Today

Most of us can't even imagine a world without cell phones, smart devices, or the internet.

As more and more people begin to adopt the many wonders of technology, from its impact of advanced computers and engineering equipment to automation and applications, we are realizing that the incredible capabilities of technology is transforming lives all over the world, at an astronomical rate.

Today's kids are sophisticated digital users. But are they ready for the technical world that awaits them?

The number of tech startups around the world reached over 135 million.

The number of internet users is over 5 billion and is increasing exponentially.

By the end of 2030, the number of smart devices that collect, analyze, and facilitate data sharing will exceed 50 billion

The number of devices connected to the internet will cross 500 billion by 2030.

GenTech's mission: Prepare today's kids for tomorrow's world
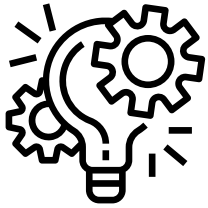
PROGRAM DESIGN

- Before or after school
- Academic day classes
- Specials classes
- Meet 1 to 5 times/week
- Grades K - 12
- Differentiated Learning
- Custom designed STEM programs to meet school needs and vision
- Lessons and coursework aligned with ADE Computer Science Standards
- Innovative hands-on, engaging instruction with real world applications.

PROGRAM DELIVERY

- Instruction by GenTechs.
- GenTechs are technology proficient college majors in: Engineering, Programming, Info Tech, Cybersecurity and Computer Science.
- GenTechs are trained in safety, class management, teaching pedagogy, and instructional best practices.
- GenTech's qualify for ADE CTE teacher certification.
- All instructors have valid fingerprint clearance.
- All GenTechs are insured, bonded and employed by GenTech.

MATERIALS + RESOURCES

- Primary, Intermediate, and Advanced Robotics including: Spheros, Vex, Legos, Parallax, Megatron, Hummingbird, Makeblock, and UB Tech Robots
- Manufacturing CNC
- Modeling 3D Print, TinkerCAD, OnShape, Fusion and AutoDesk
- Coding Software, Makecode, Python, HTML, JavaScript, C+, Visual Basic and code.org adv.
- OSMO Kits and software.
- Microcontrollers, Micro::Bits, Raspberry Pi, Electronic Kits.
- Computer build hardware, computers, and ipads
- All materials are included.

Creativity. Critical Thinking. Curriculum

- GenTech is a creative solution that brings an all inclusive STEM program to schools. GenTechs can accommodate any time period for any day on school campuses alleviating staff shortages.
- The GenTech workforce represents a vast, multicultural group of bright young adults that have tremendous amount of technical knowledge.
- GenTechs are passionate about teaching STEM. They are tech wizards.
- The GenTech curriculum encompasses engaging hands on, lively lessons. Students are challenged to critically think through numerous adventures, creatively troubleshoot through complex projects, debug coding puzzles, and consider real world scenarios relative to trending technologies like:

IoT - Internet of Things   **Networking**   **AI - Artificial Intelligence**
Robotics - Automation   **Cryptocurrency**   **Cybersecurity - Data**
Quantum Computing   **Blockchain**   **Industry Coding + More**

Collaboration

- For STEM education to be truly beneficial for students it's paramount to consider and understand what is developing in the world around them.
- GenTech collaborates with Arizona Tech Council, SciTech, CTE Career & Technical Education curriculum development, ASEE: American Society of Engineering Education, GPEC and many tech industries in Arizona.
- GenTech values partnerships with School Connect, ElevateEd, Phoenix Chambers, and works diligently for STEM advocacy at the Arizona State Capitol meeting with legislators.

1	2	3	4	5	6	7	8	9	10	11	12

Cool Coding

- Cool Coding - Primary: Syntax Development
- Cool Coding Intermediate : Web, MIT, Code.org, App Design, HTML, CSS
- Coding Awbie, OSMO Apps, Unplugged
- Coding Apps, Intermediate : Local projects
- Cool Coding Advanced: Network, IoT, Cyber Security, Adv App Development
- Cool Coding: Python for Kids 1 Block
- Cool Coding: Python for Kids 2 Script
- Cool Coding: Advanced Python
- Game On! L1 Make Code Arcade, GameMaker
- Game On! L2 Add Hardware, 2D Game Design
- Game On! L3 Unity, Blender, 3D Game Design

Radical Robots

- Robotics Primary - Blocks, Patterns, Indi's
- RVR, Parrallax Robotics, Team Robotics
- Intermediate 1 BOLT, Intro RVR, JavaScript Block, puzzles, games
- Intermediate 2 Adv RVR, Sensors, Mechatronics, JavaScript Script code
- Amazing Automation 1: Adv RVR 2, Mechatronics, JavaScript
- Advanced Amazing Automation 2: Sensors, Mechatronics, JavaScript, Micropython

Max Modeling

- Puzzle+Games: Intro Design, Geometry, Intro CAD, Solid modeling, TinkerCAD
- Vehicles+Boats: Prototyping, Geometry, TinkerCAD, OnShape, Fusion, AutoCAD
- Rocket Science: Advanced STEM concepts, Prototyping, Adv Geometry, Adv CAD
- Drone Discovery: Advanced STEM design, Aerodynamics, Engineering, Adv CAD

Mighty Micros

- Musical Micros: Block code, Electronical Engineering
- Musical Micros: Adv Networked music and performance, MIDI and musical interfaces
- Hummingbirds Micros
- IoT: Java, MicroPython, Electrical Engineering, Physical computing, IoT
- Adv IoT: Java, Python, Physical computing, Engineering capstones

Crazy Computer Builds

- Crazy Computer Builds: Hardware, software, introduction to networking, troubleshooting
- Crazy Computer Builds Advanced: Hardware, software, troubleshooting, networks, Linux + other OS

Cyber Defenders

- Cyber Defenders: Cybersecurity, ethical hacking, digital citizenship, network protocols

Real world STEM for real world kids who should flourish when they graduate.

What is coding? It is simply the language that humans use to talk to machines. When you know the language you can control the machines.

Once there was a student who was afraid of technology and terrified of robots because he thought they were evil and going to control the world. Then slowly he learned how robots perform surgeries, save people in fires and work in outer space. And then he learned how to code and run his robot through wacky mazes. Now he wants to be a computer programmer.

Last year a group of kids were wary about learning to program their robots. They had heard at home that robots were picking crops in fields in Yuma. What will happen to their future jobs in farming? We asked who will be doing the coding and running of the farm robots in the future? Why shouldn't it be you?

COOL CODING

The ultimate adventure for kids to learn coding in a fun and exciting way. Using PyCharm, MakeCode, various software apps and code.org, students explore and unleash creativity and problem-solving skills. Tons of hands-on activities and easy-to-follow quests help students learn basic block, script and advanced coding.

Block to Script Coding
JavaScript, Python, C/C+
Visual Basic, HTML/CSS
App Development
Debugging, Creativity
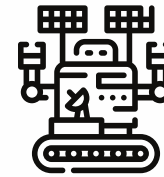
RADICAL ROBOTS

Kids roll, design, build, and program many robots using sensors and other advanced functions. Kids use coding concepts, with commands, loops, runs, variables and conditionals. The age of automation is here. Kids creatively think, and troubleshoot the world of robotics and computerized industrialization.

Spheros, Parallax, UBTech, Vex, Lego, Customized bots
JavaScript, C++, Arduino, Micropython, Python, Circuitry, Microcomputers
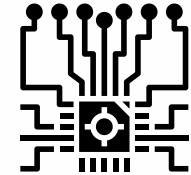
MIGHTY MICROS

Microcomputers are mini computers that control functions found in office and homes, appliances, cars, jets and even cities. This is what the Internet of Things: IoT is all about. Kids will create interactive apps, musical instruments, invent clever gadgets that light up and buzz, build interactive art pieces, and sensors.

Circuitry, Python, C++, Electrical Engineering
Creative thinking, Design, Troubleshooting

All students should have opportunities to succeed in real world STEM careers.
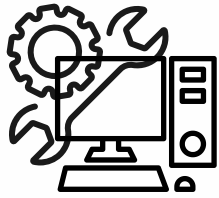
CRAZY COMPUTER BUILD

Kids take apart computers and analyze hardware components, compatibility and computing logic as it relates to all computing devices. They learn about inputs/outputs, computational apps and software, electronics, operating systems: Linux, binary code and scrutinize computer networking.

After completing all coursework students receive a full computer system with keyboard, monitor and mouse to keep forever.

CYBER DEFENDERS

Hackers beware! Kids in this course will access cutting-edge technology tools and equipment, learn the basics of computer networking, explore layers of security, encryption, firewalls, and cyber security measures. Challenges include cybergames, code competitions, ethical hacking and how to defend against cyber-attacks.

Digital Citizenship
Cloud Security, Coding, Blockchain, Linux Troubleshooting
Critical Analysis using Sophisticated Software.
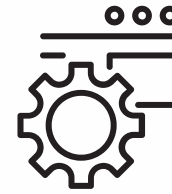
MODELING TO THE MAX

At the heart of 3D modeling for printing is CAD design and engineering prototypes. Students learn how to conceptualize models, draw, convert code and create models of monsters, boats, games, aircraft, rockets and more. Kids design, succeed, fail, redesign and ultimately compete in engineering challenges. Kids take home original creations. CNC projects for advanced levels

Manufacturing, Engineering CAD, Geometry, Creativity, TinkerCAD, OnShape, Fusion, AutoDesk

1903, the Wright brothers took the first flight in human history (they were in the air for less than a minute), and just 66 years later, we landed on the moon. Many people saw both within their lifetimes: the first plane and the moon landing.

Creativity has emerged as the driving force behind innovation across industries. Among the most impacted spaces is tech, where creativity plays an important role in shaping the present and future perspectives. The fusion of tech and creativity is not just a harmonious blend, it is an essential combination that propels world ideas to new heights.
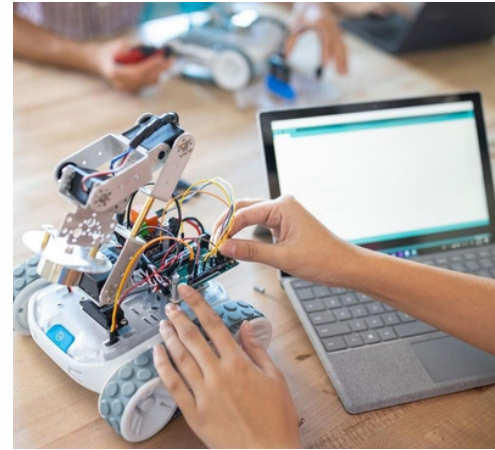
To learn more or implement an innovative
STEM program to your district or school contact:

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