



2015 Education Program Overview Resources for Classrooms



Florida Industrial and Phosphate Research Institute Education Program

1855 West Main Street, Bartow, FL 33830
(863) 534-7160
<http://www.fipr.state.fl.us>
isukhraj@FLPOLY.org

Your classroom can come alive with the Education Program of the Florida Industrial and Phosphate Research Institute (FIPR Institute) Education Program. Ready-to-use activities and materials make learning relevant and fun for your students with information that meets the Florida and Common Core Standards.

The FIPR Institute's Education Program works to help teachers and students understand the whole picture of phosphate: a local resource with global impact.

Phosphate is a nutrient essential to all living things. It is in our DNA, crucial to energy production in cells, makes bones hard, and aids plant growth. Without phosphate, there would be no life! The central Florida region, known as "Bone Valley," is rich in phosphate deposits formed in ancient seas. This important mineral resource is mined and used primarily for fertilizer production. For over a century, Florida has been the center of the global fertilizer market. Phosphate mining, processing, and land reclamation offer teachers real-world applications of many subjects, including: history, geology, chemistry, biology, economics, technology development, paleontology, engineering, and environmental science at all grade levels.

Our curriculum, consulting and focus is on integrating **STEM** education. We have been working with **STEM, STEAM** and **STREAM** integration for several years. Our staff is sought after to speak at conferences on the topic, individual teachers invite us into their classrooms to work on projects and we are "go-to" science fair judges.

The FIPR Institute (formerly known as "FIPR") was originally formed as an independent state research agency by the Florida Legislature in 1978 to be a source of scientific facts on phosphate-related issues such as reclamation, public health, process water, phosphogypsum, and technology. The FIPR Institute continues its focus on phosphate, but now also has a broadened scope of applied industrial research. The FIPR Institute is part of the Florida Polytechnic University.

Indira Sukhraj is the FIPR Institute's Learning and Development Facilitator/Education Coordinator.

Email: isukhraj@fipoly.org

Please allow at least two weeks lead time for scheduling events; the earlier you can make contact, the better!

Contact the Education Program at isukhraj@fipoly.org to schedule a visit or for more information

Guest Speakers for:

- Career Day
- Great American Teach-In
- Science Nights
- STEM Fair
- STEM Night
- Science Club

Science and Engineering Fair Judges

- Combined, our staff has experience with school, district, regional, state and international level Science and Engineering Fair judging
- School and regional science and engineering fair sponsor
 - Regional science and engineering fair SRC member

Community Involvement (Exhibiting)

- Bok Tower Gardens
- Museums
- Public Libraries
- Local Government/Public Outreach

Activities:

Kid's Dig It!

FIPR Institute staff will turn your classroom into a fossil dig! After a presentation on Florida's geology and ancient animals, the fossil boxes will turn your classroom into a guided dig for your students. This is an **INDOOR** activity.

Rock and Mineral Testing

Students will review rocks and minerals, the three types of rocks, discuss ways geologists categorize and classify rocks, as well as perform Moh's Hardness testing on rock samples.

Fossil Imprints

With this activity, students are able to learn about theories and understand how scientists collect evidence to support their theories. Specifically they will learn how fossils impact scientific theories. This activity teaches students about the three ways fossils form, and that physical changes can be caused by forces like motion, temperature and pressure. Students will get the chance to make their own impression fossil, simulating the process in a much shorter time.

Email isukhraj@fipoly.org or go to www.fipr.state.fl.us for more information about our Workshops, Education Grants and **FREE Curriculum**.

