

3D Shapes in St Paul's Cathedral Architecture

Sir Christopher Wren was inspired by the design of Ancient Greek and Roman buildings. The tradition of this classical architecture was to provide a community building that would be **strong, useful and beautiful**.

St Paul's Cathedral was built using mathematical understanding of structures to make a **large, tall and substantial church for the people of London**.

Let's take a closer look at the designs and discover how the construction of the building gives a beautifully decorated and useful meeting space.



Can you see how **cylindrical columns and cuboid pillars** are an important part of the construction? They support the weight of the roof and strengthen the walls.



The story of the Corinthian column.

If you look closely at the columns and pillars of St Paul's Cathedral you can see that the top, or capital, has a decorative design. The story of this design comes from ancient Corinth, a city in Greece. The tale is told of a young girl who sadly dies of an illness, cutting short her promising life. She is buried by an acanthus tree and a basket of her favourite toys and story scrolls, protected with a flat tile on top, is lovingly placed on her tomb by her family. The following spring, leaves of the plant begin to grow and wind their way up through the basket, bringing new life and beauty to a place of endings and sadness. A sculptor called Callimachus walked past the grave site and was so impressed by how beautiful it had become, that he began to carve the scene into his work on the stone columns of buildings in the city. The memory of the girl became immortalised in the details of design throughout the centuries and across the world. The design is known as the Corinthian column, named after her home town.

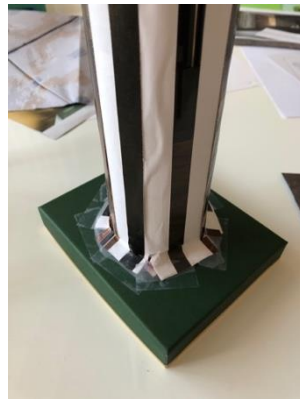
It is the leaves and scrolls and the flat tile on top that you can see on the columns at St Paul's.

Can you construct your own Corinthian Column?

You will need:

A cylinder, like the card inside of a kitchen roll
A cuboid, like a small box or lid
Card, coloured paper, pages of an old magazine
Template sheet
Pencils, scissors, glue and tape

1. Cut strips from a magazine page and glue onto paper then stick around the cylinder to make the carved vertical lines of the column.
2. Cut short strips at the base, to bend and flatten out, then tape the column, securing it on the box or lid.
3. Using the template below and coloured paper, trace or cut strips for scrolls and spiky acanthus leaf shapes for the decoration at the top of the column.
4. You will need scrolls and sets of 3 leaves; curl them then glue in layers, starting with a scroll, to make the capital at the top of the column.
5. Top with a square of card to finish the column.



Now your classical Corinthian Column is finished:

Test how **strong** it is: will it support a heavy weight balanced on top?
Would it be **useful**: have you ever seen rows of columns in a large building?
Is it decorated **beautifully**: could you add more colour or detail?

Are you interested in Architecture and Design?

For more information you could research:
Ancient Greek and Roman architecture.
Corinthian order in architecture.
Classical design.

Template Sheet

