

Session 1: STEM Clues

K.C. Rudy Wildlife on the Move

Students will compete by solving a sequence of STEM based clues derived from STEM disciplines, including decoding and riddles, to arrive at the "final solution".

Session 2: Mystery

Dr. Roy Joe Harris – Mathematics

Is it math or is it magic? Come see how much fun math can be and learn way to impress your friends with your new found knowledge. *What does Dr. Harris have in store?*

Session 3: Dragons, Demons, and Fireballs, Oh My!

Dr. Debbie Dunn/Dr. Liz Hutchinson – Computer Science

Attendees will develop a simple, interactive game using a visual tool. Attendees will acquire skills in drag and drop programming, game design, and multimedia production.

Session 4: Killing Arianna Grande!

Dr. Alyx Frantzen – Chemistry

Students will be laboratory scientist and analyze samples taken from a crime scene. They will use chemical sleuthing to help determine if the deceased, Ariana, was a victim of a weak heart or a malicious crime!

Session 5: Turn Up the Heat!! - Food Transformations in the Culinary Cafe

Dr. Chay Runnels/Chef Todd-Culinary Arts

We cook food to improve ingredient aesthetics, flavor, and food safety. The cooking process causes amazing changes to the properties that make up each ingredient. Come experience and taste how food properties change and transform into what our bodies need, as well as, what our taste buds enjoy!

Session 6: Superman is a Cockroach!

Erin Childress – Biology

Come join us in the biology lab as we explore how Madagascar hissing cockroaches can pull more than 10 times their own weight. Can your cockroach be the superman of all? Some have been known to pull a cell phone across the floor! We will explore this biological marvel and find out just how they do it!

Session 7: Come on Baby Light my Fire

Dr. Susan Ballard – Nursing

Weak stomachs beware; the smell of burns is in the air! See how much water you would need, when your skin can no longer lead. The scorch of fire cannot be beat, so do you think you can handle the heat? Come join us to visualize different burns, estimate how much of the body is burned, and learn how to identify how much fluid the patients will need.

Session 8: Toxic And Deadly

Dr. Michele Harris

Recently there has been a lot of news coverage about toxic materials in waterways in Michigan. A toxic substance is any substance that is hazardous to living organisms at **low** concentrations. We will do an experiment that simulates how chemists determine the toxicity of substances.

Session 9: Why does Dairy Hurt my Stomach?

Dr. Darla O'Dwyer – Nutrition

The sugar in milk is called lactose. Ideally, the human digestive system contains an enzyme called lactase that breaks apart lactose into two molecules called glucose and galactose for easy absorption. However, many people lack this enzyme. Without it, lactose is not absorbed into the bloodstream and instead ends up in your digestive tract unabsorbed. If you, or someone you know, has problems after drinking milk, then you might have lactose intolerance.

Session 10: Come meet my Little Friends

Dr. Susan Ballard – Nursing

Bloody, smelly, goopy and gross! To clean these wounds you will have to get close! Weak stomachs beware, this can be quite a doozy! When caring for patients, you cannot be choosy! Come join us to visualize different stages of wounds, and learn how to measure and clean a wound. Best of all, meet our little friends that will eat everything in site!

Session 11: Eating the Sun

Dr. Dennis Gravatt – Biology

Carbon dioxide levels are rising in our atmosphere. Rubisco is the enzyme that plants use to “gobble” up CO_2 . Will plants take over our planet? Maybe they already have? Find out how plants “eat” energy from the sun. In this engaging and exciting session students will use alginate to encapsulate algae (*Scenedsmus quadricauda*) in order to measure photosynthesis. Students will explore the rate of carbon dioxide uptake by these photosynthetic organisms in response to light.

Session 12: T-Rex Hates CPR!

Rusti and Lonnie Allen

Keep calm and do CPR! Learn the basics of CPR for adult, child, and infant with Rusti Gayle and Lonnie Lee Allen, a mother/daughter team who will make you laugh until you can't breathe. Don't worry, we studied under Chuck Norris who, while learning CPR, brought the dummy to life.

Session 13: Rock Paper Scissors!

Dr. Jonathan Mitchell and Cord Sheard

We all have play RPS with something at stake hoping to win! Come find out how you can possibly increase your chances of winning! Get Ready to play!

Session 14: Physics!

Dr. Walter Trikosko and Physics Faculty

Come discover the wonders of transforming wind energy in a hands-on fun way! We will explore what works and how we can lessen our carbon footprint by efficiently capturing energy.
