



Expanding Your Horizons Workshop List

Coding for Fun!

Create an explosion of colorful bubbles or a delicate snowflake using Ninja-like coding skills. Discover your inner coding power!

Color Your Genes: The DNA Bracelet Workshop

Dive into the fascinating world of genetics by crafting a unique bracelet that represents the OCA2 gene, which plays a key role in eye pigmentation. Using colored beads to symbolize DNA bases, participants will explore how genetic variations can influence whether we have brown or blue eyes, all while creating a fun friendship bracelet!

Dig! Dig! Dig!

What is an anthropologist or archaeologist, and what do they do? Come learn about anthropology, excavation sites, and how artifacts can teach us about the past. In this activity, students dig for objects that are buried beneath sand and piece their history back together by reassembling a clay pot they designed.

EggStruction

How does an egg survive being launched from a chicken, shipped in a carton, or dropped off the edge of a building? Come learn about design, architecture, and construction by exploring shapes and materials used in structures while building your own Egg Protection Device. Will YOUR egg survive the fall?

Friends with Feathers

How much has urbanization contributed to the decrease of 3 billion birds? Is it really okay to feed ducks bread? Join us as we learn about the impact of industrialization of bird habitats through an interactive game, and about the importance of not feeding wild birds with an “Elephant Toothpaste” experiment.

Hack the Stack – Building Blocks of Programming

How does a computer “think”? Computers are designed to follow an algorithm, which is a set of instructions that tell it what to do. Just about everything a computer does has an algorithm! Would you like to learn how to think like a computer and create an algorithm? Come and learn about the components of an algorithm using a fun cup stacking activity!

How to be an Ecologist

Do you like animals and want to see how a passion for nature can turn into a career? Learn what it’s like to be an ecologist! For this workshop, you will get an opportunity to learn from female scientists about ecology, biodiversity, and how to think like a scientist. You will handle real research specimens and field equipment and will walk away with a deeper understanding of our natural world. There are many fascinating animals and plants out there – explore them with us!

Infection Detectives

Put on your detective hat and follow the trail of some germy mysteries! Join us in this hands-on adventure where you'll learn about infectious diseases from the common cold and athlete's foot to West Nile virus, Lyme disease, and tuberculosis. Discover how infectious diseases travel and survive, and how our amazing bodies fight back! Then, put your imagination to the test as you design and build your very own germ to take home. Will yours be a virus, bacteria, or something brand new? Become an Infection Detective and crack the case of the microscopic world!

It's in our Genes!

DNA is the genetic code that makes us who we are. We share 99.9% of our DNA with other humans, so why do we look so different? Join us to explore the story of our DNA and see just how similar we really are! In this workshop, we will compare the traits we do or do not have in an interactive activity to learn about genetics.

Let it Glow

We will be explaining fluorescence in household items and the natural world, after which participants will be able to explore some real-world applications of fluorescence with glowing plastic brains, fluorescence watercolor painting, and dyed fluorescent carnations that participants can take home.

Midnights (The Ocean's Version)

Are you *Ready For It?* Dive beneath the waves to discover how sunlight shapes life in the ocean! In this hands-on workshop, participants will explore the three major ocean zones—the sunlit, twilight, and midnight layers—through interactive demonstrations and creative activities. From shimmering plankton that *Bejeweled* the surface to deep-sea creatures, you'll learn how light, color, and pressure change with depth and how marine organisms adapt to thrive in the deep, dark sea.

Milky Ways: Unlock the Secrets of Light!

Do you know why the sky is blue during the day and orange during sunset and sunrise? It only takes some milk, a few household items, and a humble laser pointer to understand this! Come join us in this demonstration of how light interacts with matter!

Mystery in the Mud: Using Soil to Solve a Crime

Become a soil detective! In this hands-on workshop, you will analyze real soil to solve a mystery. Using clues such as color, texture, moisture, and pH, you will compare soils from different "crime scenes" to determine where a fictional murder took place. Along the way, you'll discover how scientists use soil properties to solve crimes.

Plant Pigment Painting / Seed Dispersal Challenge

In this workshop you will learn how plants spread their seeds without moving. By designing and testing your own "seeds," you will explore how shape, weight, and structure affect flight and dispersal — just like in nature. Then, explore the colorful pigments inside plants (chlorophyll, anthocyanins, carotenoids) by crushing leaves and petals to make "natural paints." You'll learn that these colors aren't just pretty — they have important jobs in plant biology, too!