Doorway from the Isaac Gillet House, Painesville, Ohio

Academic Content Standards
Grades K–4: Geometry and Spatial Sense

Common Core Standards
Grades K–5: Geometry

Crown
Academic Content Standards
All grades: Geometry and Spatial Sense Standard
Grades 5–7: Patterns, Functions, and Algebra Standard

Common Core Standards
Grades K–5, 8: Geometry
High School: Geometry: Congruence

Cartonnage Mummy Case
Academic Content Standards
All grades: Geometry and Spatial Sense Standard
Grades 5–7: Patterns, Functions, and Algebra Standard

Common Core Standards
Grades K–5, 8: Geometry
High School: Geometry: Congruence

Interior of the Pantheon, Rome
Academic Content Standards
Grade 12: Patterns, Functions, and Algebra

Common Core Standards
High School: Functions: Interpreting Functions
High School: Algebra: Seeing Structure in Expressions

Turned Armilla
Academic Content Standards
High School: Number, Number Sense, and Operations Standard
High School: Measurement Standard
Grade 12: Patterns, Functions, and Algebra Standard

Common Core Standards
High School: Functions: Interpreting Functions
High School: Algebra: Seeing Structure in Expression

Louis XV Savonnerie Carpet with Royal Arms
Academic Content Standards
Grades 4–5, 7–9: Measurement
Grades 4–8: Patterns, Functions, and Algebra

Common Core Standards
Grades 6–7: Ratios & Proportional Relationships
Jonathan Goldsmith, an architect from Northeast Ohio, used elements from both Greek and Roman architecture in this elaborate doorway. The flat window tracery serves as a good example of geometric design in 18th-century decorative arts. Ask younger students to identify polygons, vertical and horizontal lines, right angles, and parallel and perpendicular lines.

This beaded crown was worn by a Yoruba king, and the birds on top represent his ability to cross boundaries and connect with the spiritual world. Geometric patterns are used in various types of African art to symbolize power, deities, and other spiritual ideas. Explore patterns on this crown, including regular tessellations and non-regular tessellations.

This mummy case is made of cartonnage, a material similar to papier-mâché but using layers of linen rather than paper. On the bottom, the artist portrayed the mummy’s sandals with scorpions on each side for protection. Notice the pattern on the sandals, an example of a regular tessellation composed of squares.

Tapestry and carpet manufacturers worked from the cartoons of artists, designs drawn on a much smaller scale than the finished product. Using a grid system, the weavers, like those at the French Savonnerie manufactory, were able to reproduce the small drawing onto a final, grand-scale carpet.