



2018 Edison Universe Exclusive Contest for CAPS

EDISON UNIVERSE CONTEST OVERVIEW

- The submission [Criteria](#) for the 2018 Edison Universe Student Contest will closely mirror the standards established for a corporate or non-profit [Edison Awards](#) nomination, but will be modified for student submissions.
- Students will create entries for the Edison Universe Contest using the 2018 Edison Universe Contest Form.
- Students will submit their projects to Corey Mohn at CMohn@bluevalleyk12.org by May 18, 2018.
- The entries will be judged by CAPS administrators and instructors, as well as Edison Awards Steering Committee members and reviewers.
- The top three students (or teams of students) receiving the most votes in the final round will be named “Young Edison” student winners. Each of the three winning students (or teams) will receive a scholarship (to be split among team members.) First place winner will receive a \$1,000 scholarship. Second place winner will receive a \$750 scholarship. Third place winner will receive a \$500 scholarship.
- Student winners and the CAPS programs will be featured on the Edison Universe webpage and through Edison Awards social media channels.
- Student winners are required to create a 60-second video acknowledging the scholarship and describing their project that will be featured on the Edison Universe web page and through Edison Awards social media channels.
- Any CAPS students who attend the Edison Awards event in New York in April 2019 will be interviewed for a video to be released on the Edison Awards YouTube channel.

EDISON UNIVERSE CONTEST TIMELINE

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|-------------------|--|
| • April 25, 2018 | Schools announce contest details to students |
| • May 18, 2018 | Deadline for student submissions |
| • May 21-25, 2018 | Voting week |
| • June 1, 2018 | Winners announced |

VALUE TO CONTESTANTS

- Recognition for your team and your innovation
- Opportunity to hone your marketing message
- Alignment of your innovation with one of the most widely known and respected innovators in history, Thomas A. Edison
- Winners featured on Edison Universe webpage and social media as highlighted in this Edison Awards [Overview](#)
- High-powered focus group review by CAPS administrators/instructors, Edison Awards Steering Committee and industry experts
- Feedback regarding entry, if desired
- Edison Universe Contest participant/winner certificate
- Chance to win a scholarship for top winners/winning teams

TIPS FOR SUBMITTING AN ENTRY

Two factors directly impact the success of your entry:

1. Whether your product/service is genuinely innovative
2. How effectively your marketing efforts showcase that innovation. If your product/service is not yet being marketed, then describe how you *would* market it.

VIDEO: [How to Craft an Excellent Nomination](#)

Below are qualities that distinguish the best nominations:

Written Descriptions

- Craft clear, easily understood messages.
- Use correct spelling and grammar.
- Make sure to answer the question in each section.
- Your message should be easily understood by anyone. In addition to your industry's experts, see if people outside your industry understand the message.

Website

- Easy to navigate and to find information
- Clear message about the product or service and its purpose, benefits and value
- A visually appealing, unified theme throughout the site

Video

- The best videos convey their message in two minutes or less.
- Videos can be made easily and inexpensively; there's no need for expensive studio time.
- Tips to create inexpensive videos:
 - [How to Shoot Great Videos for Your Business](#)
 - [8 Free Resources for You to Make an Online Video Easily](#)
 - [10 Ways to Create Videos Without Installing Software](#)

EXAMPLES OF EDISON AWARDS NOMINATIONS

Below are several examples of strong nominations from past Edison Awards finalists. While judges of this Edison Universe student contest will not require this level of development, these give good examples of winning entries in the official Edison Awards contest.

EXAMPLE #1

Category:	Applied Technology
Company:	Consumer Physics
Product:	SCiO™
Snapshot Description:	world's first hand-held molecular sensor
Website:	https://www.consumerphysics.com/mySCiO™/
Video:	https://www.youtube.com/watch?v=UIFyAOD_E3E



Thumbnail Description: SCiO™ is the world's first molecular sensor that fits in the palm of your hand! With SCiO™ you can scan materials and get instant relevant information directly to your smartphone. It is a non-intrusive, no-touch sensor that provides a seamless user experience. Explore more with the click of a button.

Concept: Smartphones made it easy to research facts, capture images, and navigate, but they haven't brought us closer to the physical environment. SCiO™ is the first handheld molecular sensor. It's an affordable device for everyday use. SCiO™ uses a science that is 100 years old. We made this powerful technology available to everyone by reducing the size and cost of a spectrometer. SCiO™ is based on the proven NIR spectroscopy method. The physical basis is that each type of molecule vibrates in its own unique way; these vibrations interact with light to create a unique optical signature.

Value: SCiO™ is for anyone who would like instant information about the things they interact with and consume every day. It is also great for people who want to help develop a rapidly expanding database of useful knowledge that will benefit the entire community of users. Spectrometers today are too large and expensive and are not available for everyday use. SCiO™ is offered in our online store for \$249 including two years of free Apps. With that, users can begin scanning, learning and sharing their findings with their friends.

Delivery: We launched a Kickstarter campaign in April 2014 in order to get the first community of users that could help us grow SCiO™'s database. We have been communicating with our backers on Kickstarter as well as on Facebook and Twitter. There have also been many magazine, newspaper and TV interviews. We have been attending conferences, introducing SCiO™ to the world and demonstrating its capabilities.

Impact: The ability to scan and learn more about the world around you has tremendous implications on the food we are about to consume, the water we are about to drink, our environment and our health and wellness. With SCiO™ one can tell the nutritional values of the food they are about to consume, the ripeness of fruits and vegetables, if they have been using safe drugs etc. The application allows users to track themselves, record and share with their friends. The more it is used, the greater the database will be. SCiO™ is the first and largest database of matter.

Differentiation: As far as we know there are no other similar products in the market. SCiO™ is the first of its kind aiming to be the world's first database of matter. Spectrometers are used in labs around the world but they are too large and expensive for everyday use.

EXAMPLE #2

Category:	Medical/Dental
Company:	Titan Arm
Product:	Titan Arm
Snapshot Description:	gives patients an edge when recovering from upper body injuries
Website:	http://titanarm.com/
Video:	http://youtu.be/8S53Mc4Ujgl



Thumbnail Description: Titan Arm gives patients an edge when recovering from upper body injuries. After strapping into the backpack-based device, users get a 40lb bicep boost, preventing injury and regaining lost mobility. As a diagnostic and therapeutic tool, patients and doctors precisely monitor range of motion, position, and strength through dynamic sensing.

Concept: The Titan Arm is an upper body exoskeleton developed for physical therapy and occupational lifting. Our project focused on improving the lives of those affected by life-altering injuries. Through an initial discovery phase, we found our niche -- upper body exoskeletons, an unmet need in the market. From the start, we utilized works such as prototypes from laser-cut fiberboard to evolve structural design. Meetings with physical therapists and professors provided insight into our critical design elements. We divided labor based on individual skill sets, accelerating development while maintaining active collaboration at weekly meetings and fortifying the final integration.

Value: Titan Arm seeks to aid people suffering from permanent disability or reduced mobility due to stroke, disease, or aging. We created a low-cost strength augmentation solution, which allows the user to effortlessly lift 40lb. Our initial prototype was developed for less than \$2,000, and we are confident that a low-cost final product could be created to vastly undercut the six-figure alternatives that are currently on the market. Using lean and innovative approaches, Titan Arm could be developed into a life-changing device that can be worn regularly in order to help millions of people live out their lives free from disability.

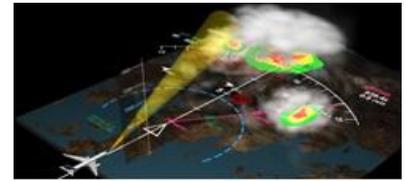
Delivery: Titan Arm seeks to fill a specific gap in the current exoskeleton market, and having such an inexpensive device enables us to reach a much broader audience of users. We have shown the product to a large variety of technology magazines and news agencies in order to give the product maximum exposure. This publicity has resulted in numerous people reaching out to us for more information about the device or potential collaborative future work. Although the device is not yet available to the public, this positive reception reinforces our initial hypothesis that there is a need for such a product.

Impact: Titan Arm embodies a vision to bridge the gap between engineering and medicine in order to integrate exoskeletons into daily living. Our team has advanced the state of exoskeleton technology by establishing the feasibility of a low-cost, portable, and lightweight solution for injury prevention and rehabilitation. Titan Arm's impact has extended around the globe, as demonstrated by the overwhelming response from individuals suffering from debilitating ailments, looking for a solution to regain mobility. We consider ourselves engineers, designers, and makers who are working to inspire and educate the next generation of innovators through scientific and educational initiatives.

Differentiation: The Titan Arm differentiates itself from other players in the market through its focus on the upper body and its low price tag. After studying market leaders, our student team pursued development of an exoskeleton that would allow robotically assisted upper limb therapy feasible for both in the hospital and at home. While existing robotic therapies cost over \$100,000, and are limited mainly to the full or lower body, our single arm solution totaled just under \$2000 in development costs. This low cost makes it feasible for a widespread adoption of the Titan Arm.

EXAMPLE #3

Category:	Transportation
Company:	Rockwell Collins
Product:	MultiScan ThreatTrack™
Snapshot Description:	provides atmospheric threat assessment capabilities for commercial aircraft
Website:	http://www.rockwellcollins.com/
Video:	https://www.youtube.com/watch?v=isnohgFdfPY



Thumbnail Description: MultiScan ThreatTrack™ weather radar delivers increased safety and efficiency to commercial aircraft. Advanced capabilities go beyond hail and lightning prediction, alerting pilots to cell threats and to turbulence levels. When thunderstorms grow ahead and below the aircraft, ThreatTrack’s Predictive Overflight™ feature warns the crew of cells in the flight path.

Concept: Timely and comprehensive weather information is critical to flight crew weather avoidance decisions. MultiScan ThreatTrack™ provides advanced automatic weather detection and threat assessment capabilities to the airline industry to enable safe and efficient flight operations. The ThreatTrack development relied on collaboration with NASA, Universities, Research Institutions and other partners, utilization of satellite data for modeling, thousands of hours of flight test validation and correlation with ground based radar and lightning networks. The result is a weather radar product that provides advanced easy to use weather information to the flight deck for safer and more efficient operations than the previous generation.

Value: MultiScan ThreatTrack™ provides airlines operational efficiency and cost savings by reducing turbulence-related passenger claims and aircraft damage. In a research project sponsored by the NASA Weather Accident Prevention Project, data examined over the past two decades indicates that turbulence resulting in minor or major injury has cost airlines anywhere from \$28,000 to \$167,000 per incident. With an average of 750 turbulence encounters per year, the resulting cost to the industry can be \$30 to \$60 million per year. Lightning and hail damage to aircraft can increase the related costs exponentially.

Delivery: Rockwell Collins has made a significant effort to engage media and customers with MultiScan ThreatTrack™. Several demonstration flights showcasing the features and functions of the system in the weather threat environment have occurred resulting in articles and videos. Rockwell Collins’ MultiScan ThreatTrack video provides a dynamic capabilities view, and the American Airlines Storm Chasing for Safety video features MultiScan ThreatTrack™. Articles have appeared in Aviation Week and the Associated Press regarding MultiScan ThreatTrack. An iPad® application has been created to demonstrate the features and functions of ThreatTrack.

Impact: MultiScan ThreatTrack™ provides unprecedented atmospheric threat assessment capabilities for commercial air transport aircraft. It is the first weather radar in the industry to feature two levels of turbulence detection—severe and ride-quality—which more accurately informs flight crews of the type of turbulence in their path. Based on a long heritage of aviation weather radar experience, Rockwell Collins engineers developed an innovative approach to detecting and analyzing weather phenomena and displaying adverse threats. The result of the research and development is a weather radar system that automatically makes optimum adjustments to maximize the “probability of detecting” thunderstorms during all phases of flight.

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ACCEPTANCE OF TERMS

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