



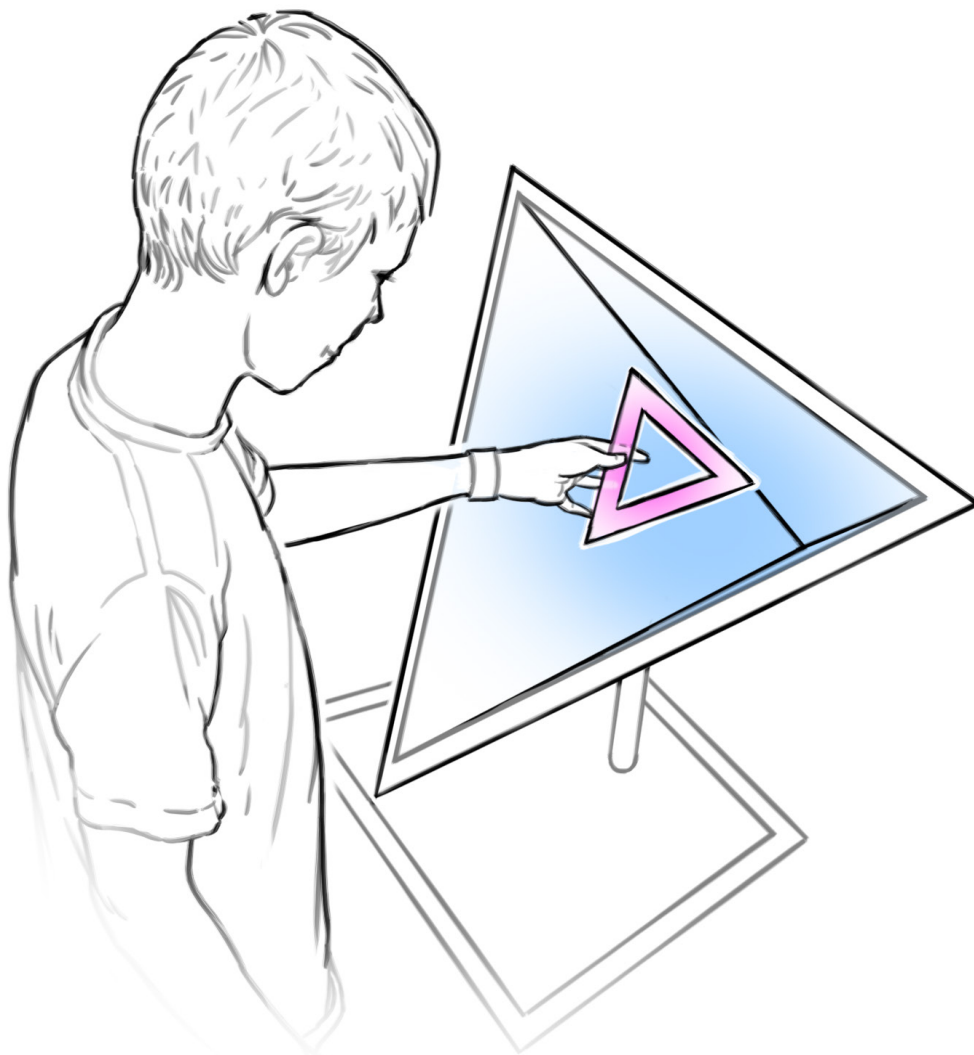
## KALEIDOSCOPE 3.



**ROLL** a ball into the kaleidoscope or place a stick in the kaleidoscope.

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

**EXPERIMENT** with different objects and observe the arising figures.



This kaleidoscope consists of three mirrors. The angle between any two mirrors is  $72^\circ$ . As  $72^\circ$  is exactly one fifth of a full circle ( $360^\circ$ ), a fivefold symmetry arises. You'll see this symmetry with a ball or a stick.

If you place an equilateral triangle in the kaleidoscope, a icosahedron forms. This figure consists of 20 surfaces (from greek eikosi = 20) and is one of the Platonic solids. The surfaces of these fully regular solids consist of equilateral and equiangular polygons of equal size.