CLASS: IX, MATH ACTIVITY NO: 5, INCENTRE OF A TRIANGLE

OBJECTIVE: To illustrate that the bisectors of angles of a triangle are concurrent and the point of concurrency (Incentre) always lies inside the triangle.

DESIGN AND APPROACH TO THE ACTIVITY:
1) Knowledge of different types of triangles.
2) Concept of concurrent lines.
3) Knowledge of obtaining the bisector of an angle by paper folding.

PROCEDURE:
1) Take a coloured paper and cut an acute angled triangle ABC from this paper.
2) Fold it along the vertex A such that AB coincides with AC.
3) Now, press along the fold to form a crease. This crease represents the bisector of angle A.
4) Similarly, obtain the creases representing the bisectors of angles B and C.
5) Mark a line by a pen on these creases.
6) Repeat the same activity for a right-angled triangle and an obtuse angle triangle.

OBSERVATION:
1) It is observed that in each case, all the 3 angle bisectors pass through the same point (I) which shows that the bisectors of angles of a triangle are concurrent.
2) The point of concurrency of the bisectors of the angles of the triangle (the incentre) always lies inside the triangle.