

Pop-out Triangles

Aim: Students should be able to recognise the types of triangles that they've already learnt. If they have not learnt it, they can get what is different in each triangle by looking at the shape and the question beside it. Then the names will be just a formalization of what they've already recognised. Students will also be able to feel the triangles and play with them. They can try fitting in the triangles in various ways and think about why some of them can fit in after being rotated or flipped and why some of them can't.

Materials: Two cardboard pieces, round object (big eg plate, lid, etc), scissor, pen/pencil, Blank/Ruled paper (If cardboard not blank), protractor, scale, coloured paper (optional).

Procedure: - Place the same round object on both cardboard and cut them equally after marking them.

- Find the centre of the circle by folding it in half in two different ways and finding their intersecting point.
- Take the protractor and mark 0° , and in intervals of 60° throughout the circle and draw lines, using the scale, between the points and the centre of the circle.
- Write "acute, right-angled, obtuse, scalene, isosceles, equilateral" at the top of each of the six sections respectively.
- Draw the type of triangle below each name, and cut it out of the cardboard exactly.
- Remove the cut triangles and stick the bigger section (piece of the cardboard) to the identical one cut. (Ensure that no glue is left on the cut regions).
- Cover the triangles in coloured paper (optional).
- Put the triangles back in.
- Write a question about each type of triangle beside the triangle, inside the section.

Additional Activities

1. Cut the triangles into multiple pieces and ask the students to fit them in properly.
2. Wrap the pieces in coloured paper to make them more attractive.
3. Make the pieces transparent and add LEDs below.
4. Create a video about it and share it with your friends.
5. Try adding more types of triangles to your design (atleast three) eg. Isosceles Right, Isosceles Obtuse.
6. Try understanding how triangles are used in 3-D rendering of videos and games.

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