

# Math and the paraprofessional teaching fractions



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Maths and the paraprofessional teaching fraction xxxxx School: xxxxx xxxxx  
xxxxx Due xxxxxx Introduction In fractions, models are used because of a number of reasons. However, the most important is that it helps to give the concept of fraction as a number (Department of Education and Early Childhood Development, 2009). Different models are used to make a clear understanding of the concept among the students. As few young ones are unable to grasp a certain concept or idea, therefore through other means, the concept can be embedded in their minds in a better way. Hence, they can have a long-term understanding of fractions.

In order to develop deep understanding of fractions, there are some concrete examples to the three fraction models: area, linear, and set models (Kawas, 2010). As a teacher, I need to address all the three models in well-designed instructional activities so that Bonnie and Emanuel can develop a rich concept of fractions, which they can use to make sense of measurement, numbers, and operations.

### Examples

#### Region or Area Models

For the introduction of this model, we need yellow, red, and blue construction paper. We would be using the yellow sheet as a whole, and red and blue sheets to cover it with different fractions.

To give them the concept of  $\frac{1}{2}$ , I will fold the red sheet into half and will ask them how much reds would be required to cover the yellow part completely. Like this, they will understand that two reds would be required to cover the yellow means one red would be required to cover  $\frac{1}{2}$  of the yellow sheet.

After this, to make them aware with the idea of  $\frac{1}{4}$ , with the help of my students I will fold the blue sheet twice to create fourths. Leaving the paper  
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folded, I will ask the students about the number of blue that would be using to cover the yellow sheet. In this way, they will come to know that four blues would be required to cover the yellow means that each part of the blue is  $\frac{1}{4}$  of the yellow.

The same activity can be seen with more fractions and numbers in complex ways and in this way, with the help of such activity, both the students may be able to understand the concept clearly.

#### Length or Measurement Models

For this model, we would be using a linking cube train. We will join the four cubes of the train together; at one end put the signboard of zero and at the other use the signboard written 'one' on it. Then to give them the concept of  $\frac{1}{4}$ , I will put the board with question mark after the first cube. Then I will ask them about the number of cubes that are dividing the train. As the answer would be four, likewise I will try to explain them that the whole train is divided into four parts and one cube of the train represents  $\frac{1}{4}$  of the train.

With the same concept, in order to give them the idea of  $\frac{1}{2}$ , I will make the train of two cubes and will put the question mark signboard after the first cube. In this way, I will tell them that since the train is divided into two halves. Therefore, in denominator, we will write the total division that is two and in numerator, we will write the block number that is before the board.

#### Set models

In set models, we would be using four slices of cheese. Then I will help my students to make four irregular circles in each slice. Once the circles are made, I will explain them the concept that in set models irregularity of the object does not matter they must only be in same number.

After the concept gets clear in their mind, I will ask them to assume that they have eaten one slice. Like this, they would have eaten  $\frac{1}{4}$  of the set. If they will eat another slice, they would surely have eaten  $\frac{1}{2}$  of the set.

#### Strategy of teaching girls

As it is considered that the girls can have better understanding of the concept if the question;  $3\frac{3}{4}$  divided by 2 can be explained in more meaningful way. While teaching girls, Mary Kate and Ashley, the concept of fractional division, we can use the methods other than “invert and multiply”.

We would be using exploration rule, When the  $3\frac{3}{4}$  is considered as a fractional parts, there are 15 fourths to share altogether or 7.5 per set. I will give them certain time to divide it without working. If any of them could think of allotting 1.5 or 6 fourths on each set, they will be left with 3 fourths to be divided between the 2 sets. Here, 1-fourths can again be given to each set and the half that is left would be divided between them. Before this, we can let them solve the problem without any help, with simple guessing the answer.

#### References

Kawas. T, 2010, Fractions, Accessed on 7th March 2011 from

<http://mathwire.com/fractions/fracmodels.html>

Department of Education and Early Childhood Development, 2009, Fractions, Accessed on 7th March 2011 from [http://www.education.vic.gov.](http://www.education.vic.gov.au/studentlearning/teachingresources/maths/mathscontinuum/number/N35007G.htm)

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