What was Chernobyl?

KS3 KS4 Ages 11-16 ⏰ 3 min read

On 26 April 1986, at 1:23 in the morning, Reactor Number Four at the Chernobyl Nuclear Power Plant in Soviet Ukraine exploded. The blast and the fire that followed released a cloud of radioactive material that drifted across much of Europe. It remains the worst nuclear power accident in history.

What went wrong

Engineers were running a safety test on the reactor — checking whether, in an emergency, the reactor could still power the cooling pumps after the main power was cut. The test was poorly designed, the operators were under pressure to complete it quickly, and safety protocols were ignored or overridden. The reactor's power surged wildly out of control.

There was an enormous steam explosion, followed almost immediately by a second, more powerful explosion. The 1,000-tonne steel roof of the reactor was blown off. The reactor core — now open to the atmosphere — was burning, spewing radioactive smoke high into the sky.

A nuclear reactor works a bit like a very carefully controlled kettle: the nuclear reaction heats water to make steam, which drives turbines to make electricity. Chernobyl's reactor was like a kettle where someone removed the safety valve, cranked the heat to maximum, and sealed the lid. The pressure built until the whole thing blew apart.

The immediate response

Firefighters were called to the site, most with no idea they were fighting a radioactive fire. Many received fatal doses of radiation in the first hours. The Soviet government initially tried to downplay the disaster, waiting 36 hours before ordering an evacuation of the nearby city of Pripyat, home to 50,000 people. Those people were told to take only what they needed for three days. Most never returned.

The exclusion zone

Over the following days and months, approximately 600,000 emergency workers — known as **liquidators** — were brought in to contain the disaster. They buried the remains of the reactor under a concrete shelter called the **sarcophagus**. An exclusion zone of 30 kilometres radius was established. It still exists today.

The nearby ghost town of Pripyat, with its abandoned fairground and crumbling tower blocks, is one of the most haunting places in the world — a snapshot of life frozen in April 1986.

The wider impact

Estimates of deaths caused by Chernobyl vary enormously — from the officially recognised 31 direct deaths to projections of tens of thousands of cancer deaths over subsequent decades. The disaster badly damaged the Soviet Union's credibility and economy, and many historians argue it accelerated the collapse of the USSR in 1991. The accident fundamentally changed public attitudes to nuclear power around the world — effects still felt in energy policy today.