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DIALOG(R)

NORTHERN ILLINOIS UNIVERSITY WILL HOLD WORKSHOPS ON HOW TO USE ROBOTIC TELESCOPES ACCESSIBLE VIA INTERNET

US Federal News

Tuesday, September 1, 2009

TEXT:

DEKALB, Ill., Aug. 31 -- Northern Illinois University issued the following news release:

Northern Illinois University STEM Outreach will hold two upcoming workshops that will allow participants to capture spectacular photographs and explore the heavens using high tech robotic telescopes that can be accessed online.

The workshops, titled Capture the Colorful Cosmos, will be held from 9 a.m. to noon on both Saturday, Sept. 12, and Saturday, Sept. 19, in NIU's Digital Convergence Laboratory at Founders Memorial Library.

Registration is limited. Participants will attend both workshops and must be at least 10 years old. They are encouraged to register with a partner. During the Sept. 12 workshop, participants will learn about telescopes, light and filters. They also will be able to request images from the MicroObservatory, a network of five automated telescopes that can be controlled via the Internet. Free software that allows users to manipulate MicroObservatory images also will be provided.

"The MicroObservatory's telescopes are high tech and can track astronomical objects for up to a minute," says Patricia Sievert, STEM Outreach coordinator. "When you open a camera in a telescope for a full minute, it collects more light and more information.

"We'll be teaching participants how to use special processing software that helps pull information out of the raw images, which at first might not look like much. Photographs can be taken through three color filters, and the

software helps bring out all the objects in the picture, such as planets, star groupings or nebula. The resulting images can be spectacular."

The robotic telescopes are operated by the Harvard-Smithsonian Center for Astrophysics, with funding from the National Science Foundation and NASA. The telescope network is designed to enable students and teachers nationwide to investigate the wonders of the deep sky from their classrooms.

Users of MicroObservatory are responsible for taking their own images by selecting the celestial object to be photographed, selecting exposure times, filters and other parameters. The educational value lies not just in the image returned by the telescope, but in the satisfaction and practical understanding that comes from mastering a powerful scientific tool.

During the Sept. 19 NIU workshop, participants will download and process their images and create an exhibit to be displayed at DeKalb and Sycamore public libraries later this fall.

Sievert is encouraging parents to register for the workshops with their high schoolers or middle school students. Capture the Colorful Cosmos is supported by NASA's Science Mission Directorate. For more information or to register online, see www.outreach.niu.edu/stem/cosmos.shtml.

NIU's STEM Outreach delivers off-campus programs and on-campus activities designed to increase science, technology, engineering, and mathematics literacy and enthusiasm among students, their families and educators. The STEM Outreach office provides a central place to find information on the numerous outreach programs offered by NIU's colleges and STEM departments. For more information please contact: Sarabjit Jagirdar, Email:- htsyndication@hindustantimes.com.

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Record - 2

DIALOG(R)

Active learning

EDWARD ROY KRISHNAN, PHD,
Bangkok Post (Thailand)
Tuesday, September 1, 2009

TEXT:

The word "education" originates from the Latin word, educere, which means "to bring out". For centuries, educators have noted the importance of tapping into the existing knowledge and wisdom of a learner and then working to deepen them. The question that teachers often ask is, are there concrete ways to make this possible?

About five years ago, I watched a DVD that completely changed my attitude toward teaching. It is an award-winning video. A Private Universe, is an eye-opening half-hour video that was followed by a short series called Minds of Our Own, produced by the Harvard-Smithsonian Center for Astrophysics.

The documentary emphasizes the importance of starting from what students

already know before teaching them what they need to know. According to several case studies presented in the documentary, those students who do not connect past and present knowledge tend to underperform. Teaching a concept over and over again is unnecessary if new knowledge is put in the context of the existing knowledge.

KWL

The KWL teaching strategy (K represents "What students already know", W represents "What students want to know", and L represents "What students have learned") effectively addresses the need to bridge the gaps between what students already know, what they want to know, and what they have to learn. This method was popularised by Donna M. Ogle in the 1980s as a strategy to encourage active reading of expository text. The strategy has increased in value and diversified in application over time. Today, the strategy is used by teachers to encourage active learning and to promote the extension of new concepts.

The application of KWL strategy allows students to personalise knowledge and become accountable for their own learning. The teacher becomes a facilitator who designs a learning environment where feedback, in the form of factual statements and questions, is generated and channelled in the direction of building meaningful new knowledge. It encourages both teachers and students to become critical of existing and new information. More importantly, it provides a sense of purpose to the whole process of teaching and learning.

Nexus

Let's take, for example, a lesson on the Eiffel Tower in Paris, France. The teacher starts off by announcing that students are going to learn a new topic. She indicates that she is going to help guide them through the process. She then divides the whiteboard into three columns, and writes at the top of each: K (What you already know); W (What you want to know); and, L (What did you learn?).

Prior to this, the teacher has either prepared a handout containing sufficient information on the topic, or decided on the pages in the textbook where information on the topic could be found.

The class continues with the teacher asking students what they already know about the Eiffel Tower. She lists each statement shared by students on the whiteboard. At this time, the teacher must emphasize that accuracy of information is not a priority. Misconceptions can be detected and corrected later.

After generating sufficient information from the students and filling up the first column, the teacher can then ask the students to share questions that they may have to further their knowledge and understanding of the topic.

Emphasis must be placed on encouraging students to ask good questions. These questions will be written in the second column. Every student should be involved in the process.

Once the two columns are filled up, students are asked to read the handout.

This purposeful reading will allow students to verify the information in the first column, answer the questions in the second column, and gather additional information on the topic.

The motivation for reading is high as the discussion is keenly focused. At the end, the teacher and students work on filling up the third column and gauge the overall learning experience.

Dr Edward Roy Krishnan is the headmaster (Thong Lor campus) and director of Strategic Planning & Development at Wells International School (<http://www.wells-school.com>). He also lectures in the Graduate School of Psychology, Assumption

University. He can be contacted at edwardmsia@gmail.com. To access additional articles by him, visit <http://www.affectiveteaching.com>. Copyright (c) 2009 Post Publishing Co Ltd, Source: The Financial Times Limited

Record - 3

DIALOG (R)

Chandra continues to 'amaze' scientists

Victoria Cumbow

The Huntsville Times (Huntsville, AL), 2 ed, p1B

Wednesday, August 19, 2009

TEXT:

X-ray Observatory sent its first images 10 years ago today

Ten years ago today, the Chandra X-ray Observatory sent its "first light" - an image of a star that exploded more than 300 years ago.

"There are pictures of us standing around the computer," said Chandra project scientist Martin Weisskopf. "We were actually amazed."

Huntsville played a big role in Chandra's history and still does. The X-ray telescope's mirrors were tested in Huntsville in the 1990s, and today the program is managed by Marshall Space Flight Center, along with the Smithsonian Astrophysical Observatory.

Originally, Chandra had a five-year life expectancy, but last month the observatory marked its 10th year in orbit. Weisskopf and Chandra Program Manager Keith Hefner said they are extending the contract with the Smithsonian for three more years and, hopefully, another two extensions beyond that.

"We hope to have nine more years of the telescope," Hefner said.

The Hubble Space Telescope views objects in visible light, which is a low-energy light, and Chandra takes X-ray images, which is high-energy light.

Weisskopf said the two complement one another. Other nations also use Chandra's technology and, through written proposals, receive observation time. In the coming years, Weisskopf said he's hoping for longer observations.

"We're trying to encourage that by the guidelines for the proposals," he said.

He also said a well-written proposal could allow up to a month-long use of Chandra.

During the past 10 years, scientists have learned that galaxies are accelerating from one another; Chandra confirmed that on a larger scale.

The observatory's technology has helped make things better, such as lasers, CDs and digital cameras. It's helped create advances in security and medicine.

It's studied black holes and looked into gravity, magnetic fields and temperatures - all things Weisskopf said can't be reproduced on Earth.

"These are all things this type of science has done," he said.

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Record - 4

DIALOG(R)

Odd stories

Augusta Chronicle, The (GA), All ed, pA02

Thursday, March 5, 2009

TEXT:

Asteroid gets 'pretty darn close' to Earth

PASADENA, California - An asteroid about the size of one that leveled more than 800 square miles of forest in Siberia a century ago just buzzed Earth.

The asteroid named 2009 DD45 was about 48,800 miles from Earth when it zipped past early Monday, NASA's Jet Propulsion Laboratory reported.

That is just twice as high as the orbits of some telecommunications satellites and about a fifth of the distance to the moon.

"This was pretty darn close," astronomer Timothy Spahr of the Harvard-Smithsonian Center for Astrophysics said Wednesday.

The space rock measured between 69 feet and 154 feet in diameter. The Planetary Society said that made it about the same size as the asteroid that exploded over Siberia in 1908.

Of the known space rocks, the next time an object will get closer to Earth will be in 2029 when an 885-foot asteroid comes within 20,000 miles, said Donald Yeomans of NASA's Near-Earth Object Program at the Jet Propulsion Laboratory in Pasadena.

Iowa House OKs bill that would make agency for elderly DOA

- From wire reports

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