



2022 JANUARY SCHOOL HOLIDAYS YOUTH TECHNOLOGY CAMP

LEARN. CREATE. PLAY

Our popular Youth Technology Camps are a 2-day event where students aged 8-16 learn about emerging technologies, investigate and research special STEM topics, participate in engineering design challenges, and more. Students have to use their critical thinking, problem-solving, and teamwork skills to participate in various fun and interactive activities.

This is the perfect opportunity for your child to get ready for future opportunities and becoming an early adopter of emerging technology and Maker culture!

DAY 1

Natures Numbers
Exploring the Golden ratio

Design Challenge: Applied forces
The art-of Paper engineering (pop up
book creation)

**BYO Device - Laptop, mouse, and charging cable

DAY 2

Natural Disasters
(Research/ Presentation/Discussion)

Robotics and Coding: Arduino
Build your own night light

Robina Community Center - 10th -11th January 2022

Ages - 8-16, 9am - 3pm

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DAY 1 - 9am - 3pm

Mathematics - Natures Numbers (exploring the golden ratio)

Students discover the mathematical constant phi, in relation to other natural objects. They measure dimensions of things like stars, human hands and nautilus shells. We calculate ratios of the measured values with close approximations to phi and then learn about a basic definition of a mathematical sequence - specifically Fibonacci's sequence! By taking ratios from successive terms they find numbers close to sinusoidal patterns called Fibonacci spirals.

Engineering maker challenge: The art of paper engineering (pop up book creation)

Students learn about applied forces as they create pop-up books and get introduced to the art of paper engineering. They also learn the basic steps of the engineering design process.

DAY 2 -9am - 3pm

Natural Disasters: Research/ Presentation/Discussion)

Students learn about the Earth's structure and its dynamic systems of natural impacts. They explore how earthquakes, volcanoes, landslides, floods and tornadoes are formed when they impact humans. They research how Engineers can help make people safe from these hazards by designing structures that can withstand these events or prevent damage in them if possible.

Robotics and Coding: Arduino Project - Build your own Night light

Students work through the engineering design process to create their own night-lights using Arduino microcontrollers, photocells and code to sense light levels and turn on/off LEDs as they specify.

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