



Chess



Kerbal
Space Program



Engineering



Zane Math



Game
Modding



3D
Printing



Robotics



Art & Design



GBL: Minecraft™

zaniac™

K-8 STEAM After-School Programs & Camps

**STEAM Learning
for Schools**



GarageBand®



Zane Prep



Art & Design



GBL: Minecraft™



Computer
Programming



What is Zaniac?

“Zaniac helps children understand how the world was built and gives them the confidence and tools to make it better.” – Professor Paul Zane Pilzer, Zaniac Founder

At Zaniac, pre-K-8th grade kids discover how much fun Science, Technology, Engineering, Arts and Math (STEAM) learning can be. Zaniac’s fun enrichment programs and high-tech learning environment engage kids in creative, conceptual problem solving that builds confidence and helps them succeed in school.

Zaniac’s programs teach 21st century skills in a way that feels like play.

Kids can learn how to code—going from building games with Scratch to writing codes in Python and Java.

Game-Based Learning using Minecraft™ capitalizes on the love kids already have for the game to teach concepts ranging from natural sciences to physics.

We use modular LEGO® systems designed for education in our robotics courses to explore scientific and engineering concepts.

Zaniac is an inclusive learning environment and welcomes children with special cognitive/physical abilities or on the spectrum. We meet with parents to discuss a learning plan and provide the best possible learning experience for every child.

And that’s just
the beginning.

**Ignite your child’s
love of learning
at Zaniac!**



Our Mission

$(-1)^2$ Ignites imagination & natural curiosity to unleash a child's potential

$\frac{206}{-204}$ Engages kids in peer-based learning with friends in an environment that feels like play

$\sqrt{9}$ Instills a love of learning & empowers kids with 21st century technology skills to change the world

$3\sqrt{64}$ Provides kids with a real academic edge to succeed

$\frac{5\pi}{3.141592654}$ Gives kids the confidence to be curious, explore new concepts and innovate to solve problems

$3!$ Leverages education and tutoring to provide parents with their child's daily progress

$\sqrt{9} + \sqrt{16}$ Impacts the community through role model instructors—high school & college students—passionate about inspiring kids with STEAM

2^3 Creates a positive and safe place for students to take risks & experiment without the fear of making mistakes

$5^2 - 4^2$ Promotes a cool high-tech environment for hands-on STEAM learning

$\sqrt{100}$ Partners with schools to provide STEAM curriculum & resources to better prepare kids for the future

Zaniac's STEAM Learning for Schools

Imagine your students as engineers for the day, immersed in the 3D design process and printing out their own creations. Picture them using engineering skills to build motorized robots or programming skills to create apps. Your students will be captivated with Zaniac's high-tech experience as they build 21st century skills. Zaniac Programs are engaging technology enrichment programs designed to complement your lesson plans.

Our flexible STEAM Program offerings allow you to bring your students to Zaniac for a full program or a customized field trip, or Zaniac can come directly to your students at your school with onsite instruction during or after school. We also partner with schools for your events, setting up our interactive STEAM activities, and we can celebrate special events in our Zaniac campus with STEAM socials. Zaniac is your resource partner to raise awareness on the importance of STEAM curriculum in schools to prepare students for 21st century careers.

Zaniac's programs are designed to enrich your lesson plans, and create a fun and memorable high-tech experience for your entire class. We work with 1st grade through 8th grade to spark their curiosity and love of learning. Our STEAM Programs are customizable to your lesson plan requirements, budget, group size and schedule.

Partner with Zaniac for Zaniac's mobile booth that features interactive STEAM activities to engage kids and parents alike. We also give away cool Zaniac swag. Ask us about how we can support your school's fundraising efforts and scholarship needs.



Popular Ways Zaniac Partners with Schools

Field Trips to Zaniac

Come to Zaniac's cool high-tech environment where we will ignite the imaginations of young minds on a customized field trip of your choice. Bring your students on a Field Trip to Zaniac to complete various STEAM challenges in Zaniac's state-of-the-art campus. We can customize Field Trip Sessions where students rotate through a number of STEAM activities and challenges, including Robotics, Learning to Code, 3D Printing and Tinkering. Or choose one STEAM Program for a deeper dive into our curriculum-based offerings. Your students will experience a fun and educational visit while solving problems, brainstorming, designing and creating. Zaniac's programs bridge the gap between theory and practice so students experience STEAM in a way that feels like play. Contact our Zaniac Campus to customize a Field Trip with your students.

STEAM Day at Your School

Trained Zaniac instructors will come to your school so your students can experience a Zaniac Field Trip without having to leave school. Students gain 21st century technology skills while enjoying Zaniac's curriculum-based STEAM Programs in the classroom. Arrangements for laptops or desktop computers must be made in advance.

STEAM Enrichment During School

In addition to offering Zaniac STEAM courses at our Campus, we also offer offsite programs at local schools during school hours. Our Zaniac instructors and flexible offerings allow for STEAM enrichment instruction directly to your students at your school and in the classroom. We can customize our programs to fit your curriculum needs, teaching objectives and schedule to facilitate the seamless integration of STEAM instruction at your school.

Satellite Programs After School

Zaniac's After-School Programs can be customized for your school and classroom needs. Our STEAM Programs are flexible to fit your school's after school needs and requirements. Let us know what STEAM Programs interest you the most. Our popular Satellite Programs Include:

GBL: Minecraft Exploration • GBL: Minecraft Physics
GBL: Minecraft Architectural Design • GBL: Minecraft Galaxy • GarageBand®
Robotics • Tinkering • Computer Programming • Intro to Scratch
Game Design • Intro to Python • App Creation • Web Design
Intro to Java • Fashion Design • 3D Game Design



School Events

Zaniac partners with schools and teachers to help educate and enrich your students with 21st century resources, activities and skills. Partner with Zaniac at your School's Events including STEM/STEAM Nights, STEAM Socials, Carnivals and Fairs, Math Nights, Science Nights, and Fall Festivals. Zaniac's mobile booth features interactive STEAM activities to engage kids and parents alike. We also give away cool Zaniac swag. Ask us about how we can support your school's fundraising efforts and scholarship needs.

STEAM Socials

Come to Zaniac with your STEAM Club, honors students, or entire class and have a STEAM Social at Zaniac, during school, after school or on weekends! Enjoy pizza and celebrate with fun STEAM activities, designed to enhance your curriculum. Print in 3D. Play Game-Based Learning Minecraft. Explore with our Kerbal Space Program. Choose a STEAM Program of your choice!

Professional Development Workshops

Tech + Teachers

Let's work together to use our resources for hands-on learning using STEAM principles in the classroom. We collaborate with teachers to create technology-based, innovative learning experiences. See demonstrations of the latest STEAM tools and techniques for the classroom.

STEAM Awareness Events

Zaniac works with STEAM education leaders, community leaders, business leaders and advocates to collaboratively join forces to discuss STEAM education for K-12 with the goal of empowering our youth for tomorrow with 21st century skills. Contact our Zaniac Campus to find out how we can work together to contribute to the economic strength and future of our communities, families and children with STEAM.



Computer Programming

Students work with Zaniac instructors to learn coding and real-world skills that software developers use every day. Go from true beginner to writing custom programs and games in Java, all while having a blast along the way. Coding has never been so cool.

Beginners:

Intro to Scratch (2-8)

Students learn programming skills while creating their own games and music videos. Zaniac's instructors introduce basic programming concepts like sequences, loops, iterative development, and debugging using Scratch, a block based program developed at MIT.

Game Design with Scratch (2-8)

Students will design basic games and dive deeper into the concepts of interactive software design. Learn variables, 'if, else' statements, conditionals, operators, and more.

Intro to Scratch is a prerequisite.

App Creation (3-8)

Students learn how to create new customized apps using App Inventor 2, a block-based, visual programming approach designed by MIT. They will explore event handlers, timers and database management.

Intro to Scratch is a prerequisite.

Intermediate:

Web Design (3-8)

Students explore layout strategies, color theory, responsive web design, usability and visual weight and use visual style guidelines, JavaScript, HTML5, CSS3 and Weebly to create their own custom website.

Intro to Scratch, Game Design with Scratch are a prerequisite.

Intro to Python (4-8)

Students are introduced to syntax-based programming. Students will learn lists, strings, conditions, how to draw animations and make the foundation of a platform game.

Intro to Scratch and Game Design with Scratch are a prerequisite.

Game Modding Minecraft™

Intro to Mods (4-8)

Students learn to customize Minecraft and work with developer tools including JDK, Eclipse, Terminal, and Gimp to create custom items, blocks, and new materials by writing their own code in Java. Students learn to install resource packs and pre-existing mods, and interpret the elements of existing mods to define qualities of their own. *Minecraft Exploration and Intro to Scratch are a prerequisite.*

Advanced:

Intro to Java (4-8)

Students hone their programming skills by exploring Java programming. They will learn the basics of Java, a powerful 'write once, run everywhere' language and create a text-based adventure game while learning the basics of Java syntax. *Intro to Scratch, Game Design with Scratch and Web Design are a prerequisite.*

Game Modding Minecraft

Advanced Mods (4-8)

Students dive deeper into the Minecraft Coder Pack for more advanced approaches to create custom inventory tabs, biomes, crops, and unique armor. They can build on what they learned in Intro to Minecraft Mods to create a brand new mod. *Intro to Minecraft Mods is a prerequisite.*





Game Based Learning

At Zaniac, we use Minecraft and Kerbal Space Program (KSP) as a tool to teach real world math, science and technology skills. Minecraft and Kerbal Space Program reinforce math concepts and introduce students to physical and life sciences. Kids learn with their peers in a fun team format while developing critical reasoning skills.

Minecraft Exploration (K-8)

Students learn Cartesian coordinates and use them to navigate while working together with friends to accomplish group missions. They will explore real science and engineering concepts like biomes and gravity while playing the game they love.

Minecraft Galaxy (1-8)

Students learn about Earth's oceans and undersea life with the Oceanscraft mod, and explore space with the Galacticraft mod. They can design and build rockets that travel to the moon, International Space Station, and even Mars where they will attempt to terraform the planet.

GBL Minecraft Exploration or equivalent Minecraft experience is a prerequisite.





Minecraft Architectural Design (1-8)

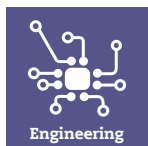
Students learn the basics of urban planning and building design. They can explore real-world architectural landmarks through Google Maps & Street View, then take that knowledge and apply it to designing a cityscape using Minecraft and Tinkercad. *GBL Minecraft Exploration or equivalent Minecraft experience is a prerequisite.*

Minecraft Physics (4-8)

Students get introduced to the world of physics and explore Newton's Laws, mechanics, and thermodynamics and will begin working with advanced concepts like fluid physics and electromagnetics, all in the Minecraft universe. *GBL Minecraft Exploration or equivalent Minecraft experience is a prerequisite.*

Kerbal Space Program (4-8)

Students get to explore a whole new universe by creating and managing their own space program. They can explore aerospace engineering and orbital mechanics by designing, testing, and launching airplanes and rockets to complete a series of missions. Through this course students develop critical-thinking and problem-solving skills, learn through experimentation, and unleash their creativity with an iterative design approach.



Engineering

Zaniac's engineering program provides a powerful way to inspire students' interest, engagement, and understanding in engineering through hands-on exploration and innovation. These courses focus on the design elements of high-quality, engineering-rich tinkering activities, and use a unique approach that helps students learn.

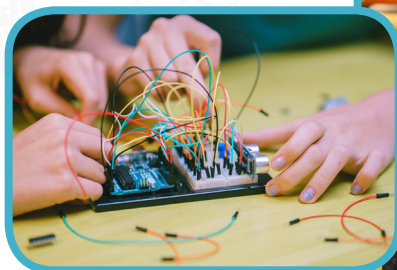
Robotics: LEGO Simple Machines (K-5)

Simple Machines is perfect for younger learners who are just getting started with LEGO. Students get an introduction to levers, inclined planes, pulleys, screws, and complete challenges through building motorized mechanisms in teams.

Robotics: Intro to LEGO Robotics (1-8)

Students learn the basics of robotics, the scientific method, forces, and design through exploring scientific and engineering concepts. They will learn to build and program robotic solutions to defined specifications and get introduced to a variety of sensors and motors.

LEGO Simple Machines is a prerequisite.



Robotics: Environmental Science (2-8)

Students dive into the study of environmental science concepts such as renewable and non-renewable resources, carbon footprints, recycling, energy efficiency, and water conservation while they gain a deeper understanding of robotics.

Intro to LEGO Robotics is a prerequisite.

Tinkering: Intro to Circuits (K-5)

Intro to Circuits uses littleBits®, the easiest way to prototype electronics, to teach basic inputs, outputs, analogs, electricity, and more. Students build projects ranging from synthesizers to flashlights, exploring the world through the lens of easy-to-build magnetic circuits.

Tinkering: Intro to Microcontrollers (5-8)

Students learn programming logic through hands-on hardware projects and work with sensors to explore the science of light and sound, and build creatively with motors, wires, and real circuit boards to create projects like color-mixing lamps.

Intro to Scratch and Intro to Circuits are a prerequisite.



Art & Design

Our Design classes place an emphasis on the art in STEAM. Students will be immersed in the engineering and design process through hands-on, engaging projects like 3D Printing, music engineering, and fashion design. Zaniac instructors guide students as they create their own well-designed items en route to assembling an innovative portfolio while using our cutting edge technology that better helps them prepare for their future.

Intro to GarageBand® (3-8)

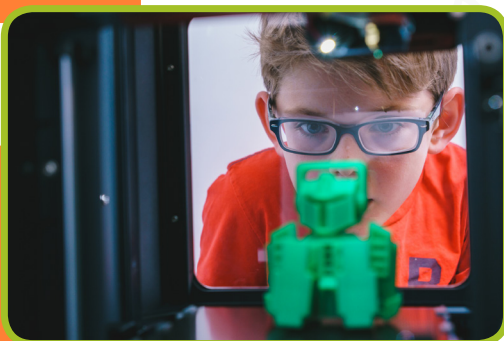
Starting with the basics of musical notation and form, students work through looping, editing, sound manipulation, and capturing vocals and MIDI instrumentation to create their own music.

Fashion Design (3-8)

Students create one-of-a-kind looks using the open-source vector graphics software Inkscape. Assemble your own custom garment designs through assembling mood boards, drawing vectors, arranging nodes, and layering color palettes.

3D Printing (3-8)

Students will be immersed in the engineering and design process and improve spatial intelligence through conceptualizing three-dimensional models then printing their own unique and exciting ideas and turning them into a reality.





3D Game Design (4-8)

Students learn the process of Character Design, Environment Creation and get hands-on experience with C# programming. In this three-part course, students use Unity, Gimp, Blender3D to create a 3D game.

3D Character Design

Students create 3D character models using the modeling software Blender and learn game design concepts like rule implementation, game flow and paper prototyping. *Game Design with Scratch is a prerequisite.*

3D Environment & Design

Students use the Unity game engine to map 3D environments and apply attributes, then design textures in Gimp to overlay on their world. They will learn design concepts like genre, random generation, character/world interaction and sound design. *Game Design with Scratch is a prerequisite.*

C# Fundamentals

Students bring characters and environments to life using C#, a real-world oriented programming language, and learn concepts like classes methods, and strings to create C# scripts. *Character Design and Environment Design are a prerequisite.*



What Teachers Say About Field Trips to Zaniac

"Our STEM Club visited Zaniac for some hands-on exploration to reinforce what we had been investigating in STEM Club. I must say that during our visit my students were having fun while being fully engaged in their learning. Kuddos to the amazing staff for being professional, organized, and knowledgeable. From the time we enter the building (which is amazing with its 21st century technology - a teacher's dream classroom for sure) the staff was immersed in collaborating with both teachers and students on robotics, app creation, coding, and 3d printing.

This truly was a day that my kiddos will remember and cherish.

And I am sure, the day that Zaniac staff ignited a spark in a child's life for a passion of STEM. Thanks so much to the staff. We can't wait to come back!"

-S.B. Patton, Principal

"My class and I really enjoyed our field trip to Zaniac. The day was engaging and educational for all of the students. The staff at Zaniac are highly knowledgeable and they made each session interesting and informative for the students. When we got back to school, many of the students wanted to go to the websites introduced to them at Zaniac and continue learning at both school and home. I would definitely recommend a field trip to Zaniac to others. I hope we get to go back again later this year."

-K. Smith, 5th grade science teacher

We can't wait to plan your day of STEAM discovery at Zaniac!

Contact our Zaniac campus to find out more.

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The background is a light gray field filled with a repeating pattern of various STEM-related icons. These include mathematical symbols like pi (π), infinity (∞), and fractions (1/4); scientific symbols like a DNA double helix, an atom, and a chemical flask; and technology-related icons like a laptop, a robot, and a circuit board. Other icons include a lightbulb, a magnifying glass, a chess knight, a rocket, a graduation cap, and a question mark.

zaniac™

K-8 STEAM After-School Programs & Camps