



› by topic

›› by NOS-feature

- › Empirical evidence
- › Step-by-step
- › Prove
- › Laws and theories
- › Creative
- › Subjective
- › Influence
- ›› **Technology**
 - › Lavoisier and the conservation of mass
 - › Joule and energy
 - › Rumford and calorics
 - › Guericke and vacuum
- › Answers

› by subject area

Technology

🔊 Listen

While science and technology influence each other, they are not the same.

"Many confuse the terms science and technology, often considering them synonyms. Roughly speaking there are two kinds of problems investigated by modern science. Some problems relate to a particular need such as how to produce a more effective or less expensive music storage device, how to increase the agricultural yield of a plot of land, or how to vanquish a particular disease—all worthy endeavors. These challenges are technological in nature and represent what is frequently called "applied" science. On the other hand, "pure" science aims at basic understanding of the fundamental nature of reality sometimes called "knowledge for knowledge sake." Some of the discoveries of pure science, like the laser, were originally just curiosities until their utility later became apparent. Some technological innovations, such as the microscope, have provided scientists the ability to look more deeply into the ultimate nature of reality." McComas 2004, <http://www.nsta.org/publications/news/story.aspx?id=49929>.

Stories where this aspect plays an important role are:

- › By systematic use of highly sensitive scales, Lavoisier developed his keystone assertion, that mass in chemical reactions is unchanged.
[Lavoisier and the conservation of mass](#)
- › The formulation of the mechanical equivalent of heat was instrumental in defining the first law of thermodynamics, which describes the conservation of energy. Two stories, which stress different aspects of the scientific work, will provide insight into Joule's set of experiments by which he determined the ratio of heat and mechanical work.
[Joule und Energy](#)
- › What is the nature of heat – is it a substance or infinitesimal movement of matter? Among others, the Bavarian War Minister Benjamin Thompson, later known as Count Rumford, found an answer by analysing the drilling process for manufacturing cannons.
[Rumford and calorics](#)
- › Can something like a NOTHING really BE in existence? This story tells you about the german mayor von Guericke and his losing game to prove the existence of the vacuum.
[Guericke and vacuum](#)