

Plant the Moon Challenge

Grade Levels
PK-12

Educational Setting

In or out of school educators. It is important to have the same students throughout the program. Teams need space to house and grow plants for eight weeks.

Informational Webinar(s)

Jan. 29, 4 p.m.
[REGISTER HERE](#)

[Recordings on Iowa STEM's Website](#)

Award Provides

Access to the curriculum materials and competition platform. Good for one competition season (Fall or Spring. About six months).

PTMC Project Kit (one kit serves 10 students)

- Five Kg lunar or Martian regolith simulant
- Ten planter pots
- Ten PTMC stickers
- Materials safety flier
- PTMC Getting Started Flier
- pH materials
- PPE
- \$80 training stipend.

2025-26 STEM Scale-Up Program Summary

The Plant the Moon Challenge is a global science experiment, learning experience, and inspirational project-based-learning challenge. Students compete to see who can grow the best crops using lunar and Martian regolith stimulant. One kit serves 10 students.

The Plant the Moon Challenge is both a student activity and competition. Participants will be sent a Plant the Moon Activity Kit. Teams will use the Project Guide to define their own plant growth experiments, defining parameters such as the structure of the plant growth setup, amount of water used, and nutrients added to the regolith simulant to help support plant growth.

Teams submit photos, videos, and an experiment report. Best-in-show awards will be provided to teams with the best plant growth results and experimental design.

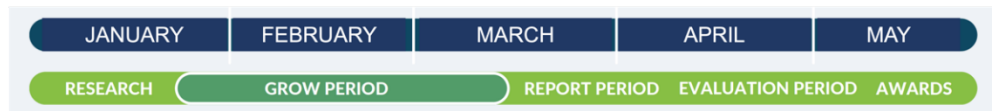
The fall opening symposium kicks off the season in mid-September with final project reports due in early December. The spring opening symposium kicks off the season in mid-January with project reports due in early April. Dates of program events will be provided with the Training Program in Jul/Aug.

Throughout the 12-week program period, teachers and their students are supported with a series of weekly engagements and four live virtual events connecting them to NASA subject matter experts, research scientists, and program staff to provide advice, guidance, and inspiration through each step of the program

Fall Challenge Timeline



Spring Challenge Timeline



Requirements to Implement the Program

- Educators must attend training to receive materials.
- Educator(s) must participate in the STEM Council Scale-Up Educator Survey.

Additional Cost(s) to Awardee During Award Period

All materials not listed under Award Provides section of this Fact Sheet that are specific to the student experimental design (seeds, alternative growing containers, etc.) must be provided by the educator/student.

Approximate Sustainability Cost(s) After Award Period

\$449 for 10 youth. Covers the standard registration fee for the team, project kit, and shipping.

Website

plantthemoon.com

Video

youtube.com/watch?v=0Jvzi8lba8U

Social media

Facebook

[@PlantTheMoonChallenge](https://www.facebook.com/PlantTheMoonChallenge)

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[@plant_the_moon](https://twitter.com/plant_the_moon)

Requirements to Implement the Program (continued)

- Timeline varies depending on learners. If students meet once a week for 30 to 90 minutes, the baseline experimental process is 12 weeks or 12 to 18 hours, which breaks down like this:
 - Weeks one to two are prepping and experiment design,
 - Weeks three to ten are planting and monitoring,
 - Weeks eleven and twelve are analyzing and reporting.

Iowa Standards Alignment

Engineering, Technology, and Applications of Science (ETS):

HSETS1: Involves designing experiments that assess agricultural technologies applicable in space. Students solve engineering problems while aligning with HSETS12 (Design and engineering process) and HSETS13 (Evaluating solutions).

Earth and Space Science:

HSESS3 (Earth and human activity): The program encourages exploration of sustainable practices for space agriculture, focusing on HSESS32 (Natural resources) and HSESS33 (Human impacts on Earth systems).

Life Science:

HLS2 (Ecosystems): Students explore ecological principles through hands-on experiments related to crop growth in simulated space environments, focusing on LS26 (Ecosystem interactions) and LS28 (Ecosystem dynamics).

Full Alignment

Professional Development

Duration:

Half day.

Date(s):

Training will occur July 15 to Aug. 15, 2025. Specific date will be scheduled after awardees are announced.

Location:

Virtual, live and synchronous.



To Learn More or To Apply: educate.iowa.gov/STEM/ScaleUp