MERUVAMBAYI M U P SCHOOL

TEACHING MANUAL

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NAME OF THE SUBJECT: MATHEMATICS (VII: ENGLISH MEDIUM)

UNIT: 1

NAME OF THE UNIT: ADDING ANGLES

ADDING ANGLES

We have already got the ability to recognize angles and to guess their magnitudes on the basis of their spreads. We have also acquired the skill to measure an angle and to draw an angle using a protractor. Here we have to understand the relations between angles sharing a common vertex. This chapter is helpful to recognize that if a line is drawn another line, then the sum of the angles on either side is 180^0 and among the four angles made by two lines cutting across each other, the angles sum of each pair of nearby angles is 180^0. Each pair of opposite angles are equal.

LEARNING OUTCOMES:

1. *Applying the geometrical ideas learnt in new contexts.*
2. *Explaining the concepts of linear pair and opposite angles, using ideas relating to angles.*
3. *Solving problems using the knowledge relating to angles.*

IDEAS:

1. *When two angles join to form a large angle is the sum of the two angles.*
2. *The measurement of the two angles sum on both sides of a line is 180^0*
3. *That pairs are called linear pairs.*
4. *The opposite angles which cutting across each other by two lines are equal.*
5. *These angles are called opposite angles.*

LEARNING MATERIALS:

- *Text book*
- *Protractor*
- *ICT projector*

TIME:

6 periods

LEARNING EXPERIENCE

Topic 1: Angle

- *Ask the students to find the odd one out from the given examples[2] and ask them to prove why it is different from others[3].*
- *Make them to understand the concept of an angle and peculiarities of an angle[5].*
- *Present a video in front of the children "what is an angle"[6]*
- *By introducing the instrument 'protractor' before the students[9] they will get an idea about how to measure an angle[12].*
- *Ask them to draw two angles, one of them is on the top of the other angle[14].*
- *Make them to find the measurement of the large angle[17].*
- *Let them do the problems which are given in their text book.*

Conclusion

These activities help us to fine that in the measures of two small angles having a common arm and the big angle formed by them is the sum of two small angles

Topic 2: On both sides

- *Let them to draw a right angle using protractor[2].*
- *Ask them to draw a line inside the right angle[3].*
- *Tell them to stretch the first line to the left[5].*
- *Ask them to find out the number of angles and compute each angle[5].*

- *Ask the students to find the relation between the measurements of the angles if we know the big angle formed by the two angles and one among the small angle.*
- *If a line is drawn from another line ask the students to find the connection between the angles formed.*
- *Give more examples to prove the relationship between the angles in a linear pair.*

Conclusion

These activities help to find out the angles, if we know the big angle formed by the two angles and one among the small angle and also if a line drawn from another line then the sum of the angles on either side is 180^0

Topic 3: Cutting across

- *Ask the students to draw a linear pair[1].*
- *From the linear pair which they have drawn ask them to stretch out the upper line towards downwards[2].*
- *Ask them to find out and mark the pairs of angles when two lines crossing each other[9].*
- *Without protractor, using the concept of linear pair ask the students to compute the measurements of all the angles[11].*
- *By drawing this can make the students to clear that what are nearby angles and opposite angles.*

Conclusion

These activities are to introduce linear pair and opposite angles and each pair of opposite angles are equal. Among the four angle made by two lines cutting across each other, the sum of each pair of nearby angles is 180^0.