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Public understanding, perception of science concerns scientists

BY ALDEMARO ROMERO
SPECIAL FOR THE SUN

Do you think science literacy is important for Northeast Arkansas?

Science and technology have been key elements in the development of the United States as a nation. Since the times when Benjamin Franklin and Thomas Jefferson distinguished themselves not only as statesmen but also as scientists until the 21st century when Americans continue to earn more Nobel Prizes than any other nation on Earth, the United States has always been at the forefront of science.

But science requires public understanding and support in order to thrive. After all, scientific development needs funding and, as the famous line from the movie "The Right Stuff" goes, "No bucks, no Buck Rogers."

That is why scientists in this country are concerned about Americans' understanding and perception of science.

In order to better appreciate what U.S. residents know about S&T and how they view scientific endeavors, the National Science Foundation conducts yearly opinion polls to analyze public perceptions of science.

Some of the more recent results of those polls are revealing and bring both good and bad news.

For example, polls show that Americans still get most of their information on S&T from television, followed very closely by the Internet.

Also, events like movie releases, such as "The Day After Tomorrow" or "An Inconvenient Truth," strongly influence public opinions on current issues, including climate change.

However, many times those media representations do not distinguish between fact and fiction and can convey an incomplete, if not a totally erroneous idea of scientific reality.

These studies also reveal that for Americans, science ranks seventh among the major categories of news followed on a daily basis after crime, health, sports, community, religion and local government while only 10 percent of U.S. residents say they have no interest in scientific issues.

Scientific knowledge among the average American has not improved much since 1990 while it has almost doubled in most European countries during the same period of time.

Some of the statistics are shocking: 25 percent of U.S. residents still think that the sun orbits the earth, 53 percent do not know that electrons are smaller than atoms and 47 percent think that antibiotics can kill viruses.

Also there are a lot of pseudoscientific beliefs out there: 47 percent of people believe in extrasensory perception, 25 percent think that astrology is based on science and 21 percent accept as true the existence of witches (flying on brooms).

Despite all this, 84 percent of Americans have a good opinion of science: Scientists together with doctors are at the top of the most prestigious occupations. Most Americans say they would be happy if their son or daughter chose a career in science.

Because economic development depends upon scientific progress and most scientific discoveries take place in universities, institutions of higher education need to take a leading role in improving public understanding of science.

To improve the understanding of science in Northeast Arkansas, Arkansas State University has taken a number of steps to expose more people to S&T. One example is a series of weekly articles, like the one you are reading, in local and regional newspapers.

Others are weekly radio shows broadcast by KASU, daily TV spots in local television stations and initiatives such as the celebration of the Year of Science in 2009 and the public showing and discussion of science-related movies on a monthly basis beginning in August at ASU's Jonesboro campus.

Additionally, ASU has been offering and will offer workshops and courses on how to improve student and faculty science communications skills. All these efforts should result in a Northeast Arkansas better educated in scientific issues and, therefore, better able to improve its economic development.

This, in turn, should make ASU a more attractive and prestigious institution at the regional and even the national level.

For more information, contact the ASU Department of Biological Sciences at biology@astate.edu.

Romero is chairman and professor at the Department of Biological Sciences at Arkansas State University.



Benjamin Franklin distinguished himself not only as the first famous American scientist but also as a great science communicator. This painting was engraved by J. Thomson in 1805 from an original picture by J.A. Duplessis.