

# Workshops

by EDVOTEK®

**NSTA**  
**Richmond**  
THURS. OCT 16, 2014

## Using the Polymerase Chain Reaction to Identify Genetically Modified Foods

For centuries, selective breeding and conventional hybridization were used to produce desirable qualities in food crops. Today, genetic engineering directly manipulates the DNA, quickly producing these traits. Due to controversy, some companies removed GM ingredients from their foods. We will extract snack food DNA and analyze it using PCR and electrophoresis.

**Receive a 4GB flashdrive and be entered for a T-shirt drawing.**

**Thursday • 8:00 am - 9:15 am • Greater Richmond Convention Center, E11C**

## Detecting the Silent Killer: Clinical Detection of Diabetes

More than 380 million people worldwide have diabetes, a disease that causes high blood sugar. Due to genetic predisposition and high-calorie, low-activity lifestyles, that number continues to grow. Without early treatment, diabetes causes severe medical complications. We will diagnose diabetes using simulated urinalysis and ELISA tests. **Receive a 4GB flashdrive and be entered for a T-shirt drawing.**

**Thursday • 10:00 - 11:15 am • Greater Richmond Convention Center, E11C**

## Biotechnology Basics

Feeling overwhelmed by the complicated experiments performed in biotechnology laboratories? If so, join us for this hands-on workshop that explores biotechnology techniques commonly used in research labs (DNA isolation, PCR, and electrophoresis). These experiments will help students understand how techniques like genetic engineering work in a real-world context.

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**Thursday • 12:30 - 1:45 pm • Greater Richmond Convention Center, E11C**

## Case of the Missing Records

Explore genetic diversity using forensic science! Your students become crime scene investigators as they analyze biological evidence using DNA fingerprinting, a technique that identifies people via genetic differences. Gel electrophoresis is used to create DNA fingerprints from crime scene and suspect samples. A match between samples suggests which suspect committed the crime.

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**Thursday • 2:15 - 3:30 pm • Greater Richmond Convention Center, E11C**

## The Drunken Worms: Exploring Gene Function with *C. elegans*

Model organisms allow us to study fundamental questions in biology that are difficult to study in humans. Learn how to culture the nematode *C. elegans* in your classroom. Explore how mutations affect alcohol metabolism using a simple locomotion assay. Data is collected and analyzed using statistics.

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**Thursday • 4:00 - 5:15 pm • Greater Richmond Convention Center, E11C**



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FRIDAY OCT 17, 2014

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