

Exploring Ukrainian Embroidery with GeoGebra and Python

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Abstract

Through the lens of Ukrainian embroidery we can delving into the history and cultural significance of Ukrainian traditions. Nowadays it is very important to adapt well-known form of a folk art to new settings and help to maintain cultural traditions and identity.

Also Ukrainian embroidery is a perfect place for bringing together mathematical ideas, algorithmics thinking and art.

In our STEAM project we explore traditional forms of Ukrainian embroidery and design new one with the help of GeoGebra and Python. One group of students works with GeoGebra in order to focus on exploring math topics involved: symmetry, geometrical transformation, tessellation etc. Another group concentrated on exploring repeating patterns and designing embroidery generator program in Python.