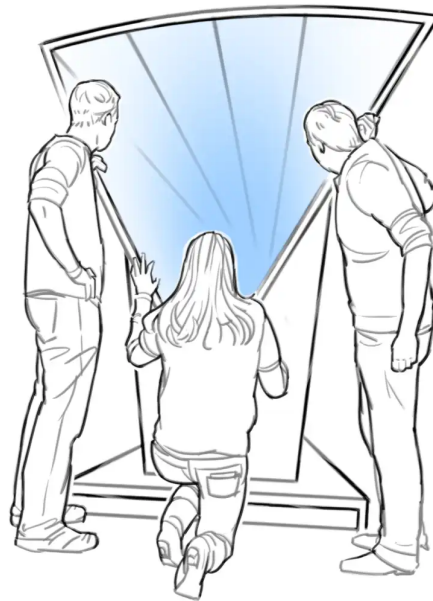


# Pentakis

How is the colourful star in the kaleidoscope created?



Look into the kaleidoscope.

Notice the different shapes.

The center is taken up by a luminescent icosahedral star.

An icosahedron (from greek eikosi = 20) is a figure made up of 20 equilateral triangles. The star forms, when the edges of each triangle are extended so that they intersect and form a tip of the star.

The icosahedral star is surrounded by a spherical dodecahedron (figure with twelve surfaces, from greek dodeka = twelve). Both shapes change their colour slowly.

The three mirrors in this kaleidoscope (greek word for 'looking at beautiful images') are arranged in the three spatial dimensions according to the principle of the 'golden section'. This arrangement produces a 60-fold reflection, creating a pentakis dodecahedron (from greek pentakis = 5-fold and dodeka = twelve).

Less than 2% of the luminescent star exists in material form – 98% is illusion.