**Itchen Abbas Primary School Fractions Policy**

Finding fractions of shapes, amounts and a group of objects.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stage 0 | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | **Stage 6** | **Stage 7** |
|  | Explore fractions of shapes with objects such as playdough and cakes. | Making connections with halving using objects. | Become familiar with the symbol ½ and make connections with halving.  Become familiar with the symbol ¼ and make connections between halving an amount twice.  Understand that a fraction is shared into equal parts.  Recognise, find and name a half as one of two equal parts and a quarter as one of four equal parts of an object. | Understand the fractions ,, using resources and pictures.   Find and understand some non-unit fractions of a shape, amount or set of objects using images to support. ( ) \*See below  Begin to make links between division/  multiplication and finding fractions. | Explore tenths and make links to decimals (dividing by 10).  Explore different representations of fractions including materials, pictures and abstract methods.  Recognise and show unit and non-unit fractions of a shape with a small denominator. | Recognise, find and write fractions of a discrete set of objects, shape of number: (unit and non-unit fractions) using visual representations. | Recognise, find and write fraction of a discrete set of objects: (unit and non-unit fractions) using knowledge of multiplication and division facts. |  |
|  | \*Stage 3 (visual representations of finding a non-unit fraction:  Finding ¾ of 8 = 6  Image result for simple stickmanImage result for simple stickmanImage result for simple stickmanImage result for simple stickmanChildren use counters to explore this method before moving onto drawing the pictorial representation. | | | | | | | |

Counting in fractions (with links to percentages and decimals)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stage 0 | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | **Stage 6** | **Stage 7** |
|  |  |  | Begin counting in halves during games/ class activities. | Count in halves, thirds and quarters using objects and visual images.  Start to solve missing fraction sequences. | Count forward and back in fractions with small denominators using images and abstract methods to support.  \*See below  count up and down in tenths (as fractions and decimals); recognise that tenths arise from dividing an object into 10 equal parts  Solve missing fractions sequences using counting knowledge. | Count up and down in hundredths using knowledge of numbers and fractions to support. |  |  |
|  | \* Stage 4 Counting in tenths | | | | | | | |

Recognising, comparing and ordering fractions

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stage 0 | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | **Stage 6** | **Stage 7** |
|  | Children explore sharing and halving in real life contexts with everyday objects and images. | Children recognise, find and name one half as one of two equal parts and one quarter as one of four equal parts with support of everyday and mathematical objects and images. | Explore thirds in the same way as Stage 1.  Children begin exploring non-unit fractions with small denominators (mainly quarters) and understands how to order them using objects, images and their knowledge of fractions.  Children recognise and understand the equivalence of one half and two quarters using objects and images. \*see below\*  Children begin to use the fraction wall to secure their understanding. | Compare and order unit fractions and fractions with the same denominator using images including bars and fraction walls to scaffold understanding.  Children recognise and show, using diagrams, equivalent fractions with small denominators.  Children compare fractions using the symbols < > = | Children recognise and show families of equivalent fractions using resources, images then drawing diagrams to show their understanding.  Children recognise and write decimal equivalents of any number of tenths or hundredths  Children recognise and write decimal equivalents to 1/4; 1/2; 3/4 using images to initially support. These facts will then be learnt ready to apply when solving problems.  Compare numbers with the same number of decimal places up to two decimal places. | Children compare and order fractions whose denominators are all multiples of the same number therefore making connections between families of equivalent fractions.   Children begin to recognise mixed numbers and improper fractions and understand how to convert one form to the other.  Explore equivalent fractions of a given fraction, represented visually, including tenths and hundredths. | Read and write decimal numbers as fractions using knowledge of tenths, hundredths and thousandths.  Round and order decimals up to three decimal places using resources such as number lines to support.   Recognise (%) and understand that it means ‘parts per 100’ and write percentages as decimals and a fraction with the denominator hundred. | Solve problems using fractions, decimal and percentage knowledge using mainly images and abstract methods to support.  Compare and order fractions including those less than 1.   Solve problems involving fractions and answer in the simplest form using knowledge of common factors.  Children recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |
|  | \* Stage 2/3 Showing equivalent fractions.   Image result for fraction wall halves and quarters | | | | | | | |

Adding, subtracting, multiplying and dividing fractions

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stage 0 | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | **Stage 6** | **Stage 7** |
|  |  |  | Recognising the equivalence of 1/2 and 2/4 using their knowledge of numbers and multiplying. This may be done with resources, pictures and using number facts. | Children will add and subtract fractions with the same denominator within one  whole  (e.g. 5/7 + 1/7 = 6/7) this will be shown with fractions resources, pictures (including the bar model)\*see below\* and using knowledge of adding and subtracting. | Children will recognise and show, using diagrams, **families of common equivalent fractions**  This will be then be discussed using multiplication and division facts. | Children will add and subtract fractions with the same denominator **and multiples of the same number**  Children will multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams \*see below\*. | Children use common factors to simplify fractions; use common multiples to express fractions in the same denomination initially using pictures to support. | Divide proper fractions by whole numbers  (e.g. 1/3 ÷ 2 = 1/6 )  Resources, pictures and knowledge of division facts will be used at this stage. |
|  | \* Stage 3: The image shows 1/4 + 2/4 = ¾ \*Stage 5: Multiplying fractions.  Image result for multiplying fractions picturesImage result for bar model for adding fractions | | | | | | | |