WHAT IS THE SCIENCE OF AGRICULTURE CHALLENGE?

The 4-H Science of Agriculture Challenge asks youth to explore and develop science-based solutions to agricultural problems they have identified in their communities. Youth in grades 6 through 12 will work in teams of 3-5 to develop a project and create a presentation to share their results, findings, or created product. Participants attend a statewide event to present their projects. Projects are evaluated and judged. The top three teams are awarded scholarship money for post-secondary education. Youth work with a team coach and a mentor from the agriculture related field their project is categorized by. Youth also have a chance to connect with representatives from Kansas State University and the agribusiness community, who are eager to meet the next generation of leaders in agriculture and STEM.

WHY IS THIS IMPORTANT?

Agriculture and ag-biosciences are critically important to finding solutions to key challenges facing the United States, including economic growth, food security, human health and environmental sustainability. The U.S. is falling dangerously behind other nations in developing its future workforce of agriculture scientists, engineers, and technology experts. Young people in America are not prepared with the necessary science, engineering and technology workforce skills to compete in the 21st century workforce.

PROJECT TOPIC AREAS

The foundation of the Science of Agriculture Challenge projects are the Pillars of Agriculture Literacy, a framework developed by the American Farm Bureau and Foundation for Agriculture. The Pillars connect agriculture to a number of crucial topics in society and are broken down into six categories.

Projects should fit into one of the categories from the Pillars model that the Science of Agriculture Challenge connects to. Teams should use the pillars to help categorize the topic they would like to focus their project on and connect with experts in that field.

PILLARS OF AGRICULTURE LITERACY

- The Relationship Between Agriculture and the Environment
- The Relationship Between Agriculture and Food, Fiber and Energy
- The Relationship Between Agriculture and Animals
- The Relationship Between Agriculture and Lifestyle
- The Connection Between Agriculture and Technology
- The Relationship Between Agriculture and the Economy

SCIENCE AND ENGINEERING PRACTICES
Teams will use the Eight Science and Engineering Practices* to guide team projects. Teams are required to incorporate each step as a process into the development of their project. In their presentation, teams share how the practices were applied to addressing their issue. The practices are as follows in sequential order:

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for science)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

**SCHOLARSHIPS**

Each youth on the top three scoring team presentations at the state event will win scholarship money to use toward the college, university, or accredited trade school of their choice.

- **1st Place** teams of 3-4 youth receive $1,000 each. Teams of five each receive $800*.
- **2nd Place** teams of 3-4 youth receive $750 each. Teams of five receive $600*.
- **3rd Place** team of 3-4 youth receive $500 each. Teams of five receive $400*.

*All scholarship amounts listed are tentative amounts. Final amounts to be determined by sponsorships secured.

**ADDITIONAL RESOURCES**


**QUESTIONS OR COMMENTS**

Send a message to asollock@ksu.edu


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