NuMinds Enrichment
Real, Inspired learning.

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Math & Science Focus:

Living in a Downsized World: The Life of a Minifig

From the Stone Age to the Age of Experience, humans have changed and adapted based on their surroundings. But what about the tiny race of beings known as Minifigs? In this course, we'll study geology, technology, culture (and more) in order to make inferences and build the hidden world of the minifig.

Physics and Fuzzy Monsters

This course is for those who love science, math, phenomena, and Pokémon! How do the creatures we love manipulate light, sound, and the powerful physics found in nature and use them to attack and defend? From fractions to refraction, Fibonacci, sound waves, and sonar, this course explores the coolest physics, as seen through the abilities of those adorable pocket monsters.

So Many Flavors of Pi

Welcome to the Great Mathematical Cooking Show! We know that math can be delicious, such as using measurements and fractions when you cook, but what is the exact flavor of Fibonacci Nacho Takis? Was your pie sprinkled with pi, or your pizza sliced with phi? This is math. This is a cooking challenge. This is mathematical madness presented in a unique and unforeseen way.

Deep Worlds: Marine Biology

The largest animal on planet Earth bellows across five hundred miles. Its call covers elusive pyrosomes, glass squids, bottlenose dolphins, and underwater crop circles of love-struck pufferfish. According to the scientists at NOAA, we have explored less than 5% of our ocean. The purpose of this course is to explore the expanses of the deep by learning and applying the scientific principles of marine biology.

The Venus Fry Trap: Space Restaurants

In the year 3023…the best place to grow crops is on the planet Venus. Well, not technically on the surface of Venus (that would be like trying to grow crops in a pizza oven with a stack of 100 elephants standing on it), but instead, floating above the Venetian clouds. These large balloon farms have access to bright sunshine, carbon dioxide, and water vapor--the perfect combination for healthy, delicious produce. The next step is for you to use these new crops to create a delicious and well-balanced meal! Students use the backdrop of Venus aerial farming to learn about nutrition, diet, and the food industry. Students create a balanced meal that meets MyPlate.gov guidelines, then push to manage profit margins to operate a successful Venetian restaurant.

Natural Hazards: A Cloud's-Eye View

Take a fun and imaginative journey through the world of weather disasters and hazards. Using the unique lens of a cloud and its team of time-traveling reporters, students will explore the big ones (tornadoes, hurricanes, earthquakes, volcanoes, and floods) plus discover some lesser-known weather phenomena, such as landslides, sandstorms, and even the closest thing to a sharknado!

Gnome Patrol

Headquarters is receiving a distress call through the fungal network: A tree in your neighborhood needs help. This is a job for the Gnome Patrol, so grab your pointy hat and get going! Tolkien and Colfier meet C.S.I. in this fun, hands-on course where tree D.N.A., leaf print analysis, and pH readings help solve the crime and protect the forest.

Stick the Landing | Mars Rover

NASA is preparing for the first humans to land on Mars. Currently, the time it takes to land is known as "Seven Minutes of Terror." We need to ensure a safe landing every time if we're going to send people. Once they land, humans will need a lot of help on Mars to construct buildings, collect resources, and conduct scientific experiments...introducing self-driving robots to help get the job done! Students will explore NASA Mars landings to simulate (or create!) a safe landing by decreasing fall time. Students will also create a simulated Martian surface and use a programmable robot(s) to navigate the terrain.

The Case of the Atom Smashers

Vandals have entered the quantum realm, tearing apart atoms to create new elements. It is your task to repair the damage and set the universe right.

Students use the narrative of vandals destroying atoms to learn about atomic structure. Beginning students will focus on the nucleus, including protons, neutrons, quarks, and gluon, while advanced students will incorporate the orbitals of electrons.

Engineering Focus:

Epic Fail: Fixing History's Flukes

You may have heard that Thomas Edison failed at the light bulb 10,000 times before getting it right, but what about armies attacking the wrong country, blue ketchup, the Leaning Tower of Pisa, or yogurt shampoo? There are Titanics, Hindenburgs, and SO MANY mistakes made along the march of human progress. Campers will laugh, recreate, and reimagine many of humanity's slip-ups as they ask, "What can we learn from those who boldly face-palmed before us?"

Aboard the I.S.S.

Astronauts aboard the International Space Station (I.S.S.) see the sunrise 16 times a day, witness the aurora borealis, and spacewalk miles above the Earth. But did you know you'll throw up if you burp in space? Going to the bathroom requires a vacuum cleaner, and don't even ask where the water comes from.

This course is for those who love the hype and reality of surviving in space. Together, we'll explore the I.S.S. inside and out, from structure and science to simulating a "day in the life" aboard our international spacecraft. Just don't drink the water!

Godzilla's Villa: An Engineer Challenge of Monstrous Proportions

Godzilla has been around for 60+ years, and in every movie, he (or she) attacks and eats and burns and... enough already! It is time to embrace the race of giant lizards and get cracking on co-inhabiting. In this course, you will explore the factual habitats of lizards, the fiction of famous monsters, and blend the two to create a city worthy of welcoming our not-so-ferocious friend.

There's Magic in the Air

Every year, over 2.7 billion passengers choose air travel as the fastest and most convenient way to reach their destination. Yet, one in every three passengers is anxious about flying. That's a lot of nervous people! To help those passengers become more confident, the F.A.A. (Federal Aviation Administration) has hired you to create an interactive learning experience that teaches children and adults all around flying!

You'll investigate the science of flight and the technology of navigation. You'll learn about safety measures and how aircrew, support teams, and ground services work together. You and your team will share your knowledge by setting up stations designed to help answer questions (especially from anxious passengers!)

Moonbase Transportation

In the year 3023…Earth's Moon is a central transportation hub with vehicles going in and out every minute of every day. There are daily commuters traveling to and from Earth, major shipments of food from Venus and water from Europa, precious cargo going to Mercury, and the interstellar highway taking supplies and contractors to Proxima Centauri b (Earth III). Not to mention that the planets are in their unique orbits, so every day, they are slightly different distances from each other! It can sometimes seem like a mess. That's why it's your job to ensure the passengers have the quickest, most enjoyable, and most relaxing trip possible.

Our Buildings Falling Down

As the temperature of the Earth continues to rise, storms are becoming more frequent and intense. The STEAM Team has partnered with the National Oceanic and Atmospheric Administration (NOAA) to design stronger buildings and even reduce our emissions.

Students learn about the growing intensity of storms and design model structures that can withstand greater impact. Once we have some stability, students will propose solutions for vertical living that are both safe and decrease our geographic footprint.

Wildfires in Our Forest

Unplanned and unwanted wildfires are raging through a national forest. The STEAM Team has partnered with The U.S. Forest Service to rescue local wildlife and help stop the spread of wildfires. Students will learn about increased drought and wildfires while engineering solutions for saving forest animals with a focus on preventive and restorative practices.

Art & Technology Focus:

Stop Motion Movie Making

From Gumby to Kubo and the Two Strings, stop motion is the illusion of making everyday objects come to life. This course begins with the fascinating history of stop-motion--from thaumatrope to kinetoscope, and quickly dives into today's more advanced techniques. This hands-on course will test both persistence and "persistence of vision" as you create amazing stop-motion movie magic.

Some Strings Attached: Props & Puppetry

We love the use of CGI in films, but the simplest cloth puppet still makes its way onto our screens and into our hearts. "It's fascinating to watch the inanimate become something real to our imagination." In this course, students will explore how puppets suspend our disbelief in order to become loveable characters.

Campers will build their own puppets, explore filming techniques, and develop their puppets' personalities. This is character creation, voice acting, and storytelling at its most playful!

Art (The Wrong Way Round)

Backwards paintbrushes...flashlights instead of ink? What's happening?! In this art class, we celebrate the freedom to make mistakes--to study the ways to do it differently so we can discover new styles! Marvel at the masters, like Ai WeiWei, who are doing it "wrong" and filling our museums with stacks of chairs and bicycles. To mod a quote from David Bowie: We don't know what you'll create, but we promise it won't be boring.

Aesthetic Astronomy

The night sky has inspired stories, poems, and art for centuries. From the ancient myths to the beauty of black holes, campers will be filled with wonder and awe at the beauty of the topic, as our team facilitates their individual learning journey into deep space.

In this course, campers will explore the science of our cosmos, focusing on astronomical concepts, such as astrobiology, astrophysics, and the new implications of gravitational waves. Trying to grasp the infinite is such a mind-melding exercise that campers will learn to express their wonder and appreciation by creating their own original, star-inspired art, myths, poetry, and writings.

Futuristic Fashion (Mars 2030)

"My space suit is itchy!" If we're going to survive and thrive on Mars, we need flexible, comfortable space suits that also protect us from the harsh Martian atmosphere. Let's get designing! Create a representation of a space suit that allows humans to perform work on Mars safely.

Messing with the Genome

In the year 3023…the Earth is warm, and the land is dry and dusty. In this harsh environment, the dusty air affects our lungs, and the increased ultraviolet radiation impacts our eyesight. Plus, with limited water, our food is made from tough grains full of gluten. With these challenging conditions, humans must adapt quickly to survive. It's up to you to use the power of biomedical engineering to alter the human genome (D.N.A.). Through coding, you can correct poor eyesight, remove severe allergies, fix asthma, and so much more.

Alpha Proxima b | Cultural Center

In the year 3023…Earth has become a wasteland, and its inhabitants are preparing to relocate to the closest exoplanet, Proxima Centauri b (Earth III). To prepare for this historic exodus, the governments of Earth have sent workers to ready settlements. How will the people of Earth, with their diverse cultures, values, and beliefs, integrate into this new home? Your job is to create a welcome center that celebrates the cultures of Earth while creating a new sense of belonging--a common goal of seeking a better life.

Plastics in Our Ocean

Plastics are entering our waterways and polluting our oceans. The STEAM Team has partnered with The Ocean Cleanup™ to use robotic technology to gather, sort, and even recapture the waste. Students learn how plastics enter our rivers and ultimately impact our oceans. Through the analog of a robot, students will simulate the recapture of plastics and microplastics. Students will also explore solutions to reduce the use of common, single-use plastics, the leading contributors to ocean pollution.

Build Challenges:

Cardboard Challenge

In our famous Cardboard Challenge, students learn by manipulating, creating, and pondering in a series of labs/modules inspired by one of our most ancient technologies: paper! The centerpiece of the Cardboard Challenge is a design challenge based on the amazing story of Caine's Arcade. Students tackle a brand-new design challenge that will require some serious imagination and problem-solving! We'll light a fire of innovation and creative thinking in this epic maker-space laboratory.

Rube Goldberg's Workshop

You tip the domino, starting a chain reaction that causes the lever to move the pulley, opening a secret hatch in Mr. Goldberg's Workshop. Crawl into a new room teeming with carefully balanced beams, hoops, and string loops tied to pivots and fulcrums.

In this course, the practical application of engineering meets the inventive absurdity of Rube Goldberg himself. Students will use creative problem-solving techniques and embrace the Engineering Design Process in order to design, create, and test a variety of their own machines.

3i Challenge

Welcome to the 3i Institute, recruit! You're here because the last guy we hired invented ear wax candles...eww! We need some inventions, innovations, or improvements to get the Institute back on track and help make our world a better place! In this course, you'll learn about the powers of 3i and apply your skills to create new solutions (and possibly save the Earth)!

Holiday Events:

Turkeys Can Fly

In this STEAM program featuring the science of aeronautics and flight, minds will soar as students explore multiple hands-on flight projects, all in the name of helping a conniving turkey named Tom escape his Thanksgiving fate.

Santa Runs on STEAM

A holiday adventure is calling! Join us as we spend the day diving deep and exploring the Science, Technology, Engineering, Arts, and Math of the holidays.

We'll engineer with holiday treats, crack Christmas physics, and create skits to unlock the season's secrets. We'll tessellate and illuminate the holidays with new insights to become Santa's problem solvers in chief.

This enrichment program is built around a secular, thematic approach to Christmas and Santa's remarkable yearly feat.

Rube Goldberg's Winter Workshop

Once inside Mr. Goldberg's Workshop, let's use those hoops and loops of string to create the perfect winter treat!

In this "winterized" edition of our course, we meld the practical application of engineering with wintery fun by using the inventive machines of Mr. Goldberg himself.

Students will use creative problem-solving techniques and embrace the Engineering Design Process in order to design, create, and test a variety of their own machines.

New Year New Gear

We are dazzled by new toys and awed at the power of future technologies, but how do these modern, mechanized wonders relate to our lives?

This program will present students with STEAM challenges that seek to uncover real-world problems and apply the potential of the latest tech-y gadgets. This program is for those who love the application of cool technology and want to be a part of it!

Spring Brain Break

Gaming, Problem Solving, and Creative Play! With summer still eons away, we all need a brain booster—the reigniting of the passion, play, and problem-solving that fuels our curiosity!

In this program, students will explore three unique "zones" that emphasize different aspects of creative play, logical problem-solving, and engineering.

Earth Day STEAM

In honor of Earth Day, we will guide your students through an incredible STEAM program that features TREES!

Students will gain hands-on academic enrichment in science, ecology, soil science, recycling, and expressive art as they explore their roles as stewards of our Earth's precious environment.

Best of all? Students can each receive a FREE TREE from Neighborhood Forest!