



THE MANHATTAN PROJECT

The Manhattan Project was the **code name** of a **government** program to **develop** an atomic bomb during World War II. **Although** over 100,000 **scientists** and **engineers** worked on the project **throughout** the USA, the main work was done at the Los Alamos laboratory in the New Mexican **desert**. The whole project cost a total of 2 **billion** dollars.

America's **nuclear** program goes back to the year 1939 when German **physicist** Albert Einstein wrote a letter to American president Franklin D. Roosevelt, warning him that Nazi Germany was **creating** a nuclear **weapon**. Scientists thought that they could **release gigantic** amounts of energy by **splitting** an atom. However, large amounts of uranium and plutonium were needed to create such a **device**.

After Japan had **attacked** Pearl Harbour in 1941 Roosevelt gave the order to put together a **research** group to develop and test a nuclear bomb. In 1942 Enrico Fermi, an Italian who fled from **Fascist** Italy, **conducted** the first controlled nuclear **chain reaction**.

Many nuclear experts, **including** Canadian and British scientists, started working on an atomic bomb. The American government also **sought** the help of scientists who **fled** from Nazi Germany.

In 1943 Robert Oppenheimer, leader of the Manhattan Project, chose the desert at Los Alamos as the place to conduct the project. **Knowledge** was kept within the **inner circles** of the group so that America's **enemies** did not learn about the project. While most of the research was carried out at Los Alamos, other **facilities** in the United States produced the uranium and plutonium needed for the Manhattan Project.

On 16 June 1945 scientists conducted the first nuclear test, about 400 km south of Los Alamos. The **gigantic** explosion was **accompanied** by a **flash** of light, **visible** for many miles, and a **tremendous** heat wave. The **destructive force** of 18 000 kg of **dynamite** formed a crater that was almost a kilometre wide. A **mushroom cloud** rose over 12 000 metres into the sky.

Almost two months after the successful test, America decided to **force** Japan to **surrender** by dropping two nuclear bombs. The first one, a uranium bomb called Little Boy, was dropped over Hiroshima on 6 August 1945. Three days later, Fat Man, a plutonium bomb, **destroyed** most of Nagasaki.

The Manhattan Project helped to end World War II and marked the beginning of the **Atomic Age**.