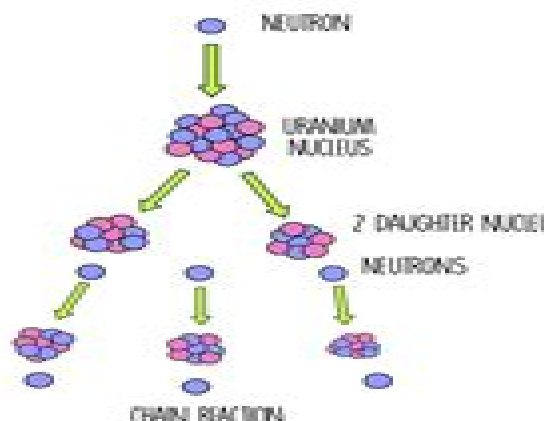




FISSION AND FUSION



Nuclear fission

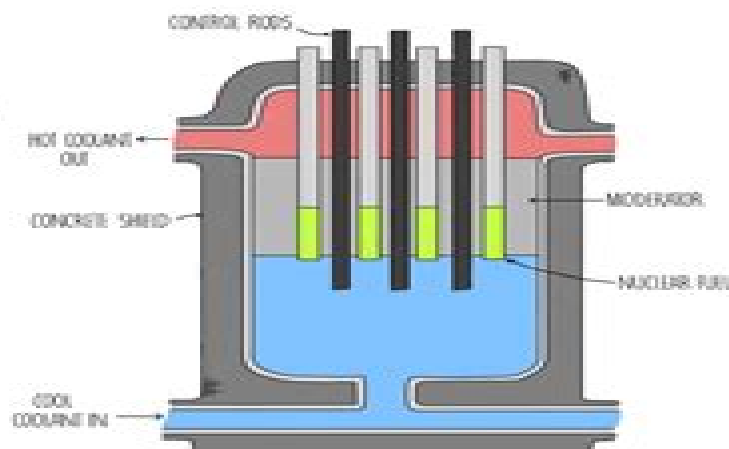
Nuclear fission is the process of splitting a nucleus to release energy. When a uranium-235 nucleus absorbs a neutron, this alters the ratio of protons to neutrons in the nucleus making it unstable.

The unstable nucleus splits into two daughter nuclei and two or three neutrons. These neutrons can be absorbed by another nucleus of uranium, which will in turn split into two nuclei and more neutrons in a chain reaction. During each fission event, energy is released in the form of kinetic energy.

The chain reaction which occurs during nuclear fission is responsible for the energy released when an atomic bomb is detonated.

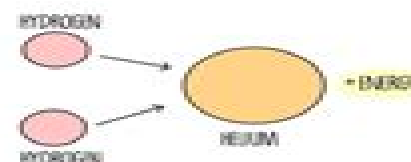
Nuclear fission is used in nuclear reactors to generate electricity. The kinetic energy of the neutrons is used to heat water. The water evaporates into steam which turns a turbine, which in turn drives a generator to produce electricity.

- The moderator in a nuclear reactor slows down neutrons so that they can be more easily absorbed by an uranium nucleus.
- The control rods absorb extra neutrons so that only a single neutron is released per fission event.



Nuclear fusion

Nuclear fusion is where two small, light nuclei collide at high speed and join together to form one heavy nucleus. Fusion reactions occur in stars when two hydrogen nuclei fuse to form a helium nucleus. Some mass is converted into energy, which radiates out from the star. Fusion can only occur under extreme temperatures and pressures, such as those found in the centre of the Sun.



Advantages

- Does not produce polluting gases
- Low fuel costs
- Only small amounts of fuel needed
- Power stations have a long lifetime

Disadvantages

- Radioactive waste needs to be carefully disposed of
- Accidents can be catastrophic
- Disposal of hot water can harm marine life
- Cannot adjust output in response to changes in demand

Questions

1. Describe how nuclear fission can result in a chain reaction.
2. How does a nuclear reactor generate electricity?
3. What is the purpose of the following in a nuclear reactor:
 - control rods
 - moderator
 - concrete shield
4. What is the difference between nuclear fission and nuclear fusion?
5. Give some advantages and disadvantages of nuclear power.

Fission Versus Fusion Worksheet Answers

S. E. Hunt



Fission Versus Fusion Worksheet Answers:

Resources in education ,1987-07 **Merrill Chemistry** Robert C. Smoot,Smoot,Richard G. Smith,Jack Price,1998

Resources in Education ,1987 Science Spectrum Holt Rinehart & Winston,Holt, Rinehart and Winston Staff,2003-03

Fission, Fusion and the Energy Crisis Stanley Ernest Hunt,1974 *Cold Nuclear Fusion* Florian Ion Petrescu,2012-07-01

Nuclear fusion is the process by which two or more atomic nuclei join together or fuse to form a single heavier nucleus. During this process matter is not conserved because some of the mass of the fusing nuclei is converted to energy which is released. The binding energy of the resulting nucleus is greater than the binding energy of each of the nuclei that fused to produce it. Fusion is the process that powers active stars. Creating the required conditions for fusion on Earth is very difficult to the point that it has not been accomplished at any scale for protium, the common light isotope of hydrogen that undergoes natural fusion in stars. In nuclear weapons, some of the energy released by an atomic bomb fission bomb is used for compressing and heating a fusion fuel containing heavier isotopes of hydrogen and also sometimes lithium to the point of ignition. At this point, the energy released in the fusion reactions is enough to briefly maintain the reaction. Fusion-based nuclear power experiments attempt to create similar conditions using far lesser means, although to date these experiments have failed to maintain conditions needed for ignition long enough for fusion to be a viable commercial power source. There are many experiments examining the possibility of fusion power for electrical generation. Nuclear fusion has great potential as a sustainable energy source. This is due to the abundance of hydrogen on the planet and the inert nature of helium, the nucleus which would result from the nuclear fusion of hydrogen atoms. Unfortunately, a controlled nuclear fusion reaction has not yet been achieved due to the temperatures required to sustain one. In hot fusion, it needs a temperature of 4000 million degrees. Without a minimum of 3000 million degrees, we can't make the hot fusion reaction to obtain the nuclear power. Today we have just 150 million degrees made. To replace the lack of necessary temperature, it uses various tricks. Because obtaining the necessary huge temperature for hot fusion is still difficult, it is time to focus us on cold nuclear fusion. We need to bomb the fuel with accelerated deuterium nuclei. The fuel will be made from heavy water and lithium. The optimal proportion of lithium will be tested. It would be preferable to keep fuel in the plasma state. Research into developing controlled thermonuclear fusion for civil purposes also began in earnest in the 1950s and it continues to this day. Two projects, the National Ignition Facility and ITER, are in the process of reaching breakeven after 60 years of design improvements developed from previous experiments. The best results were obtained with the Tokamak type installations.

Fission and Fusion Lifeliqe,2019 This lesson plan covers nuclear fission and nuclear fusion *Nuclear Fusion 32 Success Secrets - 32 Most Asked Questions on Nuclear Fusion - What You Need to Know* Florence Pope,2014-10-19 Few Other Nuclear fusion Titles Offer So Much There has never been a Nuclear fusion Guide like this. It contains 32 answers much more than you can imagine, comprehensive answers and extensive details and references with insights that have never before been offered in

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What's the Difference Between Fission and Fusion? | Children's

Physics of Energy Baby Professor,2017-02-15 Although fission and fusion are both nuclear reactions they are miles apart in terms of definitions Fission splits while fusion combines You can use this child friendly book of physics to teach the principles of nuclear reactions in the simplest manner The carefully selected images will serve as additional guide to influence the visual effectiveness of this resource Get a copy today

Nuclear Fusion Henry Rainsford Hulme,Antony McB. Colliou,1969

Fusion for Neutrons and Subcritical Nuclear Fission: Proceedings of the International Conference International Workshop on Fusion Neutrons and Subcritical Nuclear Fission,2012

Fission, Fusion and the Energy Crisis S. E.

Hunt,1974

Nuclear Fusion and Waste John R. Vacca,2010-06-15 Fusion Energy The Awesome Power Behind The Sun And Stars Has Long Been The Holy Grail Of Nuclear Researchers Worldwide Its Proponents Argue The Vast Potential For Cheap Clean Energy From Hydrogen Isotopes Extracted From Sea Water Without The Long Term Radioactive Waste Associated With Nuclear Fission While Great Strides Have Been Made Over The Past Few Decades The High Cost Of Research And Expensive Hardware Limits Most Of The Progress Over 2 000 Companies Are Currently Active In The Nuclear Fusion Energy Field Including Some Of The World S Largest Corporations Such As Boeing Governments And Corporations Worldwide Have Ploughed Over 60 Billion Into The Nuclear Fusion And Radioactive Waste Problem In 2006 Alone In The Last 15 Years Over A Dozen Nobel Prizes Have Been Awarded In The Nuclear Fusion Field Nuclear Fusion And Waste Describes The Key Concepts And Principles Then Analyzes The Opinions Of The International Scientific Community And Commercial Industry On The Subject Of Nuclear Fusion And Radioactive Waste Contributions Interviews And Comments From Leading Scientists And Nobel Laureates Provide A Forum Of Information And Opinions On The Benefits And Pitfalls Of Nuclear Fusion Including The Actual Potential For Viable Energy Solutions

Fission, Fusion and the Energy Crisis

Stanley E. Hunt,1976

Fusion-fission Systems Analysis and the Impact of Nuclear Data Uncertainties on Design Mahmoud Zaky H. M. Youssef,1980

Fusion-fission Reactions Near and Below Coulomb Barrier Energies Evita Vulgaris,1985

Fusion and Fission in the Reactions of ^{12}C with ^{27}Al , 1973 Fission Or Fusion, 1950 **Fission, Fusion,**
Safety and Nuclear Power British Nuclear Industry Forum, AEA Technology (Firm), 1994 **Fission, Fusion and the**
Energy Crisis. Repr S. E. Hunt, 1976

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In an electronic digital era where connections and knowledge reign supreme, the enchanting power of language has become apparent than ever. Its capability to stir emotions, provoke thought, and instigate transformation is truly remarkable. This extraordinary book, aptly titled "**Fission Versus Fusion Worksheet Answers**," written by a highly acclaimed author, immerses readers in a captivating exploration of the significance of language and its profound effect on our existence. Throughout this critique, we shall delve into the book's central themes, evaluate its unique writing style, and assess its overall influence on its readership.

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