Workshops by EDVOTEK®

NSTA
Atlanta, GA
Thurs. March 15, 2018

Martian Genetics: An Electrophoresis Exploration

Thursday, 8:00 AM - 9:00 AM • Georgia World Congress Center, B306

Explore genetics with our "out of this world" workshop! Imagine being the first scientist to explore Mars and discovering extraterrestrials. How would you use biotechnology to learn about the Martians? Learn how to explore the relationship between genotype and phenotype and how to see DNA in your middle school classroom. We will cover both DNA extraction using spooling and the separation of simulated DNA fragments using electrophoresis.

Exploring STEAM with Transformation!

Thursday, 9:30 AM - 10:30 AM • Georgia World Congress Center, B306

Transforming bacteria with plasmids that express brightly colored or fluorescent proteins is an unforgettable way to teach the central dogma of molecular biology. Why not take it a step further and see the art your students can create using their transformed bacteria? Receive tips and tricks to maximize classroom success, as well as dust off your paintings skills!

Our favorite design will win a free kit!

Left at the Scene of the Crime: Introduction to Forensic Science

Thursday, 11:00 AM - 12:00 PM • Georgia World Congress Center, B306

Explore genetic diversity using forensic science! Your students become crime scene investigators as they analyze biological evidence using blood typing and DNA fingerprinting. An agglutination test is used to conclusively identify crime scene samples as "blood" and to preliminarily screen suspects by ABO type. Next, gel electrophoresis is used to create DNA profiles from crime scene and suspect samples.

What's in My Lunch: Using Biotechnology to Detect GMOs and Common Allergens

Thursday, 12:30 PM - 1:30 PM • Georgia World Congress Center, B306

Biotech got its first break with the domestication of animals and plants and the use of microorganisms to make cheese, bread, beer, and wine. We want to bring the field back to these rich roots with two of our most delectable experiments! Learn how to use an enzyme-linked immunosorbent assay (ELISA) to detect common food allergens. Next, identify foods containing GMOs by separating amplified DNA using gel electrophoresis.

Cancer Investigators: Medical Diagnostics in Your Classroom

Thursday, 2:00 PM - 3:00 PM • Georgia World Congress Center, B306

Cancer contributes to almost one in every four deaths in the United States. Fortunately, innovations in biomedical research have improved our understanding of the differences between normal and cancer cells. In this hands-on workshop, participants use microscopy and electrophoresis to explore the hallmarks of cancer.

Exploring the Genetics of Taste: SNP Analysis of the PTC Gene Using PCR

Thursday, 9:30 AM - 10:30 AM • Georgia World Congress Center, B306

Explore the relationship between genotype and phenotype using Phenylthiocarbamide (PTC). Some think PTC tastes bitter, while others find it tasteless. The ability to taste PTC has been linked to variations in a taste receptor gene. In this workshop, you will learn to use PCR to distinguish between PTC alleles. We'll share tips and tricks along the way to ensure experimental success!

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