A training workshop for high school educators and scientists on X-ray fluorescence science (XRF) and on using a portable XRF device.

**X-ray fluorescence (XRF)** techniques are used at the Cornell High Energy Synchrotron Source (CHESS) to analyze materials and identify their elemental composition using a much more powerful detector called Maia. When high-energy x-rays hit an object, the atoms in the material create “fluorescence” and give off light. The colors of this light, or its wavelength spectrum, are unique to the particular atoms being struck. In this way X-ray fluorescence (XRF) has proven itself a versatile tool to “fingerprint” materials.

You may be able to take a portable version of this technique to your classroom by borrowing the XRF Tracer through our Xraise lending library program. You can use this tool to analyze emission spectra from various geologic, organic, forensic, and chemical samples. It can be used to complement your curriculum on computational analysis, energy unit conversions, energy level diagrams, graph reading and interpretation and other topics (over).
Xraise – Lending Library – Workshop Summer 2017
July 12th 2017 9am – 5pm, Cornell University

X-ray Fluorescence (XRF) using the portable Bruker Elemental
Tracer III V+

Requirements:
A small paragraph explaining how you would add XRF concepts to your curriculum or how you would use this resource in your classroom will be required when registering online. Priority given to teacher/scientists pair.

Scientists: You are required to attend in a teacher/scientist pair. This is to ensure that educators get access to this great resource.

YOU MAY BE ABLE TO USE IT IN YOUR OWN CLASS!*** Free of charge. You can look at the elemental composition of fossils, rocks, paint, and other materials ***pending on NYS permit acquisition

Schedule:
Workshop facilitator: Dr. Bruce Kaiser from Bruker Elemental

9:00am to 12:00pm
Fundamental Science of X-ray Fluorescence (XRF)
Group elemental analysis
How to run the Tracer III V+

12:00pm: Lunch (provided by Xraise)

12:30pm – 5:00pm
Hands on elemental analysis, looking at samples
Data processing
Round table discussion: How to use this in your classroom
Summary

Lodging and Travel: Travel and Lodging reimbursements are available for educators. Lodging for the night of 7/11 up to $150.

More info: Eva Luna, ejr89@cornell.edu
For applications: xraise.classe.cornell.edu/events