

Overview

The geometrigraph and polygraph were manufactured in the late 1800s. Using just these two devices, you can create curved, parallel or perpendicular lines as well as circles, angles and a range of polygons from 3-sided to 20-sided.

Design Rationale

These shapes have been used by wood workers, quilters, sign makers, graphic artists, and many others to create geometric shapes in tangible forms or in three dimensions.

The geometrigraph and polygraph can be found in the Victoria and Albert Museum in London. The geometrigraph and polygraph also inspired the creation of the Spirograph in 1965 where it was introduced at the prestigious Nuremberg International Toy Fair.

Interest in the geometrigraph and polygraph template has increased with the introduction of Zentangles as a relaxing, meditative art form (<https://www.zentangle.com/>).

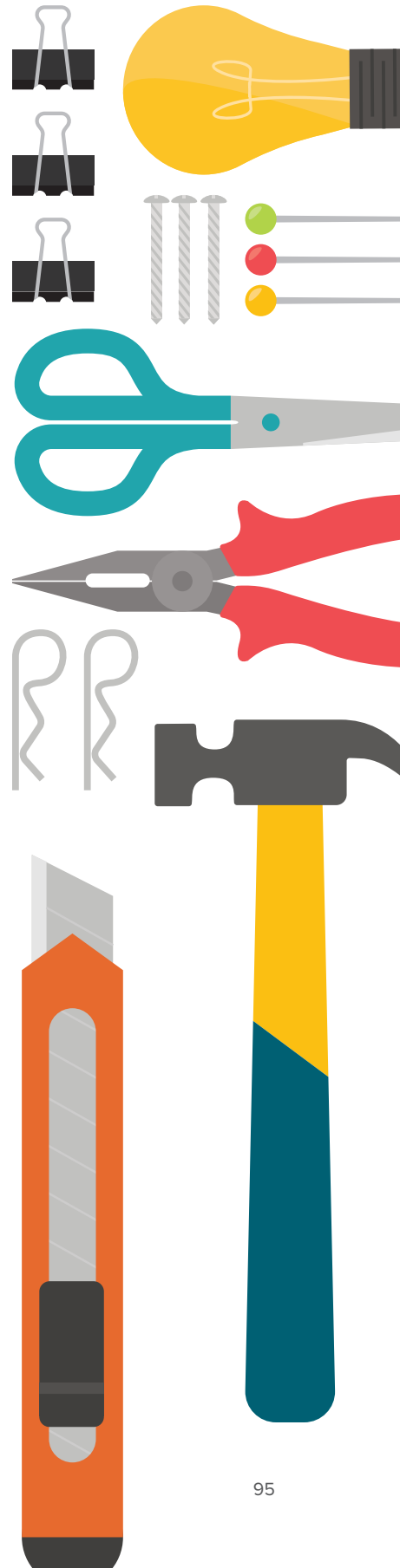
Problem Scenario

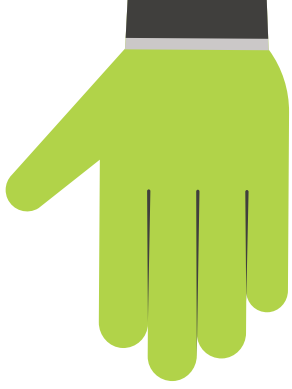
Your team has been selected to produce an interesting, complex, aesthetic geometric image that requires the use of both the geometrigraph and polygraph. You should be able identify the shapes in your image. You also need to design a structure that allows you to secure your paper and the templates and allow for complex drawing by multiple users.

Success Determinants

Success will be determined by the degree to which your design solution:

- ☐ Addresses the issues suggested in the design challenge
- ☐ Uses the templates well
- ☐ Includes multiple geometric shapes
- ☐ Is aesthetic and complex
- ☐ Provides easy identification of the geometric shapes to your audience





Parameters

- ❑ Choose consumable items and materials found in the shared pantry to aid in the enhanced development of your group's prototype.
- ❑ Use the tools that have been provided at the shared tool station.

