

The Nobel Prize captures the world's attention

The Nobel Prize is considered the most prestigious award in the world in its field. Prize-winning discoveries include X-rays, radioactivity and penicillin. Peace Laureates include Nelson Mandela and the 14th Dalai Lama. Nobel Laureates in Literature, including Gabriel García Márquez and Doris Lessing, have thrilled readers with works such as 'One Hundred Years of Solitude' and 'The Grass is Singing'.

Every year in early October, the world turns its gaze towards Sweden and Norway as the Nobel Laureates are announced in Stockholm and Oslo. Millions of people visit the website of the Nobel Foundation during this time.

The Nobel Prize has been awarded to people and organisations every year since 1901 (with a few exceptions such as during World War II) for achievements in physics, chemistry, physiology or medicine, literature and peace.

Nobel Day is 10 December. For the prize winners, it is the crowning point of a week of speeches, conferences and receptions. At the Nobel Prize Award Ceremony in Stockholm on that day, the Laureates in Physics, Chemistry, Physiology or Medicine, and Literature receive a medal from the King of Sweden, as well as a diploma and a cash award. The ceremony is followed by a gala banquet. The Nobel Peace Prize is awarded in Oslo the same day. ▶

The Nobel Banquet is a magnificent party held at Stockholm City Hall.



Prize in Economic Sciences

In 1968, Sweden's central bank (*Sveriges Riksbank*) established the Prize in Economic Sciences in Memory of Alfred Nobel.

The prize is based on a donation received by the Nobel Foundation in 1968 from the central bank to mark the bank's 300th anniversary. The Prize in Economic Sciences is awarded by the Royal Swedish Academy of Sciences, following the same principles as the Nobel Prizes.

Legacy of Alfred Nobel

The Nobel Prize is the legacy of Sweden's Alfred Nobel (1833–1896). Prizes are awarded to 'those who, during the preceding year, shall have conferred the greatest benefit on mankind.' When he signed his last will in 1895, Nobel declared that the bulk of his estate should be converted into a fund and invested in safe securities. The four institutions in Sweden and Norway (the two countries were united between 1814 and 1905) conferring the prizes were to be the Royal Swedish Academy of Sciences, Karolinska Institutet, the Swedish Academy (all in Stockholm) and a committee of five people to be elected by the Norwegian parliament (*Stortinget*, in Oslo).

The Nobel Foundation

In 1900, the four institutions awarding the prizes agreed to create the Nobel Foundation, a private institution based on Alfred Nobel's will. The Nobel Foundation were to administer Nobel's estate, which totalled SEK 31 million at the time, and would also make the public

announcements and arrange the prize ceremonies. The total amount awarded each year is based on the most recent return on investment. The capital is currently worth over SEK 4.9 billion (EUR 481 million, 558 USD million).

The Nobel Prize in each category is currently worth SEK 10 million (EUR 983,000, USD 1.1 million). There can be up to three recipients for each prize, who share the sum between them.

Organisations affiliated with the prize

The Nobel Prize is affiliated with several organisations and institutions entrusted with different tasks related to the prize.

The Nobel Foundation Rights Association was established in 1999 to provide information through a variety of media about the Nobel Laureates and their achievements.

This non-profit association serves as an umbrella organisation for three other entities:

- **Nobel Media**, which develops and manages programmes, productions and media rights of the Nobel Prize within the areas of digital and broadcast media, publishing as well as events.
- **The Nobel Museum**, housed in the Old Stock Exchange Building (*Börshuset*) in Stockholm's Old Town, creates interest and spreads knowledge around the natural sciences and culture.
- **The Nobel Peace Center**, at Rådhusplassen in Oslo, Norway, presents the Nobel Peace Prize and the work of the Nobel Peace Prize Laureates.

Nobel Prize numbers

58 women

The Nobel Prize and the Prize in Economic Sciences have been awarded to women 59 times from 1901 to 2021. One woman, **Marie Curie**, has been honoured twice, receiving the 1903 Nobel Prize in Physics and the 1911 Nobel Prize in Chemistry. This means a total of 58 women have received Nobel Prizes to date: 18 have received the Peace Prize, 16 the Prize in Literature, 12 in Physiology/Medicine, 7 in Chemistry (including Curie), 4 in Physics (including Curie) and 2 in Economic Sciences.

97 years old

The oldest Laureate to date is **John B. Goodenough**, who was 97 when he was awarded the Prize in Chemistry in 2019.

17 years old

The youngest Laureate to date is **Malala Yousafzai**, who was 17 when she was awarded the Peace Prize in 2014.

Two have declined

Two Nobel Laureates have declined the Nobel Prize. **Jean-Paul Sartre**, awarded the 1964 Nobel Prize in Literature, declined the award because he had consistently declined all official honours.

Lê Đức Thọ was awarded the 1973 Nobel Peace Prize jointly with US Secretary of State Henry Kissinger for negotiating the Vietnam peace agreement. Lê Đức Thọ said he was not in a position to accept the Nobel Peace Prize, due to the situation in Vietnam.

Four forced to decline

Four Nobel Laureates have been forced by authorities to decline the Nobel Prize. Adolf Hitler forbade three German Laureates – **Richard Kuhn** (Chemistry), **Adolf Butenandt** (Chemistry) and **Gerhard Domagk** (Physiology/Medicine) – from accepting their prizes. The Nazi regime banned all Germans from accepting Nobel Prizes after the 1935 Nobel Peace Prize was awarded to Carl von Ossietzky, a German writer who publicly opposed Hitler and Nazism. The three later received their awards, but not the prize money.

Boris Pasternak, the 1958 Nobel Laureate in Literature, initially accepted the prize but was later coerced into declining by Soviet authorities.

The father of dynamite

Alfred Nobel was a chemist, engineer, inventor and entrepreneur. He was born on 21 October 1833 in Stockholm, and died on 10 December 1896 in San Remo, Italy. He was devoted to the study of explosives, and his inventions include a blasting cap, dynamite and smokeless gunpowder. Nobel became famous across the world when the St. Gotthard Tunnel in the Swiss Alps was completed in 1881 and dynamite was used for the first time on a large scale.

At the time of his death, Nobel held 355 patents in different countries. There were Nobel companies in more than 20 countries, with explosives of all kinds being manufactured under his patents in around 90 factories worldwide. Nobel lived and worked in many countries, including Sweden, Russia, France, the United Kingdom, Germany and Italy. He spoke five languages, had a passionate interest in literature, and wrote poetry and drama. He could never have imagined how important his prize would become, or how much media attention future Nobel Laureates would attract.

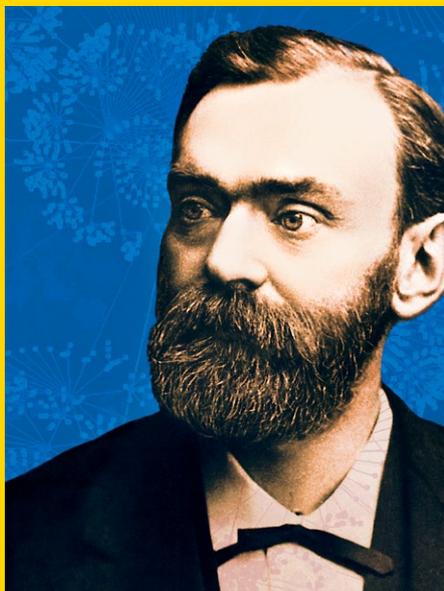
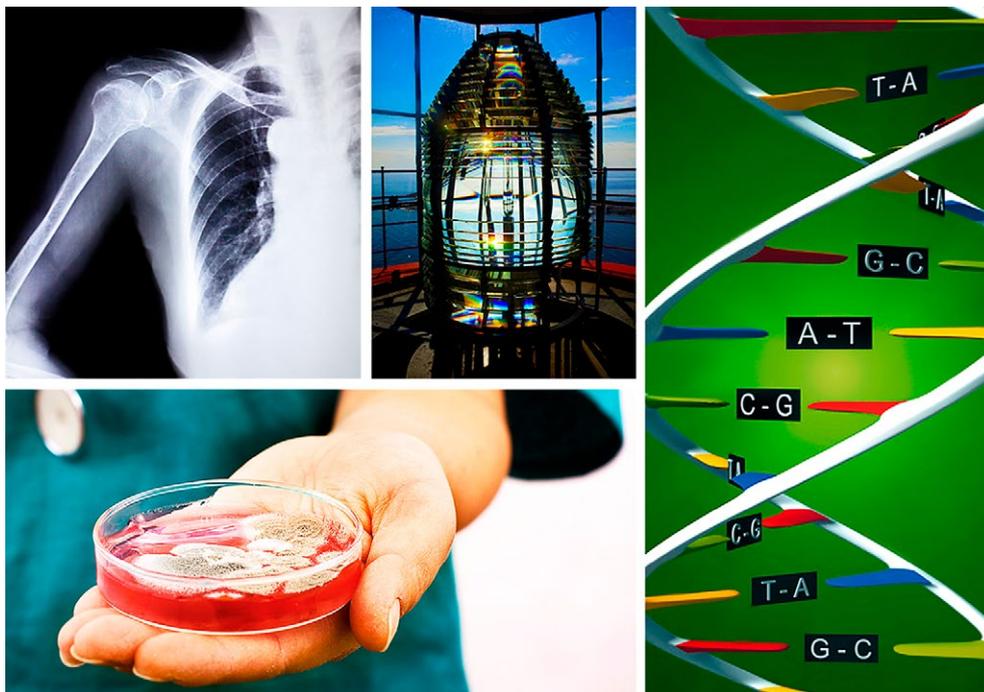


Photo: Nobel Museum

Alfred Nobel.

A history of culture and science

Since its inception in 1901 up to 2021, the Nobel Prize has been awarded 609 times, either to individuals or organisations. The recipients represent a major contribution to the cultural and scientific history of the world.



Prize-winning discoveries (clockwise from left): X-rays; AGA lighthouse, a type of automatic lighthouse that runs on acetylene gas; the molecular structure of DNA – the double helix; penicillin.

The Nobel Prize has been awarded to 947 individual Laureates and 28 organisations. Only a few recipients have been honoured more than once, which means that a total of 943 individuals and 25 unique organisations have received prizes to date.

The first Nobel Prize in Physics, in 1901, went to Wilhelm Conrad Röntgen for his discovery of X-rays, used every day by health care providers around the world.

In 1903, Marie Curie became the first female Laureate when she was named a joint winner of the Nobel Prize in Physics for her research into radioactivity. She received her second prize in 1911 – this time in chemistry – for isolating and studying the new element radium.

In 1905, Austrian baroness and author Bertha von Suttner became the first woman to win the Nobel Peace Prize, in recognition of her work with the pacifist movements in Germany and Austria. She was also widely seen as inspiring Alfred Nobel, with whom she corresponded, to create the Peace Prize.

In 1912, Swedish inventor and industrialist Gustaf Dalén won the Nobel Prize in Physics for his contributions to lighthouse technology. In the early 1900s, he invented the AGA lighthouse, a type of automatic lighthouse

that ran on acetylene gas. The gas supply was controlled by a sun valve that shut off the gas in daylight, and a revolving light apparatus that allowed the beacon to flash by switching the gas off and on at brief, regular intervals. The two innovations made it possible to reduce gas consumption by 90 per cent compared with earlier constructions.

In the autumn of 1945, the Nobel Assembly of professors at Karolinska Institutet gathered to select a Nobel Laureate in Physiology or Medicine. They chose three Laureates, including Alexander Fleming, for their discovery of penicillin, which saved millions of lives in the second half of the 20th century.

Previous Nobel Peace Prize Laureates include Martin Luther King (1964), Mother Teresa (1979) and Barack Obama (2009). Nobel Laureates in Literature include Ernest Hemingway (1954), Toni Morrison (1993), Dario Fo (1997) and Mario Vargas Llosa (2010).

In 2018, no Nobel Prize in Literature was awarded. The Swedish Academy, in the midst of a crisis, cited their diminished number of active members and a reduced public confidence as the reasons for not handing ▶

The Nobel Prize-awarding institutions

Four institutions select the Nobel Laureates:

The Royal Swedish Academy of Sciences (Nobel Prize in Physics, Nobel Prize in Chemistry and Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel). Founded in 1739 as an independent organisation, it aims to promote the sciences and enhance their influence in society. It currently has around 470 Swedish and 175 foreign members.

The Swedish Academy (Nobel Prize in Literature). Founded in 1786, it consists of 18 chairs.

The Nobel Assembly at Karolinska Institutet (Nobel Prize in Physiology or Medicine). Dating from 1977 in its current form, the assembly consists of 50 professors at Karolinska Institutet.

The Norwegian Nobel Committee (Nobel Peace Prize). Founded in 1897, its five members are appointed by the Norwegian Parliament.

The banquet of banquets

The Nobel Banquet is a magnificent party held in the Blue Hall at Stockholm City Hall. The preparations are meticulous. Hundreds of cooks, waiters and attendants ensure that everything runs smoothly. Some 1,300 guests are invited, with each Laureate entitled to bring 14 guests beside their spouses.

Sweden's royal family and the Swedish prime minister are always on the guest list, and the Nobel family is always represented. The guest list should otherwise reflect the cultural and scientific community of Sweden and the world.



Around 1,300 guests are invited to the grand banquet.

out a Prize that year. The Academy instead announced the Nobel Prize in Literature for 2018 – Olga Tokarczuk – in parallel with the naming of the 2019 Laureate, Peter Handke.

In 2020, with the ongoing Covid-19 pandemic, all Laureates received their Nobel Prize diplomas and medals in their countries

of residence. Nobel Week was staged as a digital event, with award ceremonies and lectures held online and the usual banquets in Stockholm and Oslo cancelled. In 2021, Sweden stuck to the same routines while Norway opted for an in-person award ceremony for the Peace Prize in Oslo City Hall.

The Nobel Prize calendar

The Nobel Prize Award Ceremony in Stockholm is held on 10 December, the anniversary of Alfred Nobel's death.

On the same day, the Nobel Peace Prize is awarded in Oslo, Norway.



Several other activities take place the same week, with receptions and dinners hosted by the institutions awarding prizes, the Nobel Foundation and the Swedish Royal Family. The Laureates deliver lectures and talk about their work, with panel discussions and other public appearances usually arranged.

Traditionally, the Laureates and their spouses sit with the Royal Family at the Nobel Banquet. They are also invited to a more intimate dinner at the Royal Palace, where they meet the Royal Family again. The visit to the Nobel Foundation is a great symbolic event.

The Laureates receive a document confirming the prize amount and sign their names in a guestbook, thereby joining hundreds of famous predecessors.

Nobel Week in Stockholm

5–8 December Press conferences and seminars are held in Stockholm. The Laureates deliver their Nobel Lectures. A Nobel Prize Concert in honour of the Laureates is held at the Stockholm Concert Hall.

9 December Nobel Week Dialogue.

10 December The Nobel Prize Award Ceremony is held in the Stockholm Concert Hall, where the King of Sweden presents each Laureate with a Nobel Prize Medal and a Nobel Prize Diploma. The Nobel Banquet is then held at Stockholm City Hall.

11 December The festivities conclude with a banquet dinner at the Royal Palace.

2021 Nobel Prizes

(Countries denote place of birth.)

Chemistry

Benjamin List, Germany;

David W.C. MacMillan, Scotland.

'For the development of asymmetric organocatalysis.'

Literature

Abdulrazak Gurnah, Tanzania (Zanzibar).

'For his uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugee in the gulf between cultures and continents.'

Peace

Maria Ressa, Philippines;

Dmitry Muratov, Russia.

'For their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace.'

Physics

Syukuro Manabe, Japan;

Klaus Hasselmann, Germany.

'For the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming.'

and

Giorgio Parisi, Italy.

'For the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales.'

Physiology or Medicine

David Julius, USA;

Ardem Patapoutian, Lebanon.

'For their discoveries of receptors for temperature and touch.'

The Prize in Economic Sciences in Memory of Alfred Nobel

David Card, Canada.

'For his empirical contributions to labour economics.'

and

Joshua D. Angrist, USA;

Guido W. Imbens, Netherlands.

'For their methodological contributions to the analysis of causal relationships.'

Useful links

www.ki.se

www.kva.se

www.nobelpeacecenter.org

www.nobelpeaceprize.org

www.nobelprize.org

www.svenskaakademien.se

Karolinska Institutet

The Royal Swedish Academy of Sciences

Nobel Peace Center

The Norwegian Nobel Committee

The official website of the Nobel Prize

The Swedish Academy

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