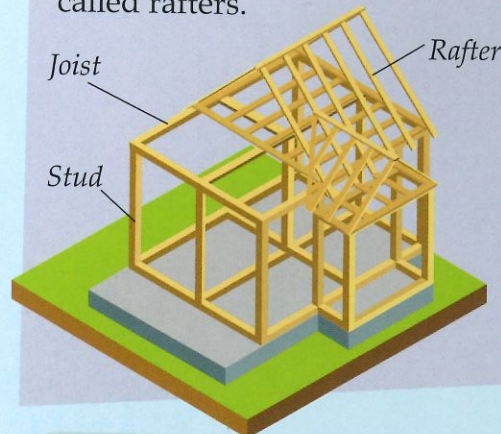


## Framing

The framework is the building's skeleton, to which the walls, floors, ceilings and roof are attached. The framework is usually made of wood or steel tubes. Vertical wall supports are called studs; horizontal floor and ceiling supports are called joists; and sloping roof supports are called rafters.



A building site needs people with many different skills, including bricklayers, carpenters, concrete finishers, ironworkers (for assembling steel frames), plasterers, pipefitters and roofers.

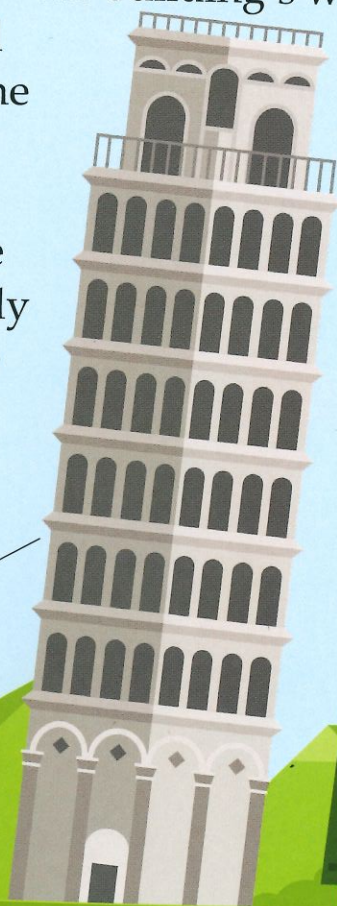


16

# How are buildings constructed?

The first stage of any construction project is preparing the site. Bulldozers clear the site of trees, rocks and other features before digging a pit for the foundation – the base of the building. Trenches are dug to carry cables and pipes to and from the building. The foundation is then laid. This transfers the building's weight to the ground. Structural engineers must ensure the foundation and the soil beneath it are capable of bearing the weight of the building evenly. Generally speaking, the heavier the building or the weaker the underlying soil, the deeper the foundation must be.

*Leaning Tower of Pisa, which has a weak foundation.*



## Insides and outsides

The next stage is to construct the building framework, followed by the roof frame, roofing and siding materials, as well as internal structures like pillars and staircases. Windows and doors are usually set in their frames after all the framing is finished to avoid damaging them.



Construction sites can be dangerous. Workers risk falls, electrocution, hearing loss and lung problems from breathing toxic fumes. Workers should wear hard hats and ear protectors.



## Finishing touches

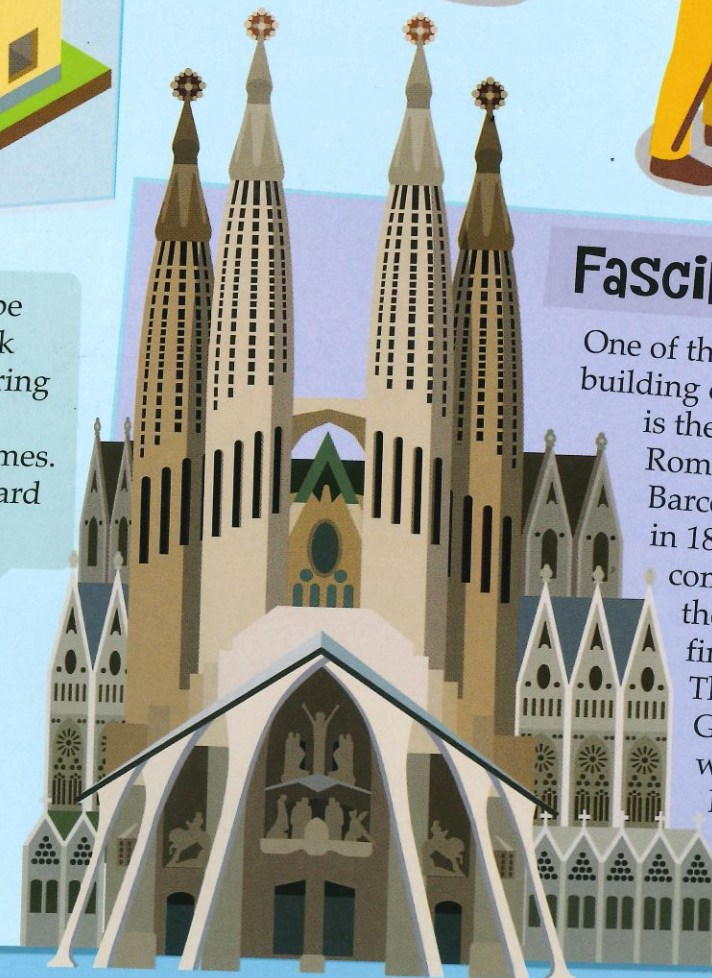
The final stage is to make the building fit for habitation: walls are painted, wallpapered or tiled; floors

are carpeted; and sockets, light fixtures, radiators, sinks, baths, toilets and kitchen appliances are installed.



## Fascinating fact

One of the world's longest ever building construction projects is the Sagrada Família, a Roman Catholic church in Barcelona, Spain. Begun in 1882, the planned completion date is 2026, though it may not be finished until 2040. The architect, Antoni Gaudí, died in 1926, when the church was less than a quarter complete.

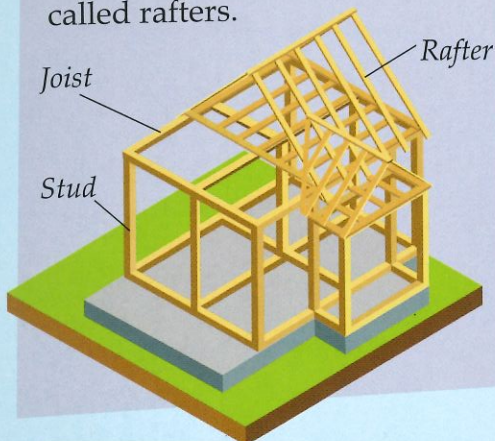


17



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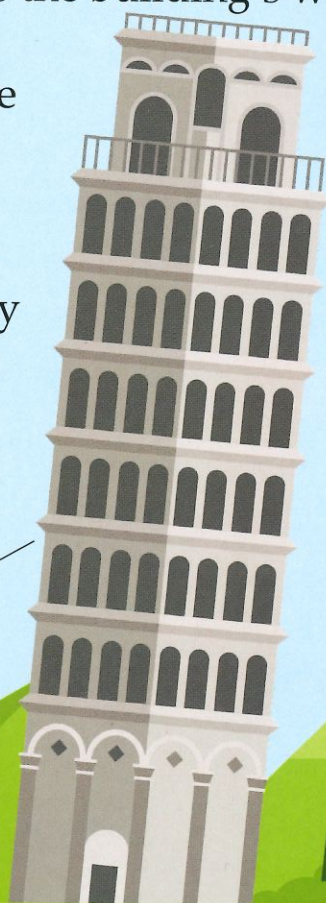
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