Science Fun Shop

2011 Course Descriptions

Build a Kaleidoscope - Erica Snipes (Physics Dept) 45 min

Use basic optics principles to learn how kaleidoscopes work, then build your own to take home!

Cartesian Diver – Aaron Modic (Physics Dept) 45 min

Explore why items float or sink, and build a fun game that will test your ability to pick up items with a Cartesian Diver.

Build a Motor – Matt Jones (Physics Dept) 45 min

Discover the principles behind how a motor actually works, then find out how simple it is to build one. Each student will take home their own motor.

Physics of Music – Dr. Stuart Loch (Physics Dept) 45 min

A demonstration of the physics concepts behind the generation of sound waves and harmonic generation. Some general demonstrations will be given, then we will analyze sounds that the students make.

Snap Electronics – Corey Small (Physics Dept) 45 min

Building electrical circuits is a 'snap'. Find out how at this session!

We-Do LEGOs - Dr. Marllin Simon (Physics Dept) 60 min

Learn how to build and program the latest LEGO system, "We-Do".

SunScreen or SunBurn? - Beth Hickman (AMSTI) 45 min

Does SPF really make a difference? Compare various popular sunscreen brands and SPF values using color changing nail polish.

All about Eyeballs -Dr. Robert Lishak (Biology Dept) 45 min

Discover how the eyeball works and then investigate the properties of eyes further by dissecting a sheep's eye.

Genes in a Bottle - Drs. Mark Liles, Cathy McVay, and Les Goertzen (Biology Dept) 45 min

Students will learn about the basic science of DNA, and will isolate their own DNA from cheek cells. The concept of an enzyme (encoded by a gene) and how it functions will be illustrated by the steps necessary to purify the DNA. At the end of the exercise students will prepare a microcentrifuge tube containing their own DNA that they will be able to wear as a necklace from this lab.

Hoo Eats Who? - Drs. Christine Sundermann, Roland Dute, & Mike Miller (Biology Dept) 45 min

What do owls and eagles have in common? What do owls eat and how do they find their food? Do you know what an owl pellet is? This course will involve some dissection and working with advanced microscopy techniques.

Silly Cilia - Dr. Tony Moss (Biology Dept) 45 min

Did you know that when genes are 'broken' that this can result in disease? In this activity you will be able to see just how green algae (Chlamydomonas) can see and swim toward and away from light, and you will be able to see what happens when gene problems affect their ability to swim (they don't drown, but they swim really slowly). Look for a special visit from some special jellyfish that use cilia to swim!

Survivor! – Dr. Brian Helms & Molli Newman (Biology Dept) 45 min

Most animals are highly adapted to their surroundings, enabling them to better find food, avoid predators, and survive. In this Fun Shop, students will assume the roles of predators and prey with unique adaptations and engage in several fast-paced games of survival. By recording the outcomes of each game, we will track the population changes of each 'species' to learn who the real survivors are!

Medical Technology - Kat Milly West (Chemistry/Biochemistry Dept) 45 min

If you're interested in the medical field, this session provides a hands-on look at what happens behind the scenes at a hospital or medical clinic. Find out what instruments are used for various blood and urine analyses and how that information can be used to treat illnesses.

Bubble Mania – Kristy Mann & Terri Rubio (AMSTI) 45 min

The science of bubbles….need we say more!

Microscopic Wonders – Roger Birkhead (Science in Motion) 45 min

Students will learn about microscopes and then use them to investigate the tiny creatures that live in pond water.

Fur, Feathers & Fins – Matt Kearly (Biology Dept) 45 min

Students will view a variety of specimens, dissect an owl pellet, and learn cool facts about the diversity of animals that are present on our planet.

Slimistry – Dr. Paul Norgaard (Science in Motion) 45 min

If you like getting your hands dirty, this is the session for you! Using basic household chemicals, students will create ooey, gooey concoctions, like silly putty and slime.

Match the Graph – Matt Obley (Science in Motion) 45 min

Learn how motion sensors work and then test your knowledge of motion in a Match the Graph competition!

Art in Science – Andrew Henley (Jule Collins Smith Museum of Fine Art) 45 min

Students will learn how science is integrated into the world of Art.