Science in Motion - Ursinus College

https://www.ursinus.edu/offices/science-in-motion/

Forensics Activities – Middle School

DNA Fingerprinting

Students use provided images of DNA fingerprinting gels to determine paternity and to match a crime scene sample to a suspect. Can be used as a stand-alone lab, or a follow-up after the Gel Electrophoresis lab.

Biology Mobile Educator

Faces / Forensic art

Students act as "eyewitnesses" and use a forensic art program to draw faces of suspects

Biology Mobile Educator

Gel electrophoresis: An introduction using food coloring

Students pour their own gels, load the gels with food coloring solutions, run the gels, and analyze the results

Biology Mobile Educator

Protein Identification through immunoassay

Students use an immunoassay to show how forensic scientists can determine if blood on a bumper is from a human or another animal.

Biology Mobile Educator

Review / Test prep activities

We can design fun, unique review sessions for nearly any topic using our programmable Spheros. (No prior programming experience needed.) Ask us for suggestions for your next review session!

Biology Mobile Educator OR Chem/Phys Mobile Educator

Spheros

Spheros are paired with a Kindle Fire (provided) through the SpheroEdu app. Beginners can draw a path for the Sphero robot to follow, intermediate users can drag and drop blocks of code, and advanced users can write text programs using JavaScript. Provide your own activities, or use one of the SpheroEdu prepared modules aligned to NGSS, CCSS, and various state standards.

Biology Mobile Educator OR Chem/Phys Mobile Educator

Thin Layer & Paper Chromatography

Analgesics: Students run TLC on acetaminophen, aspirin, and caffeine. They then identify 3 unknown analgesics made from a mixture of the above.

Ink: Students run TLC on various inks to determine an unknown ink sample

Lipstick: Students run TLC on lipstick samples, then match an unknown sample to one of the knowns

Marker: Students use paper chromatography to separate the inks in markers, then identify an unknown marker

Chem/Phys Mobile Educator

We are always working on new activities to bring to your classroom. If you have any curriculum for which you do not see an activity, please let us know! We may be able to design one for you.