prism

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Newsletter

Special Interest Articles

Individual Highlights

PRISM Employment Opportunity

PRISM Outreach Facilitator

Essential Duties and Responsibilities: Serves as a liaison between the PRISM development team and Indiana teachers of science, mathematics, and technology; works with the PRISM team to develop and present teacher professional development opportunities; works with state regional resource centers and school districts to promote PRISM; works with development team to add new resources to PRISM; assists with collecting data and assessing program efficacy; provides leadership for emerging opportunities within STEM education. Other duties as assigned.

Required Experience/Skills/Abilities:
Background in curriculum, instruction, and pedagogy essential
Knowledge of digital instructional technologies in the classroom essential;
Classroom teaching experience essential
Knowledge of Indiana STEM curricula reform and modern teaching methods;
Ability to work with minimal supervision
Ability to set and sustain an active agenda to enhance PRISM's contributions in STEM education.

Qualifications: To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Education and/or Experience: Minimum of a bachelor's degree in middle or high school science, mathematics, technology, or secondary education (with emphasis in STEM education or educational technology).

Salary: Competitive salary offered for all positions and comprehensive benefits package offered for full-time positions.

Applications: Only online applications/resumes will be accepted at: https://jobs.rose-hulman.edu until position is filled. Contact Human Resources at 812-877-8176 for questions. EEO/AA

Teachers Should Introduce Word Problems to Students Sooner, Study Finds

Kassondra Granata, Education World

A new study finds that introducing word problems to students in the beginning of a math lesson would be more beneficial for students through middle school and college.

Word problems, according to an article on EducationWeek.com, "are often considered one of the most challenging tasks in a beginning algebra class, with students likely to stumble over the move from the clean, basic formula to applying it in a real context."

"Early on, symbols are barriers to learning," said Mitchell J. Nathan, an educational psychology professor at the University of Wisconsin-Madison. "Even with no context, word problems provide powerful informal problem-solving strategies, and language itself provides an entry point to mathematical reasoning that is highly superior to the algebraic equation."

Nathan, the article said, "is one of a group of researchers who want to rescue word problems from the back of the textbooks," the article said. Nathan and his colleagues Martha W. Alibali, an educational psychology professor, Kenneth R. Koedinger, a professor of human-computer interaction and psychology at Carnegie Mellon University in Pittsburgh and more are "developing an intervention called 'Bridging Instruction' to help students and teachers use word problems more flexibly."

The group also conducted a similar study where "high school teachers predicted students would have more difficulty with math problems presented as stories or non-narrative word problems than with those presented as symbol equations."

The researchers found, according to the article, "that teachers with a higher background in math—those who had majored in mathematics or physics, for instance—were more likely to think students would struggle more with math word problems than equations. Teachers with a lower math background and those who struggled in math themselves were more likely to believe students would struggle with stand-alone equations."

"It is a real wake-up call," Nathan said. "Should we be getting rid of formal equations? Of course not. But we should be asking: When should students be given tasks to master different types of mathematical reasoning?"

Read more online more at: http://www.educationworld.com/a_news/teachers-should-introduce-word-problems-students-sooner-study-finds-2140682003#sthash.1RTx6oti.dpuf

Uranium Mining in the Grand Canyon Region

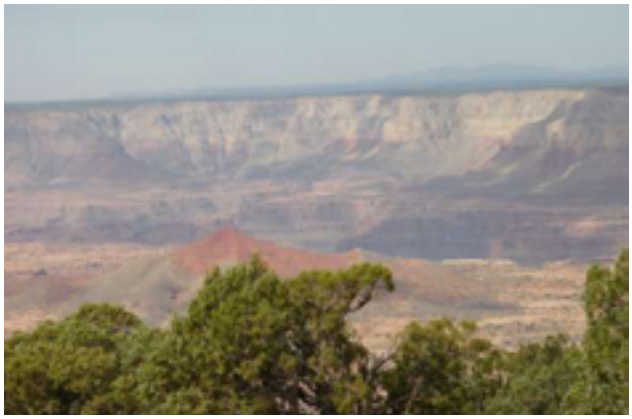
Warren Day, USGS

Hydrologist Brad Garner of the USGS Arizona Water Science Center prepares for water-quality sampling at Willow Spring, a Bureau of Land Management Wilderness Area in the Kanab Creek drainage of the Grand Canyon.

What are the environmental, cultural and social effects of uranium mining near the Grand Canyon? The U.S. Geological Survey has been tasked with answering these questions so that the Secretary of the Interior can make an informed decision about whether to continue, modify or end a uranium mining withdrawal of federal lands near the Grand Canyon in 2032.
Some of the highest-grade uranium ore in the United States occurs in deposits, known as breccia pipe deposits, scattered across the Grand Canyon region.

Evaluating the Potential Impact to the Grand Canyon, its People and Wildlife

In 2012, Secretary of the Interior Ken Salazar decided to withdraw about one million acres of federal land near the Grand Canyon from additional uranium mining development until the year 2032, citing uncertainties regarding the effects of uranium mining on the Grand Canyon, its people, wildlife and water resources. The decision to withdraw federal lands from further mining activity allows time to study the potential effects of uranium mining.



USGS scientists with different areas of expertise are coming together to conduct studies that are helping address information gaps related to the effects of uranium exploration and mining activities on people and environmental resources. The goal is to reduce uncertainties related to the effects of mining on water quality and quantity, understand the potential toxicological and radiological effects of mining on wildlife and to evaluate potential impacts on cultural and tribal resources. Results will help inform the Secretary's decision to continue, modify or end the mining withdrawal in 2032. The USGS is the lead Department of the Interior bureau tasked with developing the science to address these critical data gaps.This view is from Sowats Point on the Kaibab Plateau, looking southwest towards Kanab Creek.

Why Mine Uranium?

Uranium oxide is the fuel used in nuclear electrical power generation. Nuclear power produces relatively lower emissions of carbon into the atmosphere relative to power plants that use fossil fuels. Interest in exploration and mining of uranium fluctuates with the long-term price of the commodity. Although mining in the Grand Canyon region peaked in the 1980s and has since decreased, there is a continued level of interest in exploration and mining in the region. Currently, most of the uranium used for U.S. nuclear reactors comes from international sources.

Read more online at: http://www.usgs.gov/blogs/features/usgs_top_story/uranium-mining-in-the-grand-canyon-region/?from=textlink

5 Powerful Questions Teachers Can Ask Students

Rebecca Alber, Editor, Edutopia

My first year teaching a literacy coach came to observe my classroom. After the students left, she commented on how I asked the whole class a question, would wait just a few seconds, and then answer it myself. "It's cute," she added. Um, I don't think she thought it was so cute. I think she was treading lightly on the ever-so shaky ego of a brand-new teacher while still giving me some very necessary feedback.

So that day, I learned about wait/think time. And also, over the years, I learned to ask better and better questions. Many would agree that for inquiry to be alive and well in a classroom that, amongst other things, the teacher needs to be expert at asking strategic questions, and not only asking well-designed ones, but ones that will also lead students to questions of their own.

Keeping It Simple

I also learned over the years that asking straightforward, simply-worded questions can be just as effective as those intricate ones. With that in mind, if you are a new teacher or perhaps not so new but know that question-asking is an area where you'd like to grow, start tomorrow with these five:

#1. What do you think?
This question interrupts us from telling too much. There is a place for direct instruction where we give students information yet we need to always strive to balance this with plenty of opportunities for students to make sense of and apply that new information using their schemata and understanding.

#2. Why do you think that?
After students share what they think, this follow-up question pushes them to provide reasoning for their thinking.

#3. How do you know this?
When this question is asked, students can make connections to their ideas and thoughts with things they've experienced, read, and have seen.

#4. Can you tell me more?
This question can inspire students to extend their thinking and share further evidence for their ideas.

#5. What questions do you still have?
This allows students to offer up questions they have about the information, ideas or the evidence.

In addition to routinely and relentlessly asking your students questions, be sure to provide time for them to think. What's best here, three seconds, five, or seven? Depending on their age, the depth of the material, and their comfort level, this think time will vary. Just push yourself to stay silent and wait for those hands to go up.

Read more online at: http://www.edutopia.org/blog/five-powerful-questions-teachers-ask-students-rebecca-alber

Professional Development Opportunities

Remembering the Holocaust — For Teachers of Grades 6 – 8

Anne Frank's was one story among many during the Holocaust. Experience Anne's story through a visit to The Power of Children: Making a Difference exhibit, hands-on activities, and a theatrical performance. Hear other stories from the Holocaust that are significant to this period in history.

Date: Thursday, March 19, 2015
Time: 9 a.m.–3:30 p.m.
Fee: $55
Registration Deadline: March 12, 2015

Science and Literacy Educator Workshop — For Teachers of Grades K - 2

Science and literacy standards don't have to be taught separately! Explore how to use reading or writing to help students learn science. Participate in hands-on explorations to teach science content that can be supported by great literature. Discover how science can be incorporated into literacy centers or use science notebooks to support writing standards.

Date: Wednesday, Feb. 25, 2015
Time: 9 a.m. – 3:30 p.m.
Fee: $55 non-refundable
Registration Deadline: Feb. 11, 2015

Teaching STEM Workshop

Experts in education and industry agree that it's important to instill a thorough understanding of science, technology, engineering, and mathematics (STEM) in all students. How do we incorporate these concepts in early childhood education? Visit the new Playscape exhibit and experience immersive activities from the museum's own Guide to Learning in Playscape, an early childhood resource guide written by specialists in the field! Walk away with hands-on ideas, developmentally appropriate strategies, and other classroom resources to support your teaching of STEM.

Date: Thursday, April 16, 2015, 5–7 p.m.
Fee: $25
Registration Deadline: April 2, 2015

For registration, please visit: http://www.childrensmuseum.org/educators/professional-development

Upcoming Events

44th Annual HASTI Conference | *The Nature of Science*

February 11-13, 2015 - Indiana Convention Center, Indianapolis, IN

http://www.hasti.org/upcoming-conference-information

REGISTRATION IS NOW OPEN - CLICK HERE TO REGISTER

Exhibitor registration is now available:

CLICK HERE FOR MORE INFORMATION AND TO REGISTER YOUR BOOTH

If you have any questions please contact:

Laura Jackson, Conference Planner
317-635-4755
lauraj@cmcglobal.com

What PRISM Can Do For You!

- Easily find the perfect teaching and learning resources from our library of over 4,000.
- Save a list of your favorite resources for quick retrieval.
- Create and share lesson plans that teach your subjects utilizing your favorite resources.
- Develop online classrooms with interactive assignments, lessons, quizzes and more!
- Store your classroom materials online so that they are available to you from any computer.
- Reach your students more effectively by using web media for the digital age.
- Earn PGP points by completing PRISM led online Moodle course – either Beginning Moodle or Intermediate Moodle courses are available to you at no cost several times throughout the year.
- Select from free learning resources that emphasize visualization, rich context, staged-problem solving, and electronically enabled collaboration / communication.
- Augment your own dynamic presence in the classroom with teaching tools that mirror the skills needed for success in higher education and the 21st Century workplace.

*Through our strong support from the **Lilly Endowment** and others, we are constantly growing and improving. Check our site regularly to see what new resources you can use in your classroom.*

www.rose-prism.org

PRISM is a free website that provides collections of online resources for Indiana educators in the fields of science, technology, engineering, and mathematics (STEM). The primary collection of digital teaching materials is indexed according to the Indiana Academic Standards for 6th, 7th, and 8th grade and secondary education courses.