

# Stephen Hawking's universe

Physicist Stephen Hawking – the world-famous author of *A Brief History of Time* – has been almost completely paralyzed by motor neurone disease for 25 years. Hawking, 67, is renowned for his work on black holes, cosmology and quantum gravity



■ **Jan 8, 1942:** Born London, England

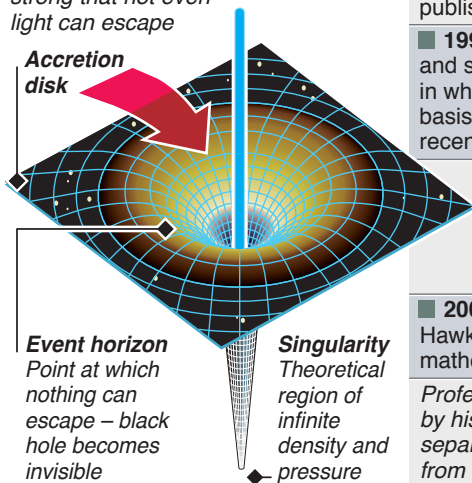
■ **1963:** First diagnosed with motor neurone disease while at Oxford

■ **1966:** Completes doctorate and is awarded fellowship at Cambridge

■ **1968:** Publishes highly-technical ***Large Scale Structure of Space-Time***

■ **1970:** By integrating cornerstones of modern physics – **Newtonian Gravity**, Albert Einstein's **General Theory of Relativity** and **quantum theory** – Hawking proposes that black holes can emit radiation. This is supposed to be impossible

**Accepted theory:** Black holes are regions of space where gravity is so strong that not even light can escape



■ **1974:** **Hawking radiation theory** published in journal *Nature*. Hawking argues that black holes glow and lose mass, eventually evaporating away in steady stream of featureless radiation

■ **1976:** Hawking argues that when black hole disappears all information about everything that had ever been inside hole disappears too. This leads to **Black Hole paradox**: If information is lost forever then science can never know the past or predict the future

■ **1985:** After catching pneumonia he undergoes tracheotomy. Unable to speak naturally – communicates with head-controlled speech synthesizer

■ **1988:** ***A Brief History of Time*** published, becomes instant best-seller

■ **1993-2002:** Writes books, essays and scientific articles explaining ways in which universe may be governed, basis of existence, and theories of recent breakthroughs in physics

■ **2004:** Announces he has solved Black Hole paradox. At Dublin conference Hawking presents outline of proof that information within hole is not lost

■ **2009:** In spite of failing health Hawking continues working on mathematics of his proof

*Professor Hawking has three children by his first wife, Jane, from whom he separated in 1991. He was divorced from his second wife, Elaine, in 2006*