



ASEE PreK-12 Engineering Education

ASEE P12 Summer Camps

In effort to support parents everywhere and provide access to hands-on activities, the American Society for Engineering Education (ASEE) P12 Commission is proud to announce online summer camps!

When? Monday through Thursday during one hour of any week you choose June 15 – July 31

For Whom? We will host camps for students currently in grades K-8. You may select from the camps offered to your current grade (2019-2020 academic year).

What Size? Each camp will host a maximum of 6-8 students, depending on age.

Who Teaches? Each camp will be staffed by one professional lead instructor and one undergraduate engineering student.

Registration? Use the hyperlink for the camp and date you choose below. You will create an account on ASEE's site if you do not already have one. Should you wish to register more than one child for the same week, please use a second email address.

Fees? The fee is \$60 for each one-week camp. Payment will be completed through the ASEE website. As you work through their system, it will appear as a "free ticket" when in fact it will show up at the end with the correct \$60 fee.

What? Our camps feature a variety of topics, with most focusing on doing hands-on engineering design challenges.

Materials? All camps rely upon materials readily found around the house. We will not be offering kits.

Platform? We will utilize password-protected zoom conference sessions. All participants must utilize the newest version of Zoom. Participants will initially enter a Waiting Room, where the professional lead instructor can then admit them to the classroom. Each participant's name in Zoom must match the registrant participant list and include only their first name. All sessions will be locked after all student participants have arrived. The chat box will be limited in function so that the professional lead instructor and undergraduate engineering student can see all posts.

Safety? Every adult leader and undergraduate engineering student has completed their university or school/district level protection of minors course.

Questions? Ask ASEE P12 Commission Chair, [Stacy Klein-Gardner](#). Learn more about ASEE at <http://asee.org>.



Camps Offered:

Read a Book, Solve a Problem: Literacy-Inspired Creations for Young Engineers – Grades K, 1

Weeks Offered: [June 29-July 2](#), [July 27-30](#)

Time: 10:00-11:00 **eastern**

Professional Lead Instructor: Pamela Lottero-Perdue, Ph.D., Towson University

Description: In this camp, each day will begin with a read-aloud of a book (or of part of a book) that will inspire children to solve a problem. The design challenges will include designing: a tower to give a toy a better view after reading *Building Up* by Christy Hale, an instrument after reading part of *Oscar and the Bat* by Geoff Waring, a boat after reading *What Floats in a Moat* by Lynne Berry, and a protective shell for a favorite stuffed animal (after reading *Turtles* by National Geographic Kids).

Let's Fly... Into Engineering – Grades 2, 3, 4

Weeks Offered: [June 15-18](#)

Time: 10:00-11:00 **eastern**

Professional Lead Instructor: Stacy Klein-Gardner, Ph.D., Vanderbilt University

Description: This camp will use the engineering design process to design things that will fly! All projects will use materials found around the house. Join us to see how far and how high your designs can go.

Let's Fly... Into Engineering – Grades 2, 3, 4

Weeks Offered: [June 29 – July 2](#)

Time: 12:00-1:00 **eastern**

Professional Lead Instructor: Keith Hargrove, Ph.D., Tennessee State University

Description: This camp will use the engineering design process to design things that will fly! All projects will use materials found around the house. Join us to see how far and how high your designs can go.

Creative Engineering – Grades 2, 3, 4, 5

Weeks Offered: [July 6-9](#), [July 13-16](#), [July 20-23](#)

Time: 12:00-1:00 **eastern**

Professional Lead Instructor: Alison Baranowski, Harford County Public Schools (MD)

Description: This camp is designed for the engineer who loves the Arts. Music, Visual Art, Dance, Storytelling, Beat Boxing, Sculpture, Improve... who knows what your daily challenge will involve? What you do know is you will use household items and recyclables to solve problems in the world of the Arts.

Energy Camp – Grades 3, 4, 5

Weeks Offered: [June 15-18](#), [June 22-25](#), [June 29-July 2](#)

Time: 11:00-12:00 **eastern**

Professional Lead Instructor: Lynn Albers, Ph.D., Hofstra University

Description: Recycling at its finest! Learn how everyday waste is collected, sorted, and converted to electricity through a virtual tour of Covanta. Students will be challenged to take everyday household items, and sort them through the use of a mechanical device.

Project Aqua - Engineering for Water Fun – Grades 1,2,3, 4, 5

Weeks Offered: [July 6-9](#)

Time: 10:00-11:00 **eastern**

Professional Lead Instructor: Mindy Zarske, Ph.D., University of Colorado Boulder

Description: Summer can be hot outside – the perfect time to combine engineering and water fun! This camp will focus on water innovations – including water balloon launchers, model water slides, and heating of water with the sun to make lemonade. Participants use materials found around the house for their designs.

Tinkercad Taster – Grades 4, 5, 6, 7, 8

Weeks Offered: [July 6-9](#)

Time: 12:00-1:00 **eastern**

Professional Lead Instructor: Jennifer Taylor, Ph.D., University of Colorado Boulder

Description: Calling all future engineers! Join us for an interactive camp to learn the basics of computer-aided design (CAD) and circuits using the Tinkercad online app. Create your own 3D designs, and save them as STL files that can be 3D printed later. Explore electronics with the Arduino microcontroller simulator to build and code circuits. Let's get tinkering!

Computation Thinking-Genetics Week-DNA – Grades 4, 5, 6, 7, 8

Weeks Offered: [July 13-16](#)

Time: 2:00-3:00 **eastern**

Professional Lead Instructors: Henriette Burns and Matt Johnson

Description: In this camp, kids first learn about how complicated information can be encoded using binary code and then the four DNA bases. Kids are taught how to send and receive coded messages using DNA. They then extract DNA from cells in a form that they can see.