



For BOYS! | Friday, Feb. 2, 2024

Workshops: A: 10-11 a.m. | B: Noon-1 p.m. | C: 1:15-2:15 p.m.

WORKSHOP DESCRIPTIONS:

A Hacker's Guide to Open-Source Intelligence (OSINT): In this session we will cover the ways that cybersecurity professionals and computer investigators use publicly available information sources to solve crimes and protect organizations.

Adaptations of Reptiles and Amphibians: An overview of the evolution of the special adaptations that reptiles and amphibians have to make them better suited to their natural environments. Session includes live animal ambassadors to observe and compare these features.

Amazing Ears: Explore Audiology!: In this class, students will learn all about their ears, how hearing works, and how to protect their hearing. Students will participate in activities that relate to the ear such as earwax removal on fake ears, look at their ears through assisted video otoscopy, investigate hearing aids, as well as other equipment that audiologists use to assess hearing. Doctorate students in the UWSP Doctor of Audiology program will assist Drs. Veith & Craig, licensed audiologists and professors, to help students learn about how important their hearing is!

Book Making: In this hands-on workshop, student learn about the art of bookmaking, how printed word on paper become books. Students will get a chance to create their own folded books in quarto, octavo, and even duodecimo formats! Learn about imposition (how words are printed on paper)and what makes a book.

Building a Better Potato: Ever wonder what goes into making perfect French fries, chips, and tater tots? There's actually a lot more involved than you think. Hands-on experiences will allow you to participate in laboratory techniques that we're using to make potatoes easier to grow, more nutritious, and extra tasty!

Create your First Web Page!: Learn how to create your very first web page using latest web technologies and tools.

Designing a Water Treatment Plant: What are the different units of a water treatment plant? What is the application of these units? What are the engineering concepts behind using these units? We will have a short experiment to learn the main engineering concepts used to design water treatment plants. Then, we will discuss the possible answers to all these questions by designing a simple water treatment plant.

Fly Fishing Science (The Art of Casting): We will lead a group on how Science plays a critical role in the casting of a fly-fishing rod, we will then teach them how to cast!

Harry Potter & the Laboratory of Secrets: Unlock the secrets in a medical laboratory to determine what is wrong with a patient to establish a diagnosis.

How Old is My Deer?: Did you know you can tell how old a deer is by looking at its teeth? Wildlife biologists collect information about deer ages to learn more about the white-tailed deer herd in Wisconsin. We will learn how to age deer by looking at real deer jaws and we will discuss how wildlife biologists use age data to manage deer herds.

<p>HyperRogue: Learn how geometry changes on different shapes and play a game called HyperRogue that will introduce students to many of the basics of hyperbolic geometry.</p>
<p>Light, Chemistry, Action!: Light and matter are all around us, but how do they relate with each other? In this interactive and hands-on session you'll explore how light interacts with matter using UV radiation, flames, chemical reactions, and some laboratory techniques. It'll be an en-light-ening experience!</p>
<p>Lyme Disease in Wisconsin: Learn about, identify, and spread awareness about tick-borne illness and Lyme Disease in Wisconsin!</p>
<p>PT Moves Me: A short presentation explaining who physical therapists are and what we do, followed by interactive small group sessions participating in the activities we as physical therapists perform with our patients. Participants will have a chance to test their balance, hands on learning about bones muscles and ligaments, as well as sensory testing and electrical stimulation.</p>
<p>Reduce your Carbon Footprint through Energy Conservation: Use light meters, watt meters, infrared thermometers and cameras as tools to conduct an energy audit. Learn ways to reduce your energy consumption, reducing your carbon footprint.</p>
<p>Renewable Energy and the Curse of the Second Law: Learn why many engines are “cursed”, even some that are powered by renewable energy, and what can be done about it. You will even build an electric motor that you can keep!</p>
<p>Soil - Nature's Filter: Let's get our hands dirty as we learn how to determine the texture of soil, with nothing but some water and our hands! We'll follow that by an experiment that demonstrates how soil is charged. A soils texture and electrical charge determine how it behaves as a water filter.</p>
<p>The Science of Cheese: Come join us as we explore the history of cheese, uncover fun facts, learn how cheese is made, and taste an American favorite! For cheese lovers and those with a curious mind.</p>
<p>Totality!: On Monday, April 8, 2024, millions of people will witness a spectacular astronomical event, a total solar eclipse. Our hour-long workshop will include a new, 25-minute fulldome planetarium show that allows the students to learn how eclipses happen, how to safely view them, and where the 2024 eclipse can be seen. During the second half of the workshop, we will demonstrate how to make a pinhole camera to safely observe the Sun during an eclipse. We will also explain how to measure the size of the Sun, based on the observations made with the pinhole camera.</p>
<p>What About Birds? Let's have fun digging into the science and behavior of birds with the UWSP Museum of Natural History.</p>
<p>Would you drink this water?: In this workshop will use murky water with twigs and mud to simulate the run off that occurs in nature from farm fields, streets, and parking lots when rainstorms pick up sediment and contaminants. After a brief introduction into Civil Engineering and the students are setup into teams and shown how a natural water filtration system works by layering different types of rock, sand, and varying sizes of each. The students create a design sketch, receive a stack of sieves, bucket of mixed aggregates, and a 'vessel' to construction the team's filter.</p>
<p>Your Unbelievable Brain: The brain is a tricky organ that is designed to sometimes deliver confusing messages to our bodies, particularly when it comes to our senses. Receptors in our sense organs can be fooled by the brain into perceiving something that isn't there. In this class, we'll use several activities to explore how the brain teases our senses of touch, sight and sound. We'll also have a real human brain for you to check out!</p>