

Harold Kroto Story -2

Sir Harold Kroto, (**Harry**) 1996 Nobel laureate in chemistry, is a man of many interests. His natural curiosity led him into science, but that doesn't limit his fascination in graphic arts, classical art and music.

Harry was the keynote speaker at the Oregon Nobel Laureate Symposium at Linfield College in April. His curiosity and energetic speaking style attracted students, faculty and the general public. His interest in students is apparent and he could be found still sharing his experience and insights long after his presentations had ended.

Harry believes we stand at a watershed moment in human history. Science, he says, can provide the tools for humanitarian relief, and for our very survival, but science cannot advance within anti-libertarian, anti-democratic regimes where intellectual and personal freedoms are restricted. Progressive, democratic societies are a necessary requirement for the scientific creativity that provides sustainable solutions.

He and other scientists have an intense curiosity to learn how things work and how the world works. He stresses the importance of questioning claims and seeking evidence to support hypotheses, noting the acceptance of facts without evidence is dangerous. **Harry** follows a "four out of five" formula when exploring a theory or hypothesis. If four or five observations are in line with the hypothesis, the theory is **almost** certainly correct. **If only one out of five are in line the hypothesis is almost certainly wrong – with the accent on the critical word almost.**

Because science is a philosophical construct designed to determine whether something is true or false **with any degree of reliability**, **Harry** encourages students to question what they are told, whether it's by their teachers, their parents **or especially themselves!**

"Shouldn't we teach our children to decide whether what we tell them is true?" **Harry** asked. "We are developing a generation of people who don't understand how our world is working and when they get into positions of responsibility, they don't care. They are oblivious not only to what scientists have done, but also to the way that scientists – **the people who created the modern technological world** - think."

Science has several aspects. One is understanding the way the universe speaks, the language of the universe. Another aspect is how science is done – the techniques and the mindsets that allow the secrets of the universe to be uncovered.

Kroto is a passionate advocate for science education. In 1994 he teamed up with BBC producer Patrick Reams to found the Vega Science Trust, which produces science programs for television. The trust aims to create a broadcast platform for science, engineering and technology communities, enabling researchers to communicate technical expertise via TV and Internet. **His present major effort is the Global Educational Outreach for Science, Engineering and Technology (GEOSSET www.geoset.info) project which is assembling a network of educational institutions committed to a synergistic programme to create a free cache of directly usable teaching material which is globally accessible via the Internet.** He travels extensively throughout the year.

He wants young people to know that science is **a profession which has in the past made a massive humanitarian contribution to society and the potential to do even more in the future**, but that it also comes with a great deal of responsibility. "I want them to understand that everything in **any** room – the carpet, paint, curtains, everything, resulted from the last 100 years of development in chemistry, physics and engineering," he said. "I want young people to know this is a fantastically honorable profession as long as they recognize there is a responsibility to ensure that whatever they do is **used for the benefit of** society and not to the detriment of it. We don't need more effective napalm or land mines. I hope we can teach our children to be more responsible."

He was knighted for his contributions to chemistry in January 1986 and later that year was a co-recipient of the 1996 Nobel Prize in Chemistry for his shared discovery of buckminsterfullerene, a form of pure carbon better known as "buckyballs." According to the Nobel committee, news of the discovery created a sensation, and for chemists, "the proposed structure was uniquely beautiful and satisfying."

Harry received the prestigious Michael Faraday Award in 2001 from the Royal Society, given annually to a scientist who has done the most to further public communication of science, engineering or technology in the United Kingdom.

He currently serves as the Francis Eppes Professor in the Department of Chemistry at Florida State University and directs the Florida Center for Research in Science Technology and Math Education. He has developed a highly popular series of public lectures and visits schools to promote science education.

Linfield is one of only five sites in the world that has been endorsed by the Nobel Foundation for Nobel Laureate Symposiums. The sciences at Linfield have experienced unprecedented growth in recent years, with students and faculty across the scientific disciplines co-authoring papers and presenting their findings at national conferences.

For more information on Kroto go to:

<http://www.kroto.info/>

<http://www.fsu.edu/profiles/kroto/>

www.geoset.info

www.geoset.fsu.edu

<http://vega.org.uk/about/internal/1>

http://nobelprize.org/nobel_prizes/chemistry/laureates/1996/press.html

http://nobelprize.org/nobel_prizes/chemistry/laureates/1996/kroto.html