



# Starting a Summer Tech Camp

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# Why Start a Camp?

- Provide new learning opportunities
- Students gain technical knowledge and experiences
- Start learning STEM early in schooling
- Provides career experiences
- Encourages students to study computer science
- Many schools don't offer CS during the school year
- Families are looking for camps to keep students active



# What Do I Need to Know?

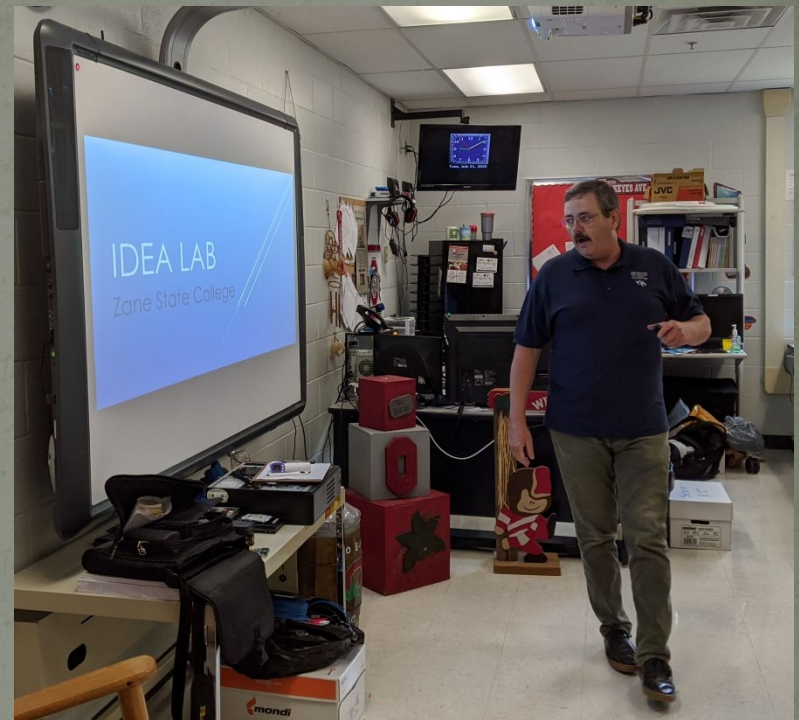
- How to work with students
- How to organize a schedule
- Setting a budget
- Getting instructors
- Getting financial support





# Who can teach tech?

- Talk to computer teachers in your local schools
- Talk to local colleges and community colleges
- Talk to local businesses and career tech schools
- Ask for parents to volunteer
- Get board approval
- **YOU CAN TEACH TECH!**





# Activities to Offer

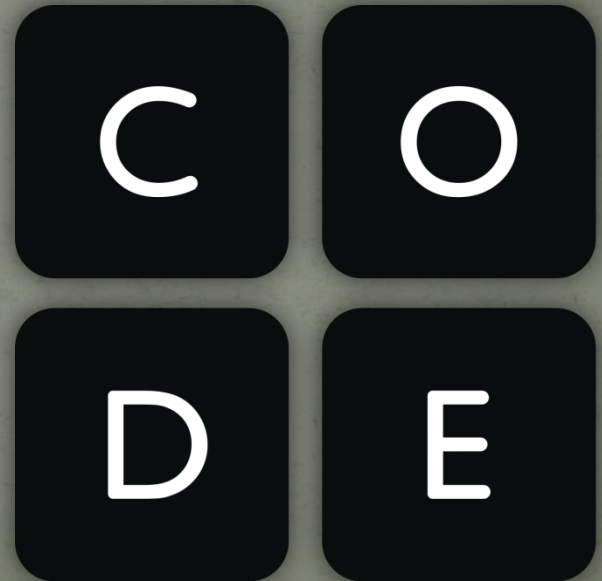
- Programming/Coding
- PC Repair
- Electronics/Circuits
- eSports/Gaming
- Robotics
- 3d Printing/CAD Design
- Flying and Programming Drones





# Programming/Coding

- There are several free and paid online programming web sites. Most sites now use block coding. Students click and drag blocks of code to build a program. This is a good option as many other STEM projects use similar block coding like in robotics.
- Code.org
- Code Monkey
- Scratch
- Alice.org
- CoderZ





# PC Repair

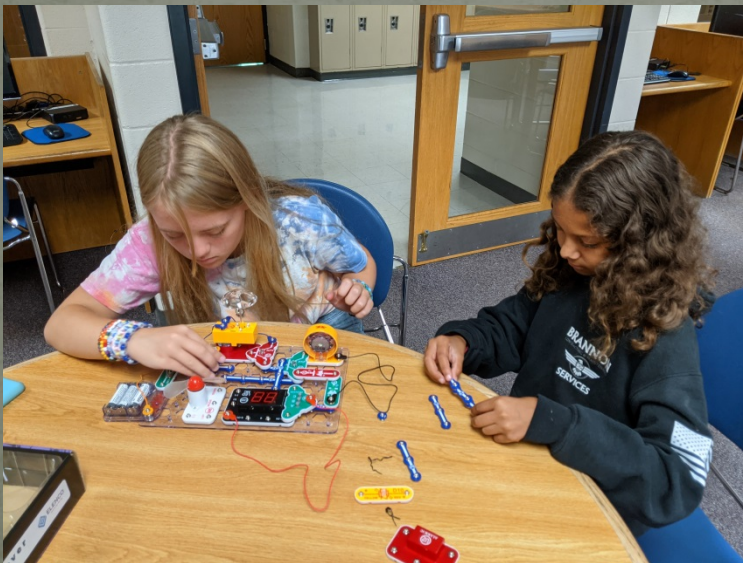
- Students can learn the parts of a computer and how they work together. We use old desktop computers that are not in service.
- Label parts and test before and after disassembly





# Electronics/Circuits

- There are several electronics kits you can purchase that teach basic circuitry. We use Snap Circuits. There are dozens of projects students can complete independently. Many start simple and build upon each other. They are not expensive to purchase.





# eSports/Gaming

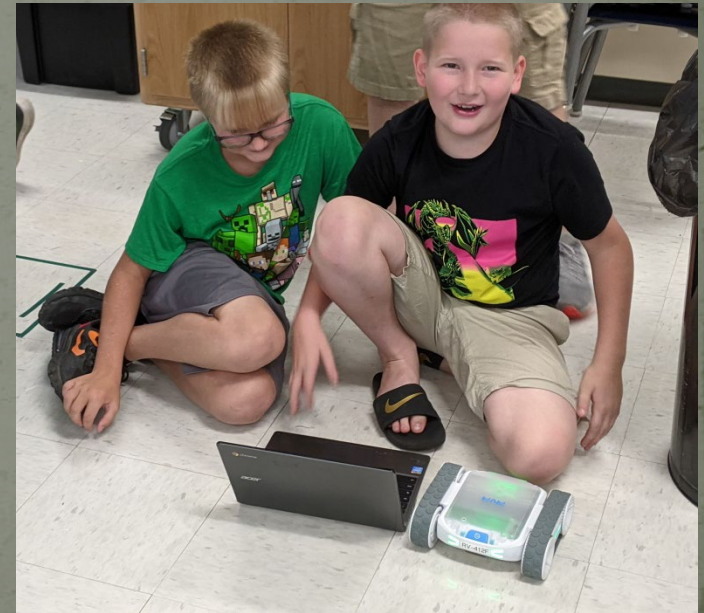
- This is the most popular topic for the students. We wait until the last 2 days of the camp because that is all the students want to do!  
😊
- We offer these games:
  - League of Legends
  - Rocket League
  - Super Smash Brothers
  - Fortnite (if 14 and older)
- We compete in regional and state eSports leagues during the school year so this helps recruit new players.





# Robotics

- This is where we combine computer programming and hands-on work together. We use several types of robots to give students a variety of fun experiences
- Sphero – RVRs, Bolts, Spark Plus
- Lego Robotics
- SparkFun Kits
- MicroBits
- littlebits





# 3D Printing/CAD Design

- Teach the basics of CAD and then print it for real!
- We use TinkerCAD to build a keychain or other projects
- Students turn in their projects to be printed
- We also use 3D Pens for hand printing models.





# Drones

- We use Parrot drones
- Easy to fly, repair and program
- Block based programming





# Funding Your Camp

- Many of these items are \$50-100 each
- Seek out local foundations and businesses to help with donations
- We charge \$25 per student for a T-Shirt and snacks. A higher price could be charged if you think students would pay for it. We are in a rural, low-income area so we wanted to keep the price down.
- There are grants to apply for but can be very difficult to get. We started with a local foundation and partnered with our after-school grant. Your school general fund can help as the equipment could be used during the school year as well.



# Previous Camp Group Pictures





# Tips & Suggestions

- Publicize your camp in your local media – newspaper, TV, school social media sites, etc. Get parent permission if you are using photos and videos. Families love seeing their students active during camp.
- Get backing from your school principals, superintendent, and school treasurer and send home flyers at school and use online sign-ups too.
- Don't try to aim too big for your first year. We started with grades 5-9 and expanded to grades 4-10. We also started with half day sessions 9am-12pm and went to all day 9am-4pm the 3<sup>rd</sup> year. We may change to 9am-3pm next year.
- We asked the students to bring their lunch, let them have a 30 minute recess and had a snack at 3:30 before sending them home at 4pm.
- We have teachers and parents who volunteer to teach at camp and that has helped to keep the costs low. You may need to offer a stipend to encourage people to help.
- Make it fun with great snacks!



# Questions?

- If you are interested in starting a camp my teachers and I would be glad to help you.
- We just finished our 3<sup>rd</sup> year. Even with the pandemic last year we increased our number of students from 23 the first year to 33 in 2020. This summer we had 60 students.



# Contact

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THANK YOU FOR ATTENDING!