

## Stephen William Hawking

Born 8 January 1942, in Oxford



Hawking as a student in Oxford

### Education

St Albans School (20 miles north of London)  
University College, Oxford (1959–62), studied Physics  
PhD, University of Cambridge (1966)

### Career

Institute of Astronomy, Cambridge (1968–73)  
Professor of Mathematics, Cambridge (1979–)

### Family

Married to Jane Wilde (1965–1995, three children)  
and Elaine Mason (1995–)

### Work

Stephen Hawking is one of the world's most famous scientists. He is well-known for his work on black holes, and has developed a number of new ideas about them. Hawking believes that the birth of the universe (the Big Bang) created many small black holes. Hawking also thinks that there is a sort of hole in the centre of a black hole. This hole leads to another universe, completely separate from our own.

Hawking's 1988 book, *A Brief History of Time From the Big Bang to Black Holes*, sold one copy for every 750 people on Earth. However, many people could not finish the book (they found it too difficult) so Hawking decided to write an easier version, *A Briefer History of Time* (2005).

### Health

Hawking discovered that he had the disease ALS (a disease that affects muscle control) at the age of 21, in his first year in Cambridge. He only expected to live a few years. However, he married Jane Wilde and found a job in Cambridge. In the early stages of his career, his illness got worse but he was fortunate that he did not have to teach. He only had to do research and this was easier for him.

Until 1985 he could talk, but in that year doctors had to operate on him and he lost his speech. Soon, however, people developed equipment that allowed him to speak. In spite of his disease, Hawking does not consider himself an unlucky man. He says it has not prevented him from having a very attractive family, and being successful in his work. He says this is thanks to the help he has received from his family and a large number of other people and organisations.

### What is a black hole?

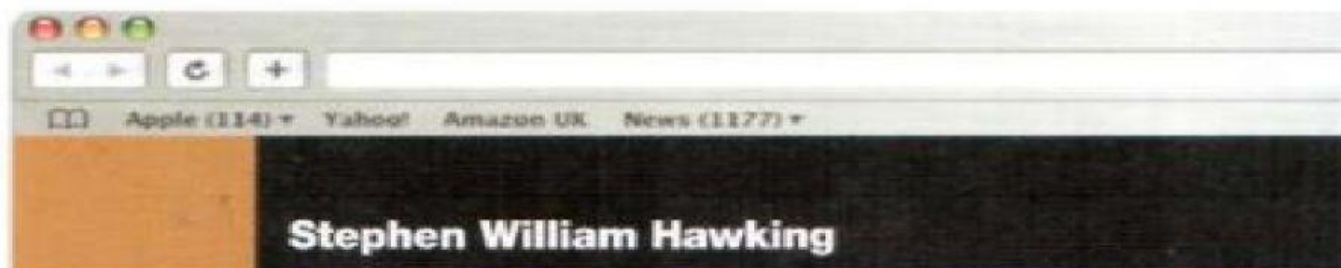
A black hole is a place in space where gravity is very strong. Anything that falls into it never comes out. Nothing can escape from it, not even light. As a result, it is impossible to see a black hole.

**2b** Complete this summary of Hawking's life. Write one word in each gap. (The words you need are in the text.)

Stephen Hawking was <sup>1</sup> \_\_\_\_\_ in Oxford, in 1942. He studied at the Universities of Oxford and Cambridge. He was still a young man when he <sup>2</sup> \_\_\_\_\_ that he had a serious disease. However, he married Jane Wilde, finished his PhD and got a <sup>3</sup> \_\_\_\_\_ at Cambridge University. In 1979, he became Professor of <sup>4</sup> \_\_\_\_\_. In 1985, after an operation, he started to use special equipment to help him <sup>5</sup> \_\_\_\_\_. Three years later, his book *A* <sup>6</sup> \_\_\_\_\_ *History of Time* appeared and sold millions of copies. Hawking rewrote the book in 2005. Surprisingly, Hawking believes that he is not an <sup>7</sup> \_\_\_\_\_ person. He is proud of his family and his work, and grateful for the <sup>8</sup> \_\_\_\_\_ that many different people have given him.

**5b** Complete this text from the webpage with the words in the box.

had to    did not have to    could    could not



### After the operation

By 1985, Stephen's speech was getting worse, and only a few people who knew him well <sup>1</sup> \_\_\_\_\_ understand him. But at least he <sup>2</sup> \_\_\_\_\_ communicate. In 1985, he <sup>3</sup> \_\_\_\_\_ have an operation on his throat. After that, he <sup>4</sup> \_\_\_\_\_ have 24-hour care by nurses. For a time after the operation he <sup>5</sup> \_\_\_\_\_ speak at all. The only way he <sup>6</sup> \_\_\_\_\_ communicate was by spelling words. He <sup>7</sup> \_\_\_\_\_ raise his eyebrows when someone pointed to the right letter on a spelling card. However, a computer expert in California (Walt Wotosz) heard of Hawking's problem and sent him a computer program. With this program, Hawking <sup>8</sup> \_\_\_\_\_ choose words from a menu on a screen. All he <sup>9</sup> \_\_\_\_\_ do was press a switch in his hand. But he <sup>10</sup> \_\_\_\_\_ also control the program by making a head or eye movement. In that case, he <sup>11</sup> \_\_\_\_\_ press the

switch. At first he <sup>12</sup> \_\_\_\_\_ run the program on a desktop computer, but then a man called David Mason fitted a small portable computer to his wheelchair.



*His second marriage to Elaine Mason*

3 Listen again and complete the notes below. Write one word or number in each gap.

Guttenberg invented PP in <sup>1</sup> \_\_\_\_\_

↓  
revolution in knowledge, society, etc.  
Why?

The first reason:

PP → books, large <sup>2</sup> \_\_\_\_\_, quickly → ideas spread quickly  
↓  
great <sup>3</sup> \_\_\_\_\_ in society

The second reason:

PP → <sup>4</sup> \_\_\_\_\_ for all ← schools ← fast pdctn. of books  
↑  
reading skills v. imp. ← written word imp. at <sup>5</sup> \_\_\_\_\_

The third reason:

PP → <sup>6</sup> \_\_\_\_\_ can make money → <sup>7</sup> \_\_\_\_\_ writers and journalists  
↓  
good for <sup>8</sup> \_\_\_\_\_

Criticism:

Did PP → educ. for all? <sup>9</sup> \_\_\_\_\_ years between PP and schools