



KALEIDOSCOPE 2.

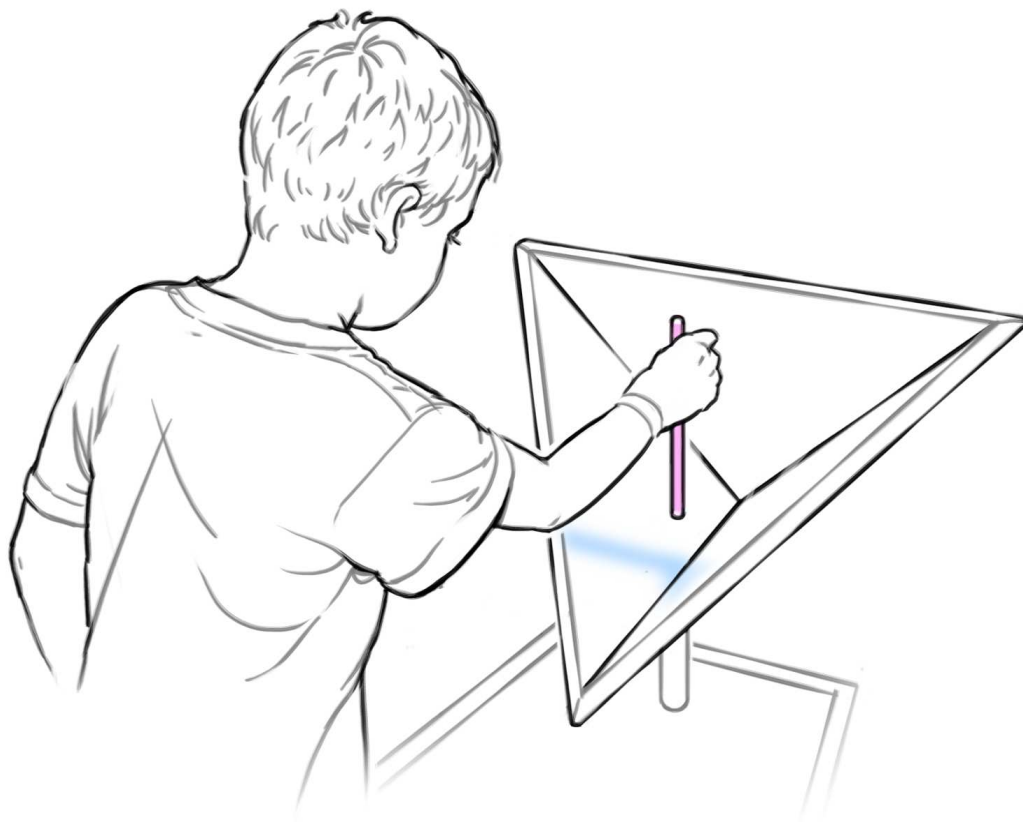


ROLL a ball into the kaleidoscope and observe its path in the mirrors.

MAKE cube-shaped figures by placing sticks in the kaleidoscope.

PLACE an equilateral triangle so that its corners touch the edges of the mirrors.

Which figure do you see if you place object 'B' or 'C' in the kaleidoscope?



In this kaleidoscope the three mirrors are perpendicular to each other, i.e. the angle between the mirrors is 90° , forming the corner of a cube. As 90° is exactly one quarter of a full circle (360°), a fourfold symmetry arises.

If you place an equilateral triangle in the kaleidoscope, an octahedron forms (eight surfaces, from greek octo = eight).

If you place object 'B' or 'C' in the kaleidoscope, it will form a dodecahedron (twelve surfaces, from greek dodeca = twelve).

This mirror arrangement is known as a reflector which reflects light back in the direction of incidence, largely independently of the direction of incidence.