

TECHNOLOGY ENRICHMENT

MIDDLE SCHOOL PROGRAM AT BETHLEHEM MIDDLE SCHOOL

MIDDLE SCHOOL PROGRAM FOR STUDENTS ENTERING GRADES 5-8

TUITION: \$265

70096

July 8 - 12, 8:30 a.m. - 3 p.m.

Campers participate in all four modules throughout the week.

Bethlehem Middle School is located at 332 Kenwood Avenue in Delmar.



BETHLEHEM MIDDLE SCHOOL

The Technology Enrichment Program gives students a chance to discover their interests and talents through hands-on, activity-packed learning sessions. Students will be given the opportunity to explore several dynamic areas.

The program will meet Monday through Friday for one week. Campers will have a half-hour for lunch and are expected to bring their own lunch and beverage. This program is comprised of four modules.

Module 1 - STEAM Challenges

Module 2 - The Science and Technology of Food

Module 3 - 3D Printing

Module 4 - UP, UP and Away (Rocketry with a splash)

STEAM CHALLENGES!

Who can build the most powerful catapult, the strongest bridge, the fastest zip line motion toy, the most accurate marshmallow launcher or the tallest tower using everyday household items? In this course you will work collaboratively using STEAM (science, technology, engineering, art and mathematics) skills to solve real-world engineering problems. Although the instructor will be there to guide and support, you are really the ones who will be running the show while collecting data, planning, creating and improving your original designs. *Todd Tyler, Instructor*

THE SCIENCE AND TECHNOLOGY OF FOOD

The food we eat has become more flavorful, colorful and packed full of energy as a result of combining science and technology. This class will take a look at some of the hidden surprises found in food - from polymers to bubbles to DNA. We will look at different ways to test food, taste food and definitely play with our food. Different food preparation techniques and cooking skills will also be explored. And of course, we will learn how to really count calories in all of that food. If you are hungry for knowledge or just looking for some homemade gummy bears, this is the class to take.

Cheri White, Instructor

3D PRINTING

Have you ever wondered how objects are designed and 3D printed? Would you believe that you could actually draw a product on the computer and have it produced right before your eyes? This course will allow students to take on the role of an inventor and see their designs come to life. Students will design their projects while learning 3D computer modeling essentials. Students will design and print two activities during the week of camp.

Andrew Cancio, Instructor

UP UP AND AWAY

(Rocketry with a splash)

Water rockets are one of the most exciting hands-on science activities around. In this program, students will convert empty plastic bottles into high-flying rockets. A rocket can be defined simply as "a chamber enclosing gas under pressure." A small opening allows the air to escape, causing thrust. Students will have the opportunity to design, construct and launch a water-powered rocket of their very own and discover scientific principles like Newton's laws, acceleration, and thrust.

Tim Connelly, Instructor



TECHNOLOGY ENRICHMENT

MIDDLE SCHOOL PROGRAM AT TEC-SMART (MALTA)

MIDDLE SCHOOL PROGRAM FOR STUDENTS ENTERING GRADES 6-8

TUITION: \$275

70383

July 29 - August 2, 8:30 a.m. - 3 p.m.

HVCC TEC-SMART Campus
345 Hermes Road, Malta



This program is comprised of six modules. Campers participate in all of these throughout the week.

Module 1 - Air Power

Module 2 - Blast off with Rocket Design

Module 3 - On Target

Module 4 - Sun and Surf

Module 5 - Video Production/ Stop Animation

Module 6 - Video Game and App Design

AIR POWER

Design, build and race a dragster powered by air. These small lightweight cars will blow you away as they cruise down the track. This hands-on module begins with an introduction to forces such as aerodynamics and friction as you create your design. You will then learn to use basic woodworking tools to create your car from a wood blank. At completion of the build we will launch and race your dragsters in a double-elimination bracket-style race.

Gregory Garrison, Instructor

BLAST OFF WITH ROCKET DESIGN

Students will be introduced to the basic principles of the design and function of solid fuel rockets by building and launching their own rocket! We use a class C motor for our rockets, which will be built from scratch and launched at the end of the week. Students will learn about pursuing rocket design as a future career and also about the National Rocketry Challenge.

Jeffrey Gargano, Instructor

ON TARGET

Can you create a machine to repeatedly hit a target? Can you modify your machine for different circumstances such as elevation or distance? Let's find out! You will be tasked with building a golf ball catapult to try to do those challenges and many more.

Gregory Garrison, Instructor

SUN AND SURF

Even though our camp is not on a lake or at the beach, we will create our own miniature version of a regatta! In another action-packed design activity, we will design and build solar powered boats that will race along in our mobile water raceway.

Gregory Garrison, Instructor



VIDEO PRODUCTION/ STOP ANIMATION

In this production twist students will learn how to produce a stop animation video using Legos or anything else of their choice. Students will also learn how Chromakey, aka "Green Screening" works and combine it with their film for a video production masterpiece. Students will learn how to video edit by laying down their own video, photo, and audio tracks.

Jeffrey Gargano, Instructor

VIDEO GAME AND APP DESIGN

Where does the next great idea in gaming or app design come from? You! Learn how to design, test, and publish your own video game. This session will focus more on building and testing a game that you design rather than the coding behind it. If time permits we will also explore the world of app inventors. Some of the best games and apps have been designed by students just like you!

Jeffrey Gargano, Instructor

