

STEM Society Meeting, April 8, 2014

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1 About the STEM Society and the STEM Society Website

STEM is an abbreviation for Science, Technology, Engineering and Mathematics. The acronym STEM is commonly associated with K-12 education, but our use of the term is only slightly bound to this meaning. There are over one hundred people on the mailing list, although a much smaller group attends any one meeting. We meet on the second Tuesday of each month at the Trailside Center at 99th and Holmes in Kansas City, Missouri. The meetings are open to all. The start time is 6PM. We make presentations, have discussions, and have demonstration experiments. These relate to Science, the History of Science, Mathematics, Engineering, Philosophy and Technology at all levels. The topics have ranged from a technical discussion of the mathematics of General Relativity to scientific experiments for young students.

These meeting notes contain links to many other documents, which may be viewed or downloaded by clicking the link. A partial list of documents can be reached by clicking the heading **Documents**. The meeting notes may also be viewed in an archive file which is in the list of documents. Most of the documents are PDF files. They may be viewed or downloaded to the computer by clicking, provided Adobe Reader is present, or another program capable of reading PDF files. There are usually more documents available at the site than are listed under "Documents" because the documents.htm file is not necessarily kept up to date.

The web site is:

<http://www.stem2.org/>

Direct to the documents list:

<http://www.stem2.org/je/documents.htm>

Direct to the archive file:

<http://www.stem2.org/je/archive.pdf>

2 The April Meeting Announcement

The April meeting of the STEM Society will take place on the second Tuesday of the month, April 8, 2014, at the Trailside Center at 99th and Holmes in Kansas City, Missouri. The starting time is 6PM.

Some of the possible topics are:

(1) Rich Kaufman and I visited the maker space at Johnson County Library on 87th St. We looked at the Raspberry Pi setup they have there. We will talk about the Raspberry Pi, its capabilities and so on. And we shall discuss the status of maker spaces in Kansas City, Python programming, Mathematica and Wolfram, and the various capabilities of such spaces. I invite anyone with good information about these things to the meeting. I have not been to the Hacker Space on 63rd Street in a while. It would be nice if someone from the various maker spaces around town, and those specifically from the Hacker space, the HMS Beagle Store, the 2014 Maker Faire, and MakeKC, could update us on their status. Maybe Craig Bersheit could tell about the things he makes and sells, such as accessories for the Raspberry Pi. Maybe Chris

Wilkson could tell us about any plans he has to teach electronics courses, or about a good cheap design for a function generator. And maybe Steve Siegel could discuss the goings on at the UMKC physics department and his amazing activities involving physics and electronics demonstrations.

(2) As always, we welcome and request other impromptu topics, projects, shows-and-tells, new theorems, experiments, book reports, problems and solutions in mathematics, physics, engineering, biology, scientific biographies, and such.

The STEM Society Website:

<http://www.stem2.org/>

3 Discussion of the Raspberry Pi Computer

stem2.org/je/raspberrypi.pdf

4 Rich Kaufman: A Review of the Book by Craig Venter *Life at The Speed of Light*

The book covers Ventors work in molecular biology, the parallel shotgun approach to DNA sequencing, Synthetic Biology and the dawn of digital life. There is some coverage of Ventors educational development, his experience in the Vietnam War, and performing surgery there as a medical technician.

Rich has a background in Physics, and has worked on several biological and medical research projects at laboratories in places like the KU Medical Center. He also went to medical school. One bit of insight he gave was that to really understand these modern developments in Biology, one really needs to work in a laboratory. It is hard to learn Biology in any depth by studying only books, because Biology is primarily a laboratory science that requires hands on experience and observation.