Expanding Your Horizons – 2022 Workshops

All About the Planets!

Would you like to learn all about the amazing planets in our Solar System? In this workshop, you will learn about the size scales and other interesting information about the planets by engaging in hands-on activities and watching a Planetarium show. A souvenir Solar System bookmark will be yours to keep!

Space Adventures

Learn about what it takes to get to space and survive there. Design your own space suit and make a model rocket out of clay.

Strawberry DNA Extraction

Do you ever think about what makes your hair the color it is, what controls the way animals grow, or what makes a strawberry taste sweet and juicy? It’s all in the DNA! All living things have DNA that controls what something looks like and how it grows. Together, we’ll learn about what DNA is and extract DNA from a strawberry with things you can find in your kitchen. Come learn about DNA with some real-life scientists!

What Do Sea Otters, Sand Crabs and Seabirds Have in Common? Acanthocephalans!

Explore an organism that has the ability to seriously harm the California sea otter population. Can you guess what this animal is? No, it’s not a great white shark or an over-excited kayaker, it is a tiny spiny headed worm called an acanthocephalan. An acanthocephalan is a type of parasite, an organism that lives in or on a host. Learn about the life cycle of this parasite and the animals it infects including sand crabs, seabirds and sea otters. Then look at a live acanthocephalan under a microscope after you dissect it from an infected sand crab.

Accessorizing with Bioluminescence: How to Achieve the Ultimate Bobtail Squid Glow Up

Not all bacteria are bad, some serve in a symbiotic relationship to help their hosts survive. Because bacteria are invisible to the naked eye, it can be difficult to understand and visualize the dynamic relationships between bacteria and their hosts. In this activity, participants will learn about the symbiotic relationship between bioluminescent bacteria and the Hawaiian bobtail squid by building their own handheld microscopes and observing prepared slides of both squid and symbiotic bacteria. Through the use of interactive activities revolving around a cute sea critter, participants can experience how a scientific experiment is performed and see that the process can be simple, accessible and fun!

Cheese Rind Microbes: A Taste of Science
Many people eat fermented foods, including kimchi, yogurt, and cheese. Have you ever wondered why these foods taste so good? Step into the shoes of a food scientist by joining our workshop to explore (and taste) how bacteria and fungi add flavor to your favorite cheeses!

**Squid - inside & out!**

Dive into the world of invertebrate zoology by getting an up close look at one of the coolest ocean creatures - squid! Each pair of students will dissect a market squid and investigate how squid anatomy is well-adapted to an ocean environment.

**Sketch Like a Scientist**

Do you love science but can’t stop yourself doodling in your notebooks? Are you an artist who prefers leaves and mushrooms to portraits? Sounds like you have the makings of a science illustrator! In this workshop, we will explore how science and art are interconnected. Participants will learn and develop skills in observation and scientific illustration. All materials are provided, but if you already have a journal or pens/pencils you’d like to use, please bring them!

**In a Heartbeat!**

Lub Dub! Have you ever wondered how our hearts beat?
In this fun, interactive, hands-on workshop you will learn the structures and functions of the heart. Virtually dissect the heart using state-of-the-art virtual dissecting table Anatomage. See a real heart and feel it with your own hands. Play doctor and listen to your heartbeat using a stethoscope. Understand what those squiggly lines on the ECG tracing mean. See the effects of exercise on the heartbeat. All these and many more. Join us in this exciting heart skipping journey about the heart! See you soon!

**Culture of microorganisms:**

We all hear that good hand washing is fundamental to avoiding multiple types of infections, but what does bacteria look like, how does it grow, and how does washing your hands make any difference?

**Physics Demonstrations and Internship Experience**

Physics demonstrations led by a Hartnell College Student alumna, in her Senior year attending San Jose State University studying to be a biomedical engineer, and a Hartnell College Sophomore studying Electrical Engineering. They will also speak about their internship experiences and how they got into the engineering field.

**Earthquake Shake!**

Welcome to the earthquake shake!!! Put your design skills to the test! Students will be creating a structure that will be put to the test with the earthquake replicator. We will try various materials that must reach a maximum height to hold a cup of candy at the top!