 18**  **Know fraction, decimal and percentage equivalents**   |  |  |  | | --- | --- | --- | | Fraction | Decimal | Percentage | |  | 0.1 | 10% | |  | 0.25 | 25% | |  | 0.5 | 50% | |  | 0.75 | 75% | |  | 0.2 | 20% | |  | 0.33 | 33% | |  | 0.6 | 60% | |  | 0.05 | 5% | |  | 0.06 | 6% | |  | 0.67 | 67% | |