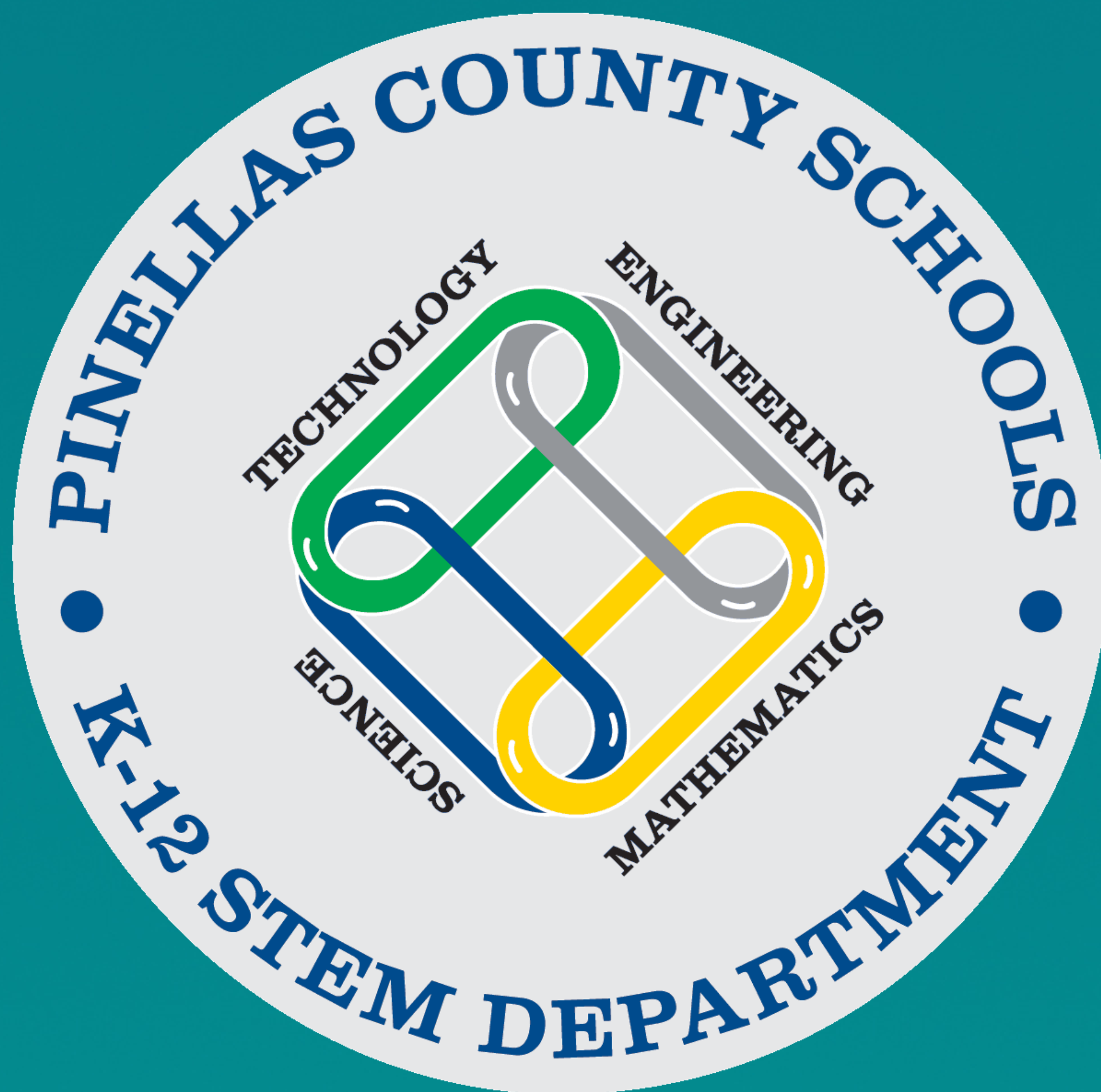


*STEM Innovation Inspired
Here!*



STEM Innovation Summer Camps

Virtual Learning

Grades 2-12

2020

Offered by: K-12 STEM Department, Pinellas County Schools

STEM Innovation Starts Here!

VIRTUAL STEM SUMMER CAMPS

Pinellas County Schools, STEM Innovation Summer Camps are the perfect way to boost your child's tech skills while they have a great time learning virtually!

The format of these camps allow for virtual collaboration and socialization, while also ensuring that campers get plenty of guidance from their teacher.

Our camps feature some of the hottest topics in STEM learning including coding, game design, Minecraft, app development, 3D printing programming, multi-media, STEM career pathway exploration and STEM challenge problem solving just to name a few!



Student Enrollment Criteria:

Students who are entering 2-12 grades during the 20-21 school year **and** who are currently enrolled in a Pinellas County school operated by the Pinellas County School Board. (Due to the funding sources utilized for this camp, charter school, private school and Florida Virtual School students are not able to enroll.)

Camp Duration and Offerings:

Camps are 4 days (Mon. - Thurs.) each and will be offered during 4 different weeks (Week of: June 15th, June 22nd, July 6th and July 13th).

Camp Sessions and Hours:

Morning Sessions, 9:00am-11:00am and afternoon sessions, 12:00pm-2:00pm. Caregivers will be able to enroll their child into one or more sessions.

Student to Teacher Ratio:

Only 20 students per class will be permitted. Wait lists will be available.

Cost:

Free

VIRTUAL STEM INNOVATION SUMMER CAMP COURSES

Each course can enroll 20 students and wait lists are available.

AM COURSE OFFERINGS 9:00AM-11:00AM

2nd Grade

Course A **Dive into STEM!** **Level: Beginner**

In this virtual course students will get to “dive” right into STEM using virtual robots. Students will use the Engineering Design Process, complete hands-on building challenges, learn coding skills and get to share their new knowledge with other STEM campers. We will be using a fantastic interactive program each day called Wonder Workshop that contains online and offline activities to get your campers “feet wet” in the world of STEM and coding! Each day will also have a whole group building challenge. Some examples of our building challenges will be, building your own marble maze, canoe boat challenge and animal rescue. We can’t wait to “Dive into STEM” with you! Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

3rd Grade

Course A **Extreme Machines** **Level: Beginner**

Students will get a chance to explore the world of “Extreme Machines” with both hands-on and virtual activities. Students will build a bulldozer using a Remote-Control Machines Construction Kit. They will also get to engage in several 360-degree experiences from the assembly line to a virtual reality bulldozer training. Campers will also use the engineering design process to modify their bulldozer’s load capacity and complete STEM challenges. Finally, students will use Cargo-Bot to complete beginner coding challenges. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

4th-5th Grades

Course A **Marvelous Minecraft** **Level: Beginner-Intermediate**

Using Minecraft: Education Edition, students will use their creative and critical-thinking skills to problem-solve a variety of STEM challenges. Students will work both independently and in multiplayer mode to design custom builds, use in-game engineering blocks, create electricity, and more. STEM hands-on activities will accompany the in-game lessons. Students will need access to Minecraft: Education Edition to participate in this virtual STEM Camp. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course B **Sustainability Innovators** **Level: Beginner-Intermediate**

This program is designed for a virtual venture into innovative sustainability with hands-on projects! Explore filtration systems that are used to clean polluted waters, engineer new ideas with products you have around the house and get ready to learn more about STEM careers. This camp explores, designs and connects back to nature. Students will get brief look into the process of career exploration and career options within the STEM fields. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

6th-12th Grades

Course A

Slow and Steady Learns to Code!

Grades: 6th-10th

Level: Beginner

In this virtual course campers will learn how to use programming “code” to move a turtle around its world. Each day students will build on what they have learned to make their turtle do more tricks! This is an excellent course for students that have no previous programming experience but need a fun and engaging starting point! This course offers the skills to progress into other programming languages.

Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course B

Jump Start Your Digital Media Skills As We Put a Capital “T” in STEM

Grades: 8th-11th

Level: Beginner

Go way beyond Snap and Insta filters! Learn how to compose and arrange elements to make a truly great image. Take your images to the next level by learning how to adjust and enhance the natural beauty. We will use free web sites and smart phone apps to bring your photography skills to the next level. You’ll learn the difference between photos used in journalism, art and digital compositions.

What happens when you want to add some extra ‘stuff’ to your picture? We’ll learn some very basic ‘photoshop like’ skills as we combine elements from photos to make WOW moments/statements (and some truly crazy creations). Distance collaboration will allow students to work together on creative comps.

If time allows, we will take a shallow dive into the world of digital video storytelling. Learn how to craft a story. Discover some basic plot and scripting concepts to make your story more engaging. We’ll demonstrate good videography techniques and work on putting all the pieces together in a video sequence. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course C

Robotic Programming in Virtual Reality

Grades: 7th-12th

Level: Beginner-Intermediate

Students will be learning to program a wheeled robot in a virtual reality environment, using VEXcode VR. Program your VR robot to complete challenges, navigate mazes, knock down enemy towers, and more, using a simple but powerful Scratch-based programming interface.

You will learn how to control the robot’s motion, read sensor values, and use programming structures like variables, conditional loops, and more. This is a great introduction to high school robotics programming. Students will be able to continue to explore the software even after the class is over. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

PM COURSE OFFERINGS

12:00PM-2:00PM

2nd Grade

Course A

Dive into STEM!

Level: Beginner

In this virtual course students will get to “dive” right into STEM using virtual robots. Students will use the Engineering Design Process, complete hands-on building challenges, learn coding skills and get to share their new knowledge with other STEM campers. We will be using a fantastic interactive program each day called Wonder Workshop that contains online and offline activities to get your campers “feet wet” in the world of STEM and coding! Each day will also have a whole group building challenge. Some examples of our building challenges will be, building your own marble maze, canoe boat challenge and animal rescue. We can’t wait to “Dive into STEM” with you! Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

3rd Grade

Course A

Want to build a video game? Level: Beginner-Intermediate

Students will use the engineering design process and a Bloxels kit (a video game hands-on building tool) to create characters, art, and stories. Each participant will design their own video game and will get opportunities to share it with their peers and family members. Participants will explore what it takes to make game design a career when they learn how to block programming to code their video game online. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

4th-5th Grades

Course A

Marvelous Minecraft Level: Beginner-Intermediate

Using Minecraft: Education Edition, students will use their creative and critical-thinking skills to problem-solve a variety of STEM challenges. Students will work both independently and in multiplayer mode to design custom builds, use in-game engineering blocks, create electricity, and more. STEM hands-on activities will accompany the in-game lessons. Students will need access to Minecraft: Education Edition to participate in this virtual STEM Camp. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course B

Sustainability Innovators Level: Beginner-Intermediate

This program is designed for a virtual venture into innovative sustainability with hands-on projects! Explore filtration systems that are used to clean polluted waters, engineer new ideas with products you have around the house and get ready to learn more about STEM careers. This camp explores, designs and connects back to nature. Students will get brief look into the process of career exploration and career options within the STEM fields. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic. to edit

6th-12th Grades

Course A

3D modeling with 123D Design and Meshmixer Grades: 7th-12th Level: Beginner-Intermediate

Learn how to make your own unique 3D-printable character or toy using the free programs 123D Design and Meshmixer. Create the basic frame and shape of your items with 123D Design, a solids modeling program; add details and personality using Meshmixer, a surface sculpting program.

Ultimately you will create an STL file that can be printed on any 3D Printer. This course is a good introduction to more advanced modeling software, such as Autodesk Inventor or Solidworks. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course B

Be Sharp With C# Programming! Grades: 9th-12th Level: Beginner-Intermediate

Do you want to experience how real computer programmers do their jobs?

No prior programming experience necessary! You will be taught each step from how to download the Microsoft Visual Studio Compiler, to creating simple C# programs leading up to more advanced programs.

Once you are introduced to the basics of computer programming, you will be able to experiment with other languages of your choice. Campers will also get an opportunity to explore STEM careers within the computer programming world.

Course C
Take your Digital Media Skills to the Next Level
Grades: 8th-11th
Level: Intermediate-Advanced

In this course, you will put your composition skills on display! Students will work collaboratively to produce advanced level image manipulation and image compositions. Digital video storytelling and editing will give each student ample opportunity to elevate their voice and tell their story.

Distance collaboration: Instructions will be given during our class discussion time. Students will work independently at home to create media magic. Virtual Gallery Walks– show & tell – will inspire even more peer collaboration. Student designers will evolve their work to a higher level. Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course D
Interested in Mobile App Development?
Grades: 6th-8th
Level: Beginner-Intermediate

Use Mad-learn's Mobile App Development program to create an app about an issue that you are passionate about. MAD-learn's platform provides a unique, dynamic, and engaging experience where students will use the design-thinking approach to mobile app development. Students will have access to a powerful tool that allows them to easily build content-rich, visually impressive mobile apps and use technology creation as a means of serving the community, solving problems, building entrepreneurship skills, and sharing ideas in a mobile world. Students final app design can be shared with other students in camp as well as family and friends! Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Course E
Build Your Own App
Grades: 9th-12th
Level: Beginner-Intermediate

Use Mad-learn's Mobile App Development program to create an app about an issue that you are passionate about. MAD-learn's platform provides a unique, dynamic, and engaging experience where students will use the design-thinking approach to mobile app development. Students will have access to a powerful tool that allows them to easily build content-rich, visually impressive mobile apps and use technology creation as a means of serving the community, solving problems, building entrepreneurship skills, and sharing ideas in a mobile world. Students final app design can be shared with other students in camp as well as family and friends!

Students will also get a look into the process of career exploration and career options within STEM fields. We will also dig deeper in the careers that pertain to the course topic.

Additional Camp Requirements

Technology Device Requirements

- Students must have access to a laptop, desktop or tablet during each of the 2-hour sessions (AM 9am-11am, PM 12pm-2pm) on all 4 days of the camp (Mon.-Thurs).
- a web camera for video (most tech devices already have this built in), if your child's tech device does not have a web camera, the K-12 STEM Dept. may be able to sign one out for your child to borrow for the 4 days.
- speakers for sound (most tech devices already have this built in)
- microphone for communication (most tech devices already have this built in)

Course Material Requirements

- Some courses may have materials that the K-12 STEM Dept. will need to provide in order for campers to participate (building materials, hands-on, etc.).
- In preparation for this, caregivers (or a representative for them) must be available on the two dates and times listed below to pick-up/sign-out and drop-off/sign-in STEM materials needed for camp implementation.
- During the 1st week in June, ALL families will receive an email which will identify if there are materials that will need to be picked up and dropped off along with a list of materials that families will need to provide at home (as applicable to each individual course).

Material Pick-Up/Sign-Out and Drop-off/Sign-In Dates and Time Frames

- Students attending Week 1 (week of 6/15) and Week 2 (week of 6/22)

Material Pick-Up: Thursday, June 11th 8:00am-10:00am, location Pinellas Technical College Clearwater Campus (6100 154th Ave N., Clearwater 33760)

Material Return: Monday, June 29th 8:00am-10:00am, location Pinellas Technical College Clearwater Campus (6100 154th Ave N., Clearwater FL 33760)

- Students attending Week 3 (week of 7/6) and Week 4 (week of 7/13):

Material Pick-Up: Tuesday, June 30th, 8:00am-10:00am, location Pinellas Technical College Clearwater Campus (6100 154th Ave N., Clearwater, FL 33760)

Material Return: Thursday, July 16th 5:00pm-7:00pm, location Pinellas Technical College Clearwater Campus (6100 154th Ave N., Clearwater, FL 33760)

Enrollment Process

Enrollment is Based Upon Completion of a 2-Step Process and on a First-Come-First-Served Basis

Student Enrollment Criteria Reminder:

- Students who are entering 2-12 grades during the 20-21 school year **and** who are currently enrolled in a Pinellas County school operated by the Pinellas County School Board. (Due to the funding sources utilized for this camp, charter school, private school and Florida Virtual School students are not able to enroll.)

Step 1

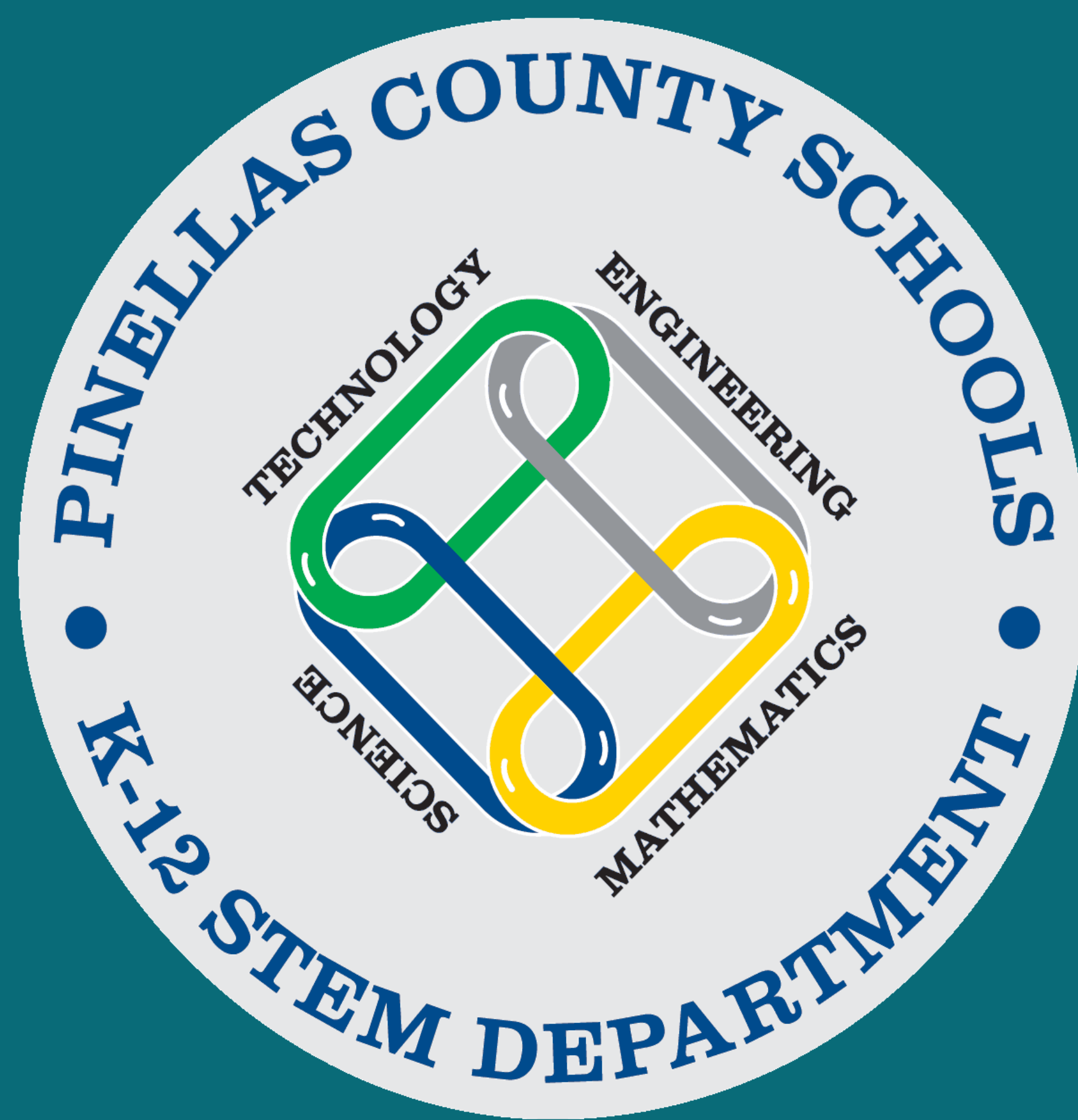
- Use the Sign Up Genius link on the district's STEM website www.pcsb.org/STEM to register your child into a course.

Step 2

- To complete the student registration process, use the Microsoft Forms Registration link on the district's STEM website www.pcsb.org/STEM to complete the registration forms.
- You must complete these forms no more than 24 hours after you have enrolled your child into a course using the Sign Up Genius link identified in Step 1.

*Due to enrollment demands, if pages from this application packet are not received electronically within 24 hours of registering your child on Sign Up Genius, child's name will be removed so that another child can enroll.

*You can enroll your child into a second course within their same grade level (if multiple courses are available) if you choose, as long as it is not the same course that they are already signed up for. If you do enroll your child into a 2nd course, there will not be a need to fill out another set of registration forms.



Hello,

The PCS K-12 STEM Department is excited to continue our STEM Summer Camp initiative that began the summer of 2014. “**STEM Innovation IS inspired here**” as we quickly shifted our camps from an in-person instructional model to virtual learning in order to offer your children, our students, STEM experiences over the summer months.

Our STEM Innovation Summer Camps are designed to engage your children in STEM project-based learning using a hands-on, digital learning approach. Students will participate in courses that introduce them or enhance their knowledge about computer science, involve self-directed engineering challenges, and a focus on STEM educational pathways and careers. Students will be given the opportunity to further deepen their STEM experiences with optional participation in STEM learning after their 2-hour course, each day.

Our course teachers are highly skilled in STEM concepts along with the K-12 STEM Department’s Engineering Design Process. Towards the end of May, you will receive an email from your child’s course teacher that contains their contact information as well as camp updates and tips.

My goal of creating virtual STEM Summer Camps for our Pinellas County Students is to help prepare them to become the next generation of problem solvers and innovators who can be globally competitive in an ever-changing world. If you want to learn more about the PCS K-12 STEM Department’s offerings, please visit www.pcsb.org/STEM.

Sincerely,
Laura Spence
Spencela@pcsb.org
K-12 STEM Specialist
Pinellas County Schools