

# Incline High Engineering students to present prototype to MIT, community

Team to file provisional patent by early June

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This is Incline High's Lemelson-MIT InvenTeam®. It is made up of 22 9th, 10th and 11th grade students.

*Incline High Engineering Lemelson-MIT InvenTeam@3*

INCLINE VILLAGE, Nev. – Incline High School engineering students will present their invention for mid-grant technical review at school on March 5 at 5 p.m. Their invention detects when the roof of a structure becomes stressed from snow.

The public is invited to Incline High's Lemelson-MIT InvenTeam® presentation where the students' working prototype will be showcased. At this review, the team will receive feedback to incorporate into their final prototype.



Sofia Alosi, Riley Hunt, Kaya Hollis, and Katie McKean are at the board brainstorming a flowchart for an app that needs to be built. Incline-High-Engineering-Lemelson-MIT-InvenTeam@1

The InvenTeam initiative engages students in creative thinking, problem-solving and hands-on learning in science, technology, engineering and mathematics.

The final prototype will be showcased at an invention celebration called EurekaFest® at the Massachusetts Institute of Technology on June 12.

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Prior to that, the team will file a provisional patent.

“It's the first step that allows you to start manufacturing the device while you're waiting for the standard patent to go through,” said Adam Shoda, engineering instructor who leads Incline High's InvenTeams. “It protects your intellectual property from that day forward.”

Incline High's team needs at least \$35,000 to travel to Cambridge, Mass., to the event.

The invention's primary purpose is to determine when snow accumulation starts to affect the structural integrity of a home.

“We want to be able to notify the people inside the house that their structure needs attention,” said Shoda.

The team is made up of 22 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> grade students.

“The leadership team is mostly sophomore girls,” Shoda said. “And they’re awesome!”

In October 2023, Incline High was awarded a Lemelson-MIT InvenTeam® grant for \$7,500 to create an invention. Incline High was one of eight high schools nationwide that was selected to participate in InvenTeam. It is a two-year process.

“It’s pretty interesting, pretty awesome,” Shoda said.

Shoda initiated the InvenTeam application process and worked with the engineering students during the summer of 2023 to finalize the proposal.

University professors, inventors, entrepreneurs, industry professionals and college students selected the grantees.

Incline High’s InvenTeam created a solution to a real-world problem, said Shoda who has taught at Incline High School for 2 years and in Washoe County School District for an additional 18 years.

“My students are enthused and excited about the project,” Shoda said. “And they have been working hard to organize the project and move forward with it.”

Incline High Principal Tierney Cahill is proud of the students’ accomplishment.

“I am thrilled to hear that our InvenTeam has been selected for this honor, and proud that our team members are tackling a challenge that directly impacts our residents here in Incline Village,” said Incline High Principal Tierney Cahill in a news release.

The InvenTeam will also work with the Incline Education Fund as the primary community partner. The team has also received support from Incline High School Boosters.

Katie McKean and Lola Meinnert are in a Zoom meeting with our team's mentor, Dr. Paul Fucile. They were presenting the team's updated flowchart.  
Incline-High-Engineering-Lemelson-MIT-InvenTeam@2

Both groups work with the community to bring industry professionals to act as mentors and to help raise funding.

Incline Education Fund is a non-profit organization that supports programs at Incline Village schools.

"We are very proud of our IHS InvenTeam students and look forward to working with them to complete this project," said Mary Danahey of Incline Education Fund in a news release.

Incline High School Boosters is a parent organization that supports the school with volunteering and financial support. A major donor is the Dave and Cheryl Duffield Foundation.

The InvenTeams initiative, now in its 20th year, has enabled 17 teams of high school students to earn U.S. patents for their projects, according to a news release dated Nov. 6, 2023.

"The InvenTeams are focusing on solving problems that impact their local communities," said Leigh Estabrooks, Lemelson-MIT's Invention Education Officer, in a news release. "Teams are focusing their technological solutions, their inventions, on inequities in health and well-being, environmental issues and safety concerns. These high school students are not just problem solvers of tomorrow, they are problem solvers today helping to make our world more equitable, healthier and safer."

Intellectual property education is combined with invention education offerings as part of the Lemelson-MIT Program's deliberate efforts to remedy historic inequities among those who develop inventions, protect their intellectual property and commercialize their creations.

The Lemelson-MIT Program gives students problem-solving skills that will help them in school, work and life.

The program has worked with 3,883 students on 296 teams nationwide for the past 20 years, according to the news release.

Accomplishments include:

- Partnering with intellectual property law firms to provide pro bono legal support.
- Collaborating with industry-leading companies that provide technical guidance and mentoring.
- Providing professional development for teachers on invention education.
- Assisting teams with identifying resources within their communities' innovation ecosystems to support ongoing invention efforts.
- Publishing case studies and research to inform the work of invention educators and policy makers, and build support for engaging students in efforts to invent solutions to real-world problems.

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