



ORISE Summer Competitions for Students

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Energy Harvesting Engineering Design Challenge

For Rising 7th through 12th Grade Students

Submissions Accepted Beginning Friday, June 1, 2018

Submission Deadline Saturday, June 30, 2018

Harvesting renewable energy is an emerging field with many potential future career opportunities. ORISE wants students to get a small introduction to this field by designing an instrument or device that harvests ambient energy and transforms it into usable energy! Use the engineering design process to guide your creation beginning with identifying a problem and ending with a novel instrument that harvests and transforms energy! FIFTEEN prizes will be awarded—seven for the 7-9th grade category, seven for the 10 – 12th grade category, and one judge’s choice award!

Prizes for 7th – 9th grade winners:

Top 2: Solar Robot
Five Runners up: Solar car

Prizes for 10th-12th grade winners:

Top 2: Solar Robot
Five Runners up: Solar car

Prize for Judge’s Choice:

Solar Robot

Examples of existing devices/instruments that harvest energy:

- Wind turbine
- Thermoelectric generator
- Atmos Pendulum Clock
- Aditya solar ferry

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Machine Madness Engineering Design Challenge

For Rising Kindergarten through 6th grade students

Submissions Accepted Beginning Monday, July 2, 2018

Submission Deadline: Tuesday, July 31, 2018

Do you think you can design a machine? We want to know how you would design a machine that solves a problem important to you! Tell us your important problem and explain the engineering design process of creating your machine, and you could win a prize! TEN prizes will be awarded to students—five for the k-3rd grade category and five for the 4 – 6th grade category.

Prizes for the top five K-3rd grade winners:

Code-and-Go Mouse

Prizes for the top five 4th-6th grade winners:

Sphero 2.0 Robot

Examples of existing machines:

- Electric Motor
- Scissors
- Wheelbarrow
- Lawn mower
- Typewriter

**For more information and
to enter either competition, visit:**

<https://orise.orau.gov/stem/k-12/competitions-for-students.html>