

what nuclear family means

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What is Nuclear Energy? The Science of Nuclear Power

What is nuclear fission? Nuclear fission is a reaction where the nucleus of an atom splits into two or more smaller nuclei, while releasing energy. For instance, when hit by a neutron, the nucleus of an atom of uranium-235 splits into two smaller nuclei, for example a barium nucleus and a krypton nucleus and two or three neutrons.

International Atomic Energy Agency | Atoms for Peace and Development

The IAEA is the world's centre for cooperation in the nuclear field, promoting the safe, secure and peaceful use of nuclear technology. It works in a wide range of areas including energy generation, health, food and agriculture and environmental protection.

Nuclear Explained - International Atomic Energy Agency

The articles and videos on this page offer easy-to-understand explanations of major topics in nuclear science and technology. The many peaceful uses of nuclear technology have a beneficial impact on our everyday lives - from energy production and food security to health care and the protection of ...

Nuclear technology and applications | IAEA

The IAEA assists its Member States in using nuclear science and technology for peaceful purposes and facilitates the transfer of such technology and knowledge in a sustainable manner to Member States.

Nuclear Explained - Energy - International Atomic Energy Agency

Nuclear fusion is the process by which two light atomic nuclei combine to form a single heavier one while releasing massive amounts of energy. Fusion reactions take place in a state of matter called plasma — a hot, charged gas made of positive ions and free-moving electrons with unique properties distinct from solids, liquids or gases.

Six Global Trends in Nuclear Power You Should Know

Here are six key trends from the Nuclear Power Status in 2025 that show how nuclear energy uptake is evolving: 1. Global Nuclear Capacity can Increase by more than double by 2050 According to the IAEA projections, global nuclear power capacity could double by 2050 — reaching between 561 GW (e) (low estimate) and 992 GW (e) (high estimate).

Nuclear energy, safe use of nuclear power | IAEA

The IAEA fosters the efficient and safe use of nuclear power by supporting existing and new nuclear programmes around the world, catalysing innovation and building capacity in energy planning, analysis, and nuclear information and knowledge management. The Agency helps countries meet growing energy demand for development, while improving energy security, reducing environmental and health ...

Top ‘Nuclear Explained’ Reads in 2024 | IAEA

Nuclear energy was in the spotlight in 2024 as the IAEA and the Government of Belgium organized the world’s first Nuclear Energy Summit, and the IAEA raised its projections for nuclear electrical generation for the fourth year in a row. Our explainer on nuclear energy was the most read in English and in all the other UN languages. [Read it here.](#)

2025 Wrapped: IAEA’s Most-Read Nuclear Explainers

1. Understanding Nuclear Energy One of the IAEA’s most popular articles in 2025 was the explainer on What is Nuclear Energy? Readers learned about how splitting atoms generates clean power without emitting greenhouse gases.

Nuclear Energy Education Gets a Boost from the IAEA

The IAEA has launched a new advisory service called INEAS to develop the nuclear energy education programmes needed for safe and sustainable nuclear power, as well as other types of nuclear science and technology.