COMPUTER ADVENTURES

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Computer Adventures is dedicated to providing children from Pre–K to Grade 8 access to leading-edge technology education in a safe, fun and confidence building environment. In addition to teaching technical skills, we also teach analytical thinking, encourage collaboration and creativity.

Our virtual camp will emulate our past fun and educational "physical" summer camps.

2020 VIRTUAL SUMMER CAMP
Online Registration : www.computeradventures.com/2020Reg

DATES
Week-long sessions from Monday to Friday

- Week1:   June 29 to July 3
- Week2:   July 6 to10
- Week3:   July 13 to 17
- Week4:   July 20 to 24
- Week5:   July 27 to 31

- Week6:   Aug 3 to 7
- Week7:   Aug 10 to 14
- Week8:   Aug 17 to 21
- Week9:   Aug 24 to 28
- Week10:   Aug 31 to Sep 4

TIME
- Morning (AM) Session   : 9AM to noon
- Afternoon (PM) Session : 1PM to 4PM

FEES
Registration fee per session: $300
- Full payment due at the time of registration.
- Class cancellation:
  ➢ More than 7 days before class start date, refund after deducting $150 cancellation fee per session
  ➢ 7 days or less before class start date, no refunds
- Session transfer fee:
  ➢ More than 7 days before class start date, no transfer fee.
  ➢ 2 to 7 days before class start date, $50 transfer fee to another session for the same participant

CAMP PROGRAM

- *Morning (AM) Session*
  9:00 AM: Announcements & Icebreaker
  9:15 AM: AM Class Session
  10:30 AM: Break (snacks, exercise, games, videos etc…)
  10:45 AM: AM Class Session
  Noon: AM Class Dismissal

- *Afternoon (PM) Session*
  1:00 PM: Announcements & Icebreaker
  1:15 AM: PM Class Session
  2:30 AM: Break (snacks, exercise, games, videos etc…)
  2:45 AM: PM Class Session
  4:00 PM   PM Class Dismissal

Online Class Requirements
Hardware: Windows PC or Chromebook or MAC & Webcam
Software: Chrome (29+), Firefox (30+), Safari (7+) or Edge (20+) browser
Network: Stable internet connection

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SCHEDULE for WEEK 1 to 5

Course Name	6/29 AM	6/29 PM	7/06 AM	7/06 PM	7/13 AM	7/13 PM	7/20 AM	7/20 PM	7/27 AM	7/27 PM
Computer Coding Club (Grade 3 to 8)	x	x	x	x	x	x	x	x	x	x
Making Games from Scratch (Grade 4 to 8)	x					x			x	
Python Programming (Grade 5 and up)	x			x	x			x	x	
Web Development (Grade 5 and up)		x	x			x	x			x
Javascript Programming (Grade 6 and up)	x		x			x		x	x	
Virtual Robotics Adventures (Grade 3 to 5)		x		x	x		x			x
3D Modeling & 3D Printing (Grade 4 to 8)			x					x		
Cyber Robotics 101 (Grade 5 to 8)		x		x	x		x			x
Minecraft Spectacular Structures (Grade 3 to 8)					x					
Minecraft Cool Contraptions (Grade 3 to 8)						x				
Minecraft Mini-games Madness (Grade 3 to 8)								x		
Minecraft Code Builder (Grade 4 to 8)		x								

SCHEDULE for WEEK 6 to 10

Course Name	8/03 AM	8/03 PM	8/10 AM	8/10 PM	8/17 AM	8/17 PM	8/24 AM	8/24 PM	8/31 AM	8/31 PM
Computer Coding Club (Grade 3 to 8)	x	x	x	x	x	x	x	x	x	x
Making Games from Scratch (Grade 4 to 8)				x			x			
Python Programming (Grade 5 and up)		x	x			x	x			x
Web Development (Grade 5 and up)	x			x	x			x	x	
Javascript Programming (Grade 6 and up)	x			x		x	x		x	
Virtual Robotics Adventures (Grade 3 to 5)		x	x			x		x		x
3D Modeling & 3D Printing (Grade 4 to 8)	x					x			x	
Cyber Robotics 101 (Grade 5 to 8)		x	x			x		x		x
Minecraft Spectacular Structures (Grade 3 to 8)			x							
Minecraft Cool Contraptions (Grade 3 to 8)						x				
Minecraft Mini-games Madness (Grade 3 to 8)							x			
Minecraft Code Builder (Grade 4 to 8)	x								x	

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Computer Programming

Computer Coding Club

Grade 3 to 8   **Prereq: none**

This course introduces programming fundamentals through grade-specific curriculum which allow students to move at their own pace. Students learn programming concepts through visual programming or block coding in a game-like interface. They will be having so much fun, that they will not realize that they are learning coding.

**Students may take this course multiple times because students will be progressing into more challenging material at their own pace.

Each session is 3 hours a day from Monday to Friday.

Making Games from Scratch

Grade 3 to 8   **Prereq: none**

Calling all creative young gamers! Learn key concepts to creating your own interactive and fun games with Scratch3®. Students will apply programming concepts such as branching, variables, loops, to create simple games to more complicated games such as different levels and sound effects.

Each session is 3 hours a day from Monday to Friday.

Python Programming

Grade 5 to 8   **Prereq: Computer Coding Club or programming experience**

Python has a gentle learning curve, but is a serious language that is used by professional programmers. Complete engaging lessons, solve challenging puzzles, and create interesting programs. This class will cover Python syntax, sequencing, repetition, conditional logic, nested loops, automation, pattern recognition, operators, expressions, variables, Turtle graphics and using arrays and objects to store structured data.

Each session is 3 hours a day from Monday to Friday.

Web Development

Grade 5 to 8   **Prereq: Computer Coding Club or programming experience**

Students will be introduced to web page development using HTML and CSS. As students work on hands-on practical projects, programming challenges, and assessment quizzes, they learn about paragraphs, lists, tables, inserting images, audio and video, hyperlinking and more. Students who completed this course will be to create their own web sites from scratch.

Each session is 3 hours a day from Monday to Friday.

Javascript Programming

Grade 6 and up   **Prereq : Computer Coding Club or programming experience**

Students who successfully complete this lesson plan will demonstrate a strong mastery of JavaScript syntax, as well as the ability to creatively program games and other projects and debug their own code. Students will also be able to come up with an idea for a game and take it through the entire design and implementation process, creating custom versions of many of their favorite games in JavaScript.

Each session is 3 hours a day from Monday to Friday.

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Leading Edge Technology

Virtual Robotics Adventures

Grade 3 to 5   Prereq: none

Students will learn the basics of coding and robotics in an environment that provides online simulation and a visual code editor. The course will cover topics, such as navigation, turning and angles, basic math and geometry, loops and various skills related to programming robots.

Each session is 3 hours a day from Monday to Friday.

3D Modeling and 3D Printing

Grade 4 to 8   Prereq: none

Want to learn about 3D modeling and 3D printing? Using a 3D modeling software, students learn to design 3D models by selecting, dragging, placing, combining and manipulating the basic shapes, and more. Students will also learn to create more intricate designs by downloading and modifying ready-made 3D models. Students will watch their 3D creations (such as name plates, keychains, vases, model cars etc) being 3D printed. Other 3D printing topics will also be discussed.

Each session is 3 hours a day from Monday to Friday.

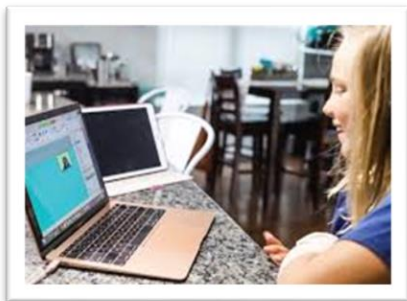### Cyber Robotics 101

Grade 5 to 8   Prereq: none

Students will learn about coding and robotics using gamification in an online simulation of the physical environment and a visual code editor. The course will cover topics, such as navigation, touch, gyro, ultrasonic and color sensors, loops and more.

**Students may take this course multiple times because students will be progressing into more challenging material at their own pace.

Each session is 3 hours a day from Monday to Friday.

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Minecraft

Minecraft Spectacular Structures

Grade 3 to 8   Prereq: none

This course will provide building tips and tricks to build fancy, realistic-looking structures in Minecraft. Students will be replicating real-world structures by applying math to calculate the size of the structure; science to understand the materials; creativity for aesthetic considerations. and more. The course will accumulate with the students' designing, constructing and presenting their own awesome structures in Minecraft.

This course may be repeated because different themes will be introduced.

Each session is 3 hours a day from Monday to Friday.

Minecraft Cool Contractions

Grade 3 to 8   Prereq: none

Students create interactive mini-games in Minecraft. Instructor will guide students to with creating simple games, and then move on to more complex games. The rules of the games will be analyzed, broken down to functions, and then translated into the Minecraft world. Students will design, plan, build, test, evaluate/redesign and deploy the mini-games.

This course may be repeated because different themes will be introduced.

Each session is 3 hours a day from Monday to Friday.

Minecraft Mini-games Madness

Grade 3 to 8   Prereq: none

Create Minecraft contraptions with items such as redstones, pistons, pressure-plates, levers, buttons, trip wire, lava, dispenser, TNT etc. Learn how to build logic gates and simple machines. These simple machines will be connected to build an entertaining system such as the Rube Goldberg machine, or a Redstone Mansion, etc. In additional to learning about cause and effect, these systems will showcase the students' logical ability as well as creativity.

This course may be repeated because different themes will be introduced.

Each session is 3 hours a day from Monday to Friday.

Minecraft Code Builder

Grade 5 to 8   Prereq: none

This course uses Minecraft to teach about computer science concepts. Whether the students are new to Minecraft or have been playing for years, they will learn to apply important programming skills, and watch their coding creations come to life in Minecraft.

Each session is 3 hours a day from Monday to Friday.