

# CAMP PROGRAMS OVERVIEW

## ROBLOX

Roblox is one of the fastest-growing game creation platforms. What better way to learn coding and learn game design fundamentals? At Roblox Camp, campers design and create their own 3D worlds. Kids will practice programming fundamentals with Lua. Kids will use Roblox's built-in editor to create 3D worlds. They can start sharing and publishing their games on any platform. Kids will study existing hit games and learn how to implement some of the same strategies in their own games.

Roblox Editor: Make Your Own Story (Ages 7-9 ).

Roblox Entrepreneur: (Imaginative Game Design - Ages 10-12).

Roblox Entrepreneur: Lua Coding and Game Scripts (Ages 10-12).

## ISTEAM MATH FUN

Kids throughout break times can solve Math problems given to them as per their grades. They will write on White boards to solve Math challenges. Middle school kids will be given a work-out to solve Mathcount challenges. We also will run trivia at the end of the camp on Friday to choose our top 3 winners. iSTEAM Math camps and courses are available to grades K through 8.

## SPACE WORLD EXPLORATION! DESIGN CAMP

Do you think the first spaceship was designed the way it looks now? Think again! Kids will explore, learn and apply math, physics and engineering in this camp. From designing rockets and blimps to creating universes and clocks, students will be engaged the entire time. Kids will design, build and fly complicated ships and to launch it in simulator their Math skills must be strong. They will acquire engineering skills by experiencing launching their machines in fictitious and fun space. They will set goals, build rockets, evaluate mission results, change designs, and try until they succeed! We teach kids, not to be afraid of failure but, have a true rocket scientist mindset. Apply iterative design concepts to master skills. Activities that campers can complete during missions include Bottle Rocket Launches, 3D Designing a spaceship challenge, Rocket Launching with Roblox, Designing a Custom Space Suit, and Building a Rover!

## AUGMENTED REALITY (AR) STUDIO

Code your own virtual world. Create a world where real and virtual elements blend together. Bring the real world into the virtual world in your AR games. Learn to add special effects to your camera feed and use hand gestures to interact with virtual game elements.

## CODING FOR FUN

Introduction to scratch programming that will teach animation and game design skills and kids always have blast learning. Kids will create their own stories and games.

## SIMPLE AND COMPLEX MACHINES

Ages 6 to 9 : (Beginners) Simple machines are the elementary building blocks of which all, more complex, machines are composed. Kids will learn the mechanics of simple machine concepts by building. They will build catapults, mary-go-rounds, pulleys and more!

Ages 9+: Make Cranes, Scissor Lift machines and Candy Throwing machine challenge. Kids will understand mechanisms like grabbing, lifting, throwing.

## BUILD YOUR OWN APP

We have this program available for all levels. Kids will make apps right in We will use tools based on age and experience of a child to create apps and learn new skills. Kids will download apps on Android devices and play their own cool games. We will have a demonstration of their creation at the end of the camp. Who knows, kids will launch and market their apps!

## CIRCUITS

Be an electrical engineer and design fun projects like, robotic hands or dance pad,. This camp is fun for those who love building AND technology! Kids will follow instructors to a challenge of wiring up a doorbell or create a dancing robot using simple motors and materials. Design a fully functioning garage door opener with circuits you have designed yourself!! With many different design projects to choose from, the only limitation is your imagination!

## DRONE CODING

Using the mini drones, kids will be housing a thrilling, hands-on drone programming platform. We provide a perfect introduction to the world of unmanned aerial vehicles (UAVs). Kids learn to code and make fly and flip code, master basic piloting skills, extreme maneuvers, grasping objects and flying combat missions all with the power of code. They will construct an obstacle course to fly through and stage a final race to showcase their cumulative knowledge. They will learn to program drones using Block Coding (6 to 9 ages) or Python programming (9+ years old) language.

## CREATIVE DIGITAL ARTS

Students get to show off their artistic abilities on the computer with the digital art software Clip Studio Paint. In this fun class, kids will learn how to design and draw clothes for their own unique characters by drawing on the XPEN tablets, as well as learning how to use the various tools provided in the software program.

## SCRATCH-O-BOTS

This fun camp is designed to enrich kids with Scratch coding along with robots. Beginners start with Lego WeDO and Intermediate and Advance explore EV3 and use Python to create fun Robot functions. Kids will brainstorm ideas and design their robots to solve challenging problems.

## DESIGN AND BUILD YOUR WEBSITE

Learn the fundamentals of creating a functional hosted website. Kids will learn HTML and CSS. They will layout strategies. Concept to Functional. Ideas to an actual live website. Kids will learn stages of design by initially brainstorming concepts, wireframing templates and using tools like Wix and Weebly. Kids will learn User interface.

## ROBOTICS

Use Lego WeDO<sup>®</sup> or Lego Mindstorms<sup>®</sup> EV3 kits at iSTEAM to solve a challenge by building and programming. Kids will work as a team and will compete for a friendly competition. We use a new challenge every day from our listed 100+ challenges. We will use multiple challenges from making insects to making machines. Kids will learn machine movement. Grabbing, Lifting and many more mechanical aspects in this camp.

## AIRPORTS, FLIGHTS SYSTEMS

We combine learning using Coding, robotics and Hands-on activities in this camp. How to design a whole system? What does it take to design an airport? Using our Legos and Motors, Kids will learn what it takes to design an airport. They will also work as a team to design one of their own. Each day kids will work, create and design parts of it. We will have some fun lessons using Coding and Games throughout the week.

## 3D GAME DESIGN - DESIGN YOUR OWN GAME

Interactive course that requires all kids to participate through many aspects of game design using Kodu Game Lab. Kids will explore the practical nuts and bolts of how to create a game but also discuss the broader theory of game design. This course will, we hope, give you a greater appreciation for what a game is and how it is created!

## INTRO TO JAVA PROGRAMMING / ADVANCED JAVA PROGRAMMING

Kids will enhance their programming skills by exploring Java programming. This course includes basics of Java syntax, and solves math problems using Java programs. This text based programming language requires basics of programming languages knowledge. This comprehensive course takes kids on a straight path through the more common programming features available in the Java platform. Let's start learning.

## ROBOTICS - SPACE CHALLENGES

Kids 6 to 9 years old will use LEGO WeDo and older kids will use EV3 Robotics. Kids will be engaged in learning space challenges and rocketship design. They will design and build new robotics missions each day. Kids will design, build, and share their learnings on Friday afternoon. Parents are welcome to attend the final session.

## 3D MODELING AND PRINTING

Students are guided through the engineering and design process while creating 3D prints, design circuits or their own fashion designs depending on theme/ challenge. They will create physical objects from a digital design at the end of the camp. Campers create their own projects using our cutting-edge tech tools. We combine coding with designing using licensed tools. Themes include but are not limited to, Car design, SpaceShip Design. At the end of camp, campers can take home small printed 3D Object.

## ENGINEER / DESIGN YOUR CAR:

Introducing kids to the Science of Speed, this week, we will be talking about what makes a car a Racecar. Each day kids will explore to learn Aerodynamics concepts like drag, lift and and implement in designing a car. Take your exciting ideas and turn them into reality with Tinkercad and other 3D Modeling tools.

**General Schedule: 4 instructed sessions everyday!**

**7:30 AM - 8:00 AM Early drop off**

**8:00 AM - 8:15 AM Regular drop off**

**8:30 AM to 10 AM Instructed Session 1**

**10 AM Snack break**

**10:30 AM - Noon Instructed Session 2**

**Noon - 1:00 PM Lunch /pickup and drop off for half days**

**1:00 PM - 2:30 PM Instructed Session 3**

**2:30 PM Snack break**

**2:45 PM - 3:45 PM Instructed Session 4**

**3:45 PM - 4:00 PM Regular pickup**

**4:00 PM - 5:00 PM Extended Care (Pick up by 5PM)**

**\*\* (Late Fees will be charged at \$5 per 5 minutes.)**

