As you can see, a Cathedral organ is HUGE, reaching from floor to ceiling. The one in Christ Church is in the west end of the Cathedral.

The organ requires a great deal of maintaining and tuning, to make sure it sounds at its best all the time. Tuning every single pipe takes a long time, and can be a very noisy experience – particularly for the person tuning the pipes!

**Introduction:**

Music plays an important role in the daily worship at Christ Church Cathedral.

Since 1525, when Cardinal Wolsey appointed a choir of 12 men, 16 boys and an organist, we have enjoyed singing and listening to hymns, psalms and sacred music.

The organ is a very versatile instrument which can play almost all of the pitches on a piano, in many different combinations.

It has such a wide range of sounds, it can replicate numerous orchestral instruments, including flutes, trumpets, oboes and string sounds.
An organ is a complex instrument made of various parts which include:

1) **The pipes.** These are hollow and sound a note when air is blown through them. Do you play a wind instrument? It operates on the same principle as an organ pipe. The nearest equivalent to an organ pipe is perhaps a recorder. Pan’s pipes, made from reeds of different lengths are similar.

![Pan's Pipes and early organ](image)

In the organ, each note has its own pipe, which is why there are so many of them. At Christ Church, our organ has 3,300 pipes!!

You may have seen the Last Night of the Proms on BBC television and heard the Grand Organ of the Royal Albert Hall? It has 147 stops and 9,999 pipes!

But Liverpool Cathedral’s organ has 10,268 pipes which makes it the largest in Britain and more than three times larger than Christ Church’s organ.

In all organs, each kind of pipe has a special name and these are often taken from French, e.g. Trompette, Tremblant, Voix Celeste or Bombarde.

2) **The wind chest.** The air for blowing the notes comes from a ‘wind chest’ which has air pumped into it. Organs are powered by electricity now, but the wind chest would have once been operated manually, by bellows - essentially a large air pump operated by a human being (often a choirboy in past centuries!) This would have been hard work for even a few minutes, with the poor choir boy using his full body weight to operate and pump the bellows.
Diagram of how the wind chest is a key part of an organ (Kyoto Concert Hall)

3) **The keyboards.** The organist presses keys to sound notes, much like playing a piano or electronic keyboard. Pressing a key opens a small hole at the bottom of the pipe which allows air to flow through it and produce a pitch. Some organs have three keyboards, arranged like steps, but the Christ Church organ has four. The more stops the organist has drawn, the more noise is made.

![Playing two of three keyboards](image)

4) **The pedalboard.** This is operated by the organist’s feet and sits on the floor. The pedal stops have the lowest sounding pipes on the whole organ and provides the bass line in music, much like the double-bass or tuba section of the orchestra.
5) **The stops.** The ‘stops’ look like knobs which can be pulled out to produce different sounds.
Our organ has 43 stops which can be used in all sorts of combinations to create different timbres and sounds.
The largest stop is 16 feet (nearly 5 metres) long! Our smallest stop is the size of a small pencil and is almost inaudible as a pitch.
Organ stops are sorted into four major types: principal, string, reed, and flute. The Larigot and Cor de Chamois that you can see in the photo are both flute stops.
Background:

There has been an organ in the Cathedral since 1526, when cardinal Wolsey changed the Priory Church into a Chapel for his new College. Christ Church’s first organist was a musician and composer called John Taverner. His music is still widely played today.

We know that a new organ was purchased, in 1608, by the Canons of the Cathedral for just £20! This new organ provided music for the choir right into the time of the Civil War (1642-1651).

Oxford surrendered to Oliver Cromwell’s army in 1646, after a siege lasting two months. After the Royalists were defeated in the Civil War, the Parliamentarian Puritans took control of the country and its worship. There was no singing in the Cathedral and no organ from 1649 - 1660. The Puritans, who liked simple worship without music, controlled the Cathedral for the eleven years between the death of Charles 1st and the coronation of Charles II.

When music in churches was allowed once more, an old organ was used at first, but Bernard Smith (known as ‘Father Smith’) built a new one in 1680. Some of his wooden case remains in our present organ which has, over the years, been located in various places in the Cathedral. It has also had alterations to it over the centuries, in much the same way an old house might.

Alterations to the organ were carried out by George Gilbert Scott in 1870 (just one of his many alterations in the Cathedral).

The organ in today’s Cathedral is much newer than it looks. The organ was restored and rebuilt by an Austrian firm called Rieger, in 1979.

Things to do at home - a few suggestions and ideas

1) Discover five differences between a traditional organ and an electronic keyboard, or an organ and a piano.

2) The Victorians liked to decorate organ pipes... Have a go at drawing an organ pipe (or group of them!) and adding decoration.

3) Listen to a piece of organ music. Liverpool Cathedral has a recording of a piece being played on its gigantic organ. For what sort of dramatic situation might it be the soundtrack? Joyful? Ghostly? Or something totally different? Write a film plot, short story or poem based on how it makes you feel.

4) Try to listen to some music by the Tudor organist, John Taverner, who lived and worked in Christ Church when it was called Cardinal College. You might try to listen to Quaemedmodum, where you can hear voices singing in parts.

5) If you are a musician, you could play a piece of organ music (you could use a piano, keyboard... or any other musical instrument).