Architectural Geometry

Architects use a variety of shapes in designing buildings, combining various shapes, modifying a single shape, repeating a single shape, and repeating combinations of shapes. Analyze the buildings to determine what geometric shapes have been used in designing each building and how those shapes are used and relate to one another.

Rectangles

Rectangles are found in most buildings. Their shapes can vary greatly.



Curves/Arcs

Curves and arcs are often used in architectural details, columns, windows, and as structural support elements.



Triangles add variety and drama, lengthening lines, and are often found in roofs and window elements.



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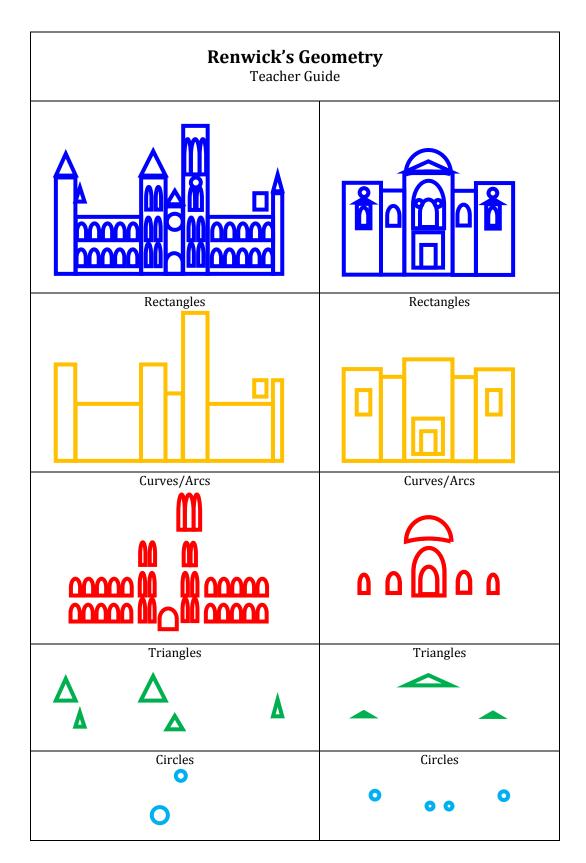
Circles

Circles add interest and contrast from rigid rectangular shapes. They are often found in windows and decorative elements.









Renwick's Geometry Student Work Sheet Have students identify the architectural elements in each of Renwick building.

Additional Classroom Exercise:

Have students draw the outline of their school building or another local building with interesting architectural elements. Have them identify each shape used in the building, whether the geometric shape is varied or repeated and how the various geometric shapes are combined or oppose each other.

Rectangles		
Curves/Arcs		
Triangles		
Circles		
Other Geometric Shapes? Hexagon, Pentagon Oval		

Name of Building	Architectural style	Geometric shapes used