

K-12 PRIZE

Want to host your own Invention Competition at your school? We love to see new schools join K-12 InVenture! The Lesson Plans tab on the main menu has some great resources to help your students in the classroom and with their project. We have some further resources to help plan out a school wide invention competition for any grade level.

Even though this is a competition, please strive to be inclusive and supportive of all projects that enter. Encourage teams to keep working on their project because they can always enter it the next year again or enter other science and engineering fairs.

What is K-12 InVenture Prize?

The InVenture Prize at Georgia Tech is the largest undergraduate invention competition in the United States. Televised live on Georgia Public Broadcasting (GPB), teams of Georgia Tech students present their comprehensive invention showcasing both the engineer and the entrepreneur.

The K-12 InVenture Prize was piloted in 2012, stemming from the passion and dedication of two high school teachers. Today, thousands of students take part in the program throughout Georgia. Top teams from each school earn a spot in the K-12 InVenture Prize State Finals hosted at Georgia Tech. InVenture challenges students to identify real-world problems and design novel solutions through careful analysis, creativity, and the scientific method. We hope to broaden participation in STEM by bringing authentic invention and entrepreneurship experiences to K-12 teachers and students.

The K-12 InVenture Prize competition is the qualifying event to represent the state of Georgia at the National Invention Convention (NIC). In past years our top teams were sent to NIC where our students took home top honors.

Would you like to host an invention competition at your school?

New schools join the K-12 InVenture cohort every year. Join us for the next iteration of the K-12 InVenture Prize at Georgia Tech!

Things to plan and keep in mind throughout the school year:

- Competition Logistics and Items:
 - o Timeline – The school competition should take place between early January and mid February to allow your students enough time to register with K-12 InVenture, make edits to their project, and practice their presentation. Students should start brainstorming around September and begin working in October or November. The Lesson Plans on the K-12 InVenture website has more resources for this!
 - o Event – Advertise for the competition around school and in science or math classes to get students interested. Have them sign

up to know the number of participants. Pick a date and time for the event and coordinate use of your venue with other teachers.

- Requirements – Determine the project requirements you would like to implement. At the state level, students are required to have a trifold board or printed poster. We encourage the requirement of an engineering log book – this helps your student remember what they have done, gets them in the good practice of keeping records of their work, and is necessary for the national level or obtaining a patent.

Note: to qualify for InVenture, a project doesn't necessarily need to have a working prototype. If the students can show what they have done thus far and discuss future plans in detail, they can still qualify for the state level.

- Venue – gyms, lunch rooms, and theaters are feasible places on campus to set up enough tables for your students and have walking space between projects for your judges.
- Awards – Certificates with a ribbon or medal. There are many certificate templates available and you can mail merge or hand write names to make the printing easy.
- Judges – Each project should be judged by at least three judges to keep scoring fair. Other teachers and parents with a specialty in a STEM field or industry can be good judges. Judges will need a scoring sheet and guidelines. The judging criteria for the K-12 InVenture Prize are on our website.
- Volunteers – To keep things running smoothly, student or parent volunteers can set up and break down the event space. Many schools require volunteering hours for students and parents – this could help them as well as you!
- Populy – Populy is a mobile voting platform used by judges at the K-12 InVenture Prize competition to score teams and provide instant feedback. If you're interested in implementing this, contact Laura Mast and Will Stoy <https://www.populy.io>

- Teacher Workshops: Join us for some specialized discussion of how to incorporate InVenture to lessons and tailor the program to your students. See the Teacher Workshops tab to learn more and register!

Timeline – This version is condensed, a longer-timed version is on the website!

In order for your students to enter the state-wide competition mid-march, your school InVenture Prize competition should take place between late January and mid-February. This allows your students to register before the state competition deadline and to improve their poster board or make any edits necessary. Below is a model timeline, but this can be adjusted to fit your student's level or time needs. In the beginning of the school year, you should determine a date for the competition and put it on the school calendar. Make sure to reserve the competition space.

Project Timeline

Week 1 – Introduce InVenture, look at past projects, talk about inventions, begin brainstorming

Week 2 & 3 – brainstorm and begin preliminary research – if they have an idea, ask for three resources that has background information on the problem they're solving.

Week 4 – have your students commit to a project. Ask for a written proposal of their project along with a list of 5-6 resources that include background information on their project and a list of major materials

Week 5 – have your students begin gathering materials. Have them document their purpose, materials, and some background information in a lab notebook for their records.

Week 6 - 9 – This time should be primarily prototype building and testing

Week 10 – check in with teams and ask for a progress report.

Week 11 – 15 – Further prototyping, testing, and report writing

Week 16 – ask for a rough draft of their background, purpose, and materials and methods sections. The competition is two weeks away and it may be crunch time for some teams.

Week 17 – ask for a rough draft of their entire report and check lab notebooks.

Week 18 – final report, notebook, and poster board are due. Finalize these for the presentation day.

Judging Rubric

It is recommended that school competitions use the same judging rubric as the state competition so that students are aware of how they are being judged and they can practice and improve their presentations. If your students choose to submit a pitch for Pitch Day on Populy before their school competition, they will be judged and receive feedback based upon the state competition rubric. There are eight criteria that they are evaluated on:

1. **Practicality**– the project addresses a clearly defined problem or need
2. **Knowledge Base**– the students can explain the relevant science or other research that went into their product
3. **Design-Based Thinking**– the students used an iterative design process including testing and refining
4. **Creativity**– the product is sufficiently unique from competing products
5. **Marketability**– there is a clearly defined market or customer base for the product
6. **Social Responsibility**– the students addressed any relevant ethical or sustainability issues. The product is likely to have a positive impact on individuals or society
7. **Enthusiasm and Communication**– students communicated their ideas clearly and are excited about their product
8. **Manufacturability**– the students have considered making and manufacturing in their prototype or have a manufacturing plan for the future

If you wish to add or alter criteria for your students, please share with them your judging rubric. They will be judged according to the following rubric on Pitch Day and at State Finals.