



FROM DARKNESS COMES THE BRIGHTEST LIGHT

A trailblazer in the study of gravity and black holes, Professor Stephen Hawking contributed seminal work to the history of modern physics and won a legion of fans from all over the planet. In spite of an afflicted body he showed the dazzling power of the untethered mind.

“When I was twelve, one of my friends bet another friend a bag of sweets that I would never come to anything. I don’t know if this bet was ever settled, and if so, which way it was decided.”

Reflecting on his school days, Professor Stephen Hawking revealed his famous sense of humour and his comment brings to mind the glint in his wide eyes and that impish smile. The death of the cosmologist, theoretical physicist and icon created ripples of grief all around the planet, the forces of which he worked so tirelessly to understand and explain.

Hawking died peacefully at home on 14th March, in Cambridge, England, aged 76. He suffered from the degenerative motor neuron disease Amyotrophic Lateral Sclerosis (ALS), which affects the cells that control voluntary muscle activity, such as speaking, walking, swallowing and general body movement.

In tribute to Professor Hawking, it would be all too easy to simply focus only on his greatest achievements to the exclusion of the honest realities of the every-day man – he liked a good curry – but it would be remiss to neglect the ordinary struggles that made an otherwise extraordinary man just like the rest of us. He lived through the ups and downs of relationships. He was married twice and was a father to three children, with all the tumult that entails. He was obstinate and argumentative, although he was not above admitting when he was wrong, whether that was about some element of black hole behaviour, or his own.

Kip Thorne, a physicist at the California Institute of Technology and a 2017 Nobel Prize winner in physics for his work on gravity, locked horns with Hawking on numerous occasions, and ➤



QUICK FACTS

FULL NAME

Stephen William Hawking

FAMOUS AS

Theoretical physicist, and cosmologist

NATIONALITY

British

BIRTHDAY

8th January, 1942

DIED AT AGE

76

BORN IN

Oxford, England

FATHER

Frank Hawking

MOTHER

Isobel Hawking

SIBLINGS

Edward Hawking,
Mary Hawking,
Philippa Hawking

SPOUSE/ EX-SPOUSE

Elaine Manson
(1995 - 2006),
Jane Wilde
(1965 - 1995)

CHILDREN

Lucy, Robert and
Timothy Hawking

FOUNDER/ CO-FOUNDER

Microsoft Research

Source:
thefamouspeople.com

found him to be unyielding but often hilarious. "His sense of humour was legendary... when he started a sentence, laboriously on his computer, I never knew whether it would end in a deep pearl of wisdom or an off-the-wall joke."

Hawking was able to communicate using a computer and voice synthesiser mounted on his wheelchair and selecting a word or letter using his thumb. As the ALS steadily deprived Hawking of more mobility, he used cheek movements and a motion sensor in his glasses to compose sentences, which were read out in the familiar computerised American accent. When meeting the British monarch, Queen Elizabeth II, Hawking quipped that his computerised accent was copyrighted. He regarded the distinctive American voice as a fixed part of his identity, telling the BBC: "It has become my trademark and I wouldn't change it for a more natural voice with a British accent. I am told that children who need a computer voice want one like mine."

Hawking lost the power of speech after contracting pneumonia while visiting CERN, in Geneva, in 1985. It was touch and go whether he would survive and doctors offered to turn his ventilator off, but Hawking's then wife Jane refused and ensured they made it back to the UK where doctors at Addenbrooke's Hospital, in Cambridge, contained the infection and performed a tracheotomy to help him breathe, which meant the irreversible loss of his voice.

In the 2013 biographical documentary film *Hawking*, he recalled: "The doctors thought I was so far gone that they offered Jane [the option] to turn off the machine. The weeks of intensive care that followed were the darkest of my life. But slowly the drugs worked, though a small incision in my throat robbed me of my ability to talk." Hawking later told the BBC: "I admit that when I had my tracheotomy operation, I briefly tried to commit suicide by not breathing. However, the reflex to breathe was too strong."

This was not the only time Hawking defied death. According to medical professionals, Hawking should have never lived past the mid-1960s. He was just 21 and a graduate student when he was diagnosed with ALS, and the grim prognosis at the time was death in three to five years. The fact Hawking lived with the affliction for 55 years is testament to his incredible iron will.

Another of Hawking's friends and collaborators is the *New York Times* science reporter Dennis Overbye. Hawking was a lifelong mentor for Overbye and he says good-naturedly that "Hawking was one of the most stubborn people who ever lived".

It was this formidable tenacity when confronted with challenges that allowed Hawking to roam the universe. The relentless adversity he faced actually



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propelled him into the galaxy that swirls around us, and perhaps without the estrangement from his own body he wouldn't have risen to such great heights in the field of cosmology. Hawking himself said: "By losing the finer dexterity of my hands, I was forced to travel through the universe in my mind and try to visualize the ways in which it worked."

Hawking's most famous book, *A Brief History Of Time: From Big Bang To Black Holes*, was published in 1988. The book was on global best-seller lists for years, was translated into 35 languages, and sold more than 10 million copies. Hawking jokingly referred to it as the "least-read, most-bought book ever".



Hawking set out to explain cosmological phenomena and describe the search for a unifying theory for the universe that the layperson could grasp. Another of his other greatest achievements, not for the layperson, was the equation he developed in 1974. Hawking had previously conceived black holes – the colossal vortexes created from collapsed stars – as eternal celestial tombs from which nothing escaped. Hawking's 1974 equation allows for heat emissions through the merging of quantum theory, general relativity and thermodynamics – now known as Hawking radiation.

As well as a number of other books about his field and a series of science-themed novels, co-written with his daughter Lucy, Hawking, a former Lucasian Professor of Mathematics at the University of Cambridge, published his memoir in 2013, *My Brief History*. The book tracks the incredible journey from his boyhood through to his scientific achievements and international celebrity.

Hawking's passing left countless people all over the world, many with no connection to the scientific community, celebrating his life. Dennis Overbye, who wrote Hawking's obituary for the *New York Times*, also coordinated a Reader Center social media group and took time to respond to readers' messages.

Leslie Feinzaig asked: "I want to know more about Mr. Hawking's thoughts on artificial intelligence,

science/technology and the future of our planet. Was he fundamentally optimistic about where we're headed?" Overbye replied: "Hawking was an unflagging supporter of interplanetary exploration because as an astronomer he knew that the sun would keep getting hotter and boil the oceans, if we didn't blow ourselves up or unleash a global pandemic first."

As a fan of auspicious dates – he liked to tell people he was born 300 years to the day after Galileo died – it seems fitting that Hawking, who was nicknamed Einstein by his classmates at school, should die on Einstein's 139th birthday. His funeral was held at St Mary the Great church, in Cambridge, on 31st March. A service of thanksgiving celebrating his life will take place at Westminster Abbey, London, on 15th June, during which Hawking's ashes will be interred near the grave of the Englishman who founded modern physics, Sir Isaac Newton.

At the time of his passing, a statement from Hawking's family read: "He was a great scientist and an extraordinary man whose work and legacy will live on for many years. His courage and persistence with his brilliance and humour inspired people across the world. He once said, 'It would not be much of a universe if it wasn't home to the people you love.' We will miss him forever." 🙏

Above: Hawking delivers a speech during the Fundamental Physics Prize Foundation inaugural prize ceremony, in Geneva, Switzerland, in 2013.