**the Eiffel Tower**

The Eiffel Tower is the most visually famous structure in [France](https://www.thoughtco.com/france-a-historical-profile-1221301), perhaps in Europe, and has seen over 200 million visitors. Yet it wasn’t supposed to be permanent and the fact it still stands is down to a willingness to accept new technology which was how the thing came to be built in the first place.

## **Origins of the Eiffel Tower**

In 1889 France held the Universal Exhibition, a celebration of modern achievement timed to coincide with the first centenary of the [French Revolution](https://www.thoughtco.com/beginners-guide-to-the-french-revolution-1221900). The French government held a competition to design an “iron tower” to be erected at the entrance to the exhibition on the Champ-de-Mars, partly to create an impressive experience for visitors. One hundred and seven plans were submitted, and the winner was one by engineer and entrepreneur [Gustav Eiffel](https://www.thoughtco.com/gustave-eiffel-eiffel-tower-1991688), aided by architect Stephen Sauvestre and engineers Maurice Koechlin and Emile Nouguier. They won because they were willing to innovate and create a true statement of intent for France.

## **The Eiffel Tower**

Eiffel’s tower was to be unlike anything yet built: 300 meters tall, at that time the highest man-made structure on earth, and built of a latticework of wrought iron, a material whose large scale production is now synonymous with the [industrial revolution](https://www.thoughtco.com/guide-to-the-industrial-revolution-1221914). But the design and nature of the material, making use of metal arches and trusses, meant the tower could be light and “see-through”, rather than a solid block, and retain still its strength. Its construction, which began on January 26th 1887, was swift, relatively cheap and achieved with a small workforce. There were 18,038 pieces and over two million rivets.

The Tower is based on four large pillars, which form a square 125 meters along each side, before rising up and joining into a central tower. The curving nature of the pillars meant the elevators, which were themselves a relatively recent invention, had to be carefully designed. There are viewing platforms at several levels, and people can travel to the top. Parts of the great curves are actually purely aesthetic. The structure is painted (and re-painted regularly).

# Interesting Facts About The Eiffel Tower

In fashionable Paris, even the Eiffel Tower must keep up with style trends. Over the decades, the “Iron Lady” has changed her looks with the application of a spectrum of paint colors.

When it opened in 1889, the Eiffel Tower sported a reddish-brown color. A decade later, it was coated in yellow paint. The tower was also yellow-brown and chestnut brown before the adoption of the current, specially mixed “Eiffel Tower Brown” in 1968.

Every seven years, painters apply 60 tons of paint to the tower to keep her looking young. The tower is painted in three shades, progressively lighter with elevation, in order to augment the structure’s silhouette against the canvas of the Parisian sky.

When dusk fell across Paris between 1925 and 1936, a quarter-million colored bulbs attached to three sides of the tower’s steeple illuminated to spell the 100-foot vertical letters of the French automobile company Citroën.

The advertisement blazed so brightly that it was visible from nearly 20 miles away, and Charles Lindbergh used it as a beacon when he landed in Paris on his 1927 solo trans-Atlantic flight.

When the initial designer of the Statue of Liberty’s interior elements died suddenly in 1879, French sculptor Frederic-Auguste Bartholdi hired Eiffel as his replacement.

Already renowned as a structural engineer and railway bridge designer, Eiffel designed the skeletal support system to which the statue’s copper skin is affixed.

(Today, a scale model of the Statue of Liberty stands on an island in the River Seine in the shadow of the Eiffel Tower.)

Eiffel engraved the names of 72 of the country’s scientists in the tower’s first-level gallery, and atop the structure he installed a laboratory that was used by himself and French scientists to study astronomy, meteorology, aerodynamics and physiology and test experiments such as Foucault’s Pendulum.

In 1909 Eiffel installed an aerodynamic wind tunnel at the base of the tower that carried out thousands of tests, including those on Wright Brothers airplanes and Porsche automobiles.

## **Parisian artists petitioned against the “monstrous” structure**

Although now a worldwide symbol of romance, the radical design of the Eiffel Tower inspired anything but love in the hearts of 300 prominent Parisian artists and intellectuals who signed the following manifesto that ran in the Le Temps newspaper on Valentine’s Day in 1887: “We, writers, painters, sculptors, architects, passionate lovers of the beauty, until now intact, of Paris, hereby protest with all our might, with all our indignation, in the name of French taste gone unrecognized, in the name of French art and history under threat, against the construction, in the very heart of our capital, of the useless and monstrous Eiffel Tower.” The screed even said that the “gigantic black factory chimney” was so loathed that “even commercial-minded America does not want” it.

### Construction

**onstruction**, also called **building construction**, the techniques and [industry](https://www.britannica.com/technology/industry) involved in the assembly and erection of structures, primarily those used to provide shelter.

Construction is an ancient human activity. It began with the purely functional need for a controlled [environment](https://www.merriam-webster.com/dictionary/environment) to moderate the effects of [climate](https://www.britannica.com/science/climate-meteorology). Constructed [shelters](https://www.britannica.com/topic/shelter-housing-structure) were one means by which human beings were able to adapt themselves to a wide variety of climates and become a global species.

Human shelters were at first very simple and perhaps lasted only a few days or months. Over time, however, even temporary structures evolved into such highly refined forms as the [igloo](https://www.britannica.com/technology/igloo). Gradually more durable structures began to appear, particularly after the advent of [agriculture](https://www.britannica.com/topic/agriculture), when people began to stay in one place for long periods. The first shelters were dwellings, but later other functions, such as food storage and ceremony, were housed in separate buildings. Some structures began to have symbolic as well as functional value, marking the beginning of the distinction between architecture and building.

The history of building is marked by a number of trends. One is the increasing durability of the materials used. Early [building materials](https://www.britannica.com/technology/building-material) were perishable, such as leaves, branches, and [animal hides](https://www.britannica.com/topic/hide-animal-skin). Later, more durable natural materials—such as clay, stone, and timber—and, finally, [synthetic](https://www.merriam-webster.com/dictionary/synthetic) materials—such as [brick](https://www.britannica.com/technology/brick-building-material), [concrete](https://www.britannica.com/technology/concrete-building-material), metals, and [plastics](https://www.britannica.com/science/plastic)—were used. Another is a quest for buildings of ever greater height and span; this was made possible by the development of stronger materials and by knowledge of how materials behave and how to exploit them to greater advantage. A third major trend involves the degree of control exercised over the interior [environment](https://www.britannica.com/science/environment) of buildings: increasingly precise regulation of air temperature, light and sound levels, [humidity](https://www.britannica.com/science/humidity), odours, air speed, and other factors that affect human comfort has been possible. [Yet](https://www.britannica.com/dictionary/Yet) another trend is the change in energy available to the construction process, starting with human muscle power and developing toward the powerful [machinery](https://www.britannica.com/technology/machine) used today.

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel.JPG)

18 July 1887:  
The start of the erection of the metalwork

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel2.JPG)

7 December 1887:  
Construction of the legs with scaffolding

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel3.JPG)

20 March 1888:  
Completion of the first level

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel4.JPG)

15 May 1888:  
Start of construction on the second stage

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel5.JPG)

21 August 1888:  
Completion of the second level

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel6.JPG)

26 December 1888:  
Construction of the upper stage

* [](https://en.wikipedia.org/wiki/File:Construction_tour_eiffel7.JPG)

15 March 1889:

|  |  |
| --- | --- |
| **The Eiffel Tower** | |
| *La tour Eiffel* | |
| Seen from the [Champ de Mars](https://en.wikipedia.org/wiki/Champ_de_Mars) | |
| [Wikimedia](https://foundation.wikimedia.org/wiki/Maps_Terms_of_Use) | © [OpenStreetMap](https://www.openstreetmap.org/copyright) | |
| **Record height** | |
| Tallest in the world from 1889 to 1930[[I]](https://en.wikipedia.org/wiki/Eiffel_Tower#endnote_talleststatus) | |
| **General information** | |
| **Type** | Observation tower Broadcasting tower |
| **Location** | [7th arrondissement](https://en.wikipedia.org/wiki/7th_arrondissement_of_Paris), [Paris](https://en.wikipedia.org/wiki/Paris), France |
| [**Coordinates**](https://en.wikipedia.org/wiki/Geographic_coordinate_system) | [48°51′29.6″N 2°17′40.2″E](https://geohack.toolforge.org/geohack.php?pagename=Eiffel_Tower&params=48_51_29.6_N_2_17_40.2_E_region:FR-75_type:landmark)[Coordinates](https://en.wikipedia.org/wiki/Geographic_coordinate_system): [48°51′29.6″N 2°17′40.2″E](https://geohack.toolforge.org/geohack.php?pagename=Eiffel_Tower&params=48_51_29.6_N_2_17_40.2_E_region:FR-75_type:landmark) |
| **Construction started** | 28 January 1887; 135 years ago |
| **Completed** | 15 March 1889; 133 years ago |
| **Opening** | 31 March 1889; 133 years ago |
| **Owner** | [City of Paris](https://en.wikipedia.org/wiki/Paris), France |
| **Management** | *Société d'Exploitation de la Tour Eiffel* (SETE) |
| **Height** | |
| **Architectural** | 300 m (984 ft)[[1]](https://en.wikipedia.org/wiki/Eiffel_Tower#cite_note-CTBUH-1) |
| **Tip** | 330 m (1,083 ft) |
| **Top floor** | 276 m (906 ft)[[1]](https://en.wikipedia.org/wiki/Eiffel_Tower#cite_note-CTBUH-1) |
| **Technical details** | |
| **Floor count** | 3[[2]](https://en.wikipedia.org/wiki/Eiffel_Tower#cite_note-Emporis-2) |
| **Lifts/elevators** | 8[[2]](https://en.wikipedia.org/wiki/Eiffel_Tower#cite_note-Emporis-2) |
| **Design and construction** | |
| **Architect** | [Stephen Sauvestre](https://en.wikipedia.org/wiki/Stephen_Sauvestre) |
| **Structural engineer** | [Maurice Koechlin](https://en.wikipedia.org/wiki/Maurice_Koechlin) [Émile Nouguier](https://en.wikipedia.org/wiki/%C3%89mile_Nouguier) |
| **Main contractor** | [Compagnie des Etablissements Eiffel](https://en.wikipedia.org/wiki/Gustave_Eiffel) |
| **Website** | |
| [toureiffel.paris/en](http://toureiffel.paris/en) | |
| **References** | |
| I. [**^**](https://en.wikipedia.org/wiki/Eiffel_Tower#ref_talleststatus) [Eiffel Tower](https://www.emporis.com/buildings/110508) at *[Emporis](https://en.wikipedia.org/wiki/Emporis" \o "Emporis)* | |