**ACTIVITY 1-Basic paper folding activity**

**Objectives**

To carry out the following paper folding activities:

Finding -

1. the mid point of a line segment,

2. the perpendicular bisector of a line segment,

3. the bisector of an angle,

4.the medians of a triangle,

5. the perpendicular to a line segment from a point given outside it,

6. the perpendicular to a line segment at a point given on the line segment.

**Pre-requisite knowledge**

Meaning of the basic geometrical terms such as perpendicular bisector, angle

bisector and median.

**Materials required**

Rectangular sheets of coloured/white paper, a pair of scissors, pencil , eraser, a ruler, glue.

**Procedure**

1.We make a line segment on the paper, by folding the paper in any way. We call it AB. We fold the line segment AB in such a way that A falls on B, halving the length of AB. We mark the point of intersection of line segment AB and the crease formed by folding the paper. This gives the mid-point M of segment AB.

2. Fold AB in such a way that A falls on B, thereby creating a crease PM. This crease PM is the perpendicular bisector of AB.

3. We draw an angle on the white paper named We fold along the vertex

B of the angle in such a way that the sides BC and BA coincide with each

other. The crease BD formed is the angle bisector of the .

4. We cut out a ΔABC.We find the mid-points of the each sides by the method given in step 1. Join A, B, C to the respective mid-points of opposite sides, BC, CA and AB by ruler. The lines newly made by ruler are the medians of the triangle.

5.We draw a line segment AB and take a point P outside it. Move B along BA till the fold passes through P and crease it along that line. The crease PM formed is the perpendicular to AB from point P.

5. We draw a line segment AB and take a point P on it. Move B along the line BA till the fold passes through P and crease it at along that line. The crease CP so formed is the perpendicular to AB at the point P on it.

**Observations**

In some cases we may verify the results obtained in this activity by actual measurement.