

Number: Fractions – Suggestions for the learning environment

IDEAS FOR THE CLASSROOM

- Observe the real-life application of fractions in everyday situations, e.g., *baking, building, measuring, etc.*
- Discuss fractions in relation to how we tell the time.
- Represent fractions in multiple formats using concrete and pictorial resources: length model (*Cuisenaire rods, empty number line, paper-folding*), area model (*geoboards, paper-folding, squared-paper*), set model (*cubes, counters, lollipop sticks*).
- Create a number line using string, pictures and clothes pegs to arrange, compare and order fractions.
- Create a word bank displaying the vocabulary related to fractions, this can be added to as new terms are examined in the classroom.
- Use fractions-related vocabulary when exploring other parts of Mathematics, e.g., *measuring lengths, investigating area and examining chance*.
- Use a range of virtual manipulatives to explore a range of representations in fractions, e.g., *virtual Cuisenaire rods (length model), virtual Geoboards (area model), virtual counters (set model)*.
- Encourage pupils to use a range of representations to explain fractions, e.g., *show me different ways we can draw $\frac{1}{4}$* .



IDEAS OUTSIDE THE CLASSROOM

- During P.E., engage in warm-up activities that involves the children going into groups of certain numbers. Discuss what one group represents in relation to the entire class.
- Design and make an area map of a new school yard where certain fractions have to be given to parts of the yard, e.g., *half of the yard for sports, one quarter for playground equipment, one eighth for benches and one eighth for the school garden*.
- Design a fractional representation of geometric patterns. Cut out a range of 2-D shapes using different coloured paper (a red square, a yellow circle, etc.). Cut these shapes into different fractions, for example, cut the square into quarters and the circles into halves. Arrange these fractional parts into your own geometric pattern and stick to black backing paper.
- Go on a fractions hunt around the school, e.g.,
 - *find an item that is approximately one quarter of the length of the door*
 - *find an area that is one eighth of the size of the basketball court*
 - *find a set of objects that could be represented in fractional form.*
- Use outdoor objects such as tree trunks, rocks or sticks to practice measuring and comparing lengths using fractional units. Children can estimate and measure lengths in fractions of a unit (e.g., $\frac{1}{2}$ foot, $\frac{1}{4}$ metre) using rulers or measuring tapes.

