



## Team-Based Challenge – Community Model

PROJECT OVERVIEW	
<b>Team-Based Challenge Title</b>	Plant Disease Detective
<b>Source</b>	Science Olympiad ( <a href="http://soinc.org">soinc.org</a> )
<b>Industry Partner</b>	<a href="#">Corteva Agriscience</a>
<b>Endorsement Area</b>	Agriculture, Food, and Natural Resources
<b>Problem to Investigate/Scope</b>	Teams will develop an understanding of pests and plant diseases that commonly affect food crops and create a year-round calendar of tasks to mitigate the effects of pests on plants and food production.
<b>Project Outcomes</b>	Students will use their investigative skills in the scientific study of disease and pests in botany and agriscience.

## PROJECT OUTLINE

Stage:	Topics/Events:	Timeline:	Deliverables:
Preparation	<ul style="list-style-type: none"> <li>- Set Expectations</li> <li>- Skill Development</li> </ul>	Week 1-2	<p>Complete the <a href="#">MY SO Plant Lesson</a> plan (you must fill out the form first) and <a href="#">slide deck</a> to build an understanding of botany and agriculture.</p> <p>Explore the resources on the <a href="#">Designer Genes Event Table</a>, including the Agriculture Career Pathways and Videos listed under "Resources and Links."</p> <p>Watch the <a href="#">STEM Session on Plants</a> to better understand college and career pathways in botany and agriculture.</p>
Project Plan	<ul style="list-style-type: none"> <li>- Analyze and evaluate data on a particular pest or disease that affects crops grown in the students' region of the state</li> <li>- Organize information and research on the pest or disease</li> </ul>	Weeks 3-5	<p>Take notes, study graphs, do background research on the pest or disease to better understand how it is identified, how it affects crops, the economic impacts of the pest or disease, and mitigation strategies, including chemical and non-chemical strategies</p>
Project Execution	<ul style="list-style-type: none"> <li>- Develop suggested calendar of actions for crop manager to avoid the disease or pest</li> </ul>	Weeks 6-8	<p>Create a step by step plan, from choosing crops/cultivars, preparing the soil for planting, planting and maintenance, based on the research and data that has been analyzed. This plan should be designed with the crop manager (farmer, agricultural scientist, urban farmer) in mind and should take into consideration cost, environmental impact and efficiency.</p>
Project Presentation	<ul style="list-style-type: none"> <li>- Develop presentation</li> </ul>	Weeks 8-10	<p>Develop a presentation for crop managers that summarizes the symptoms and impacts of the disease or pest and makes tangible recommendations for slowing and avoiding the detrimental effects of the disease or pest.</p>

This resource was created by [Education Systems Center at Northern Illinois University](#).

The Illinois Work-Based Learning Innovation Network (I-WIN) is designed to help employers, educators, and students leverage innovative models for scaling high-quality work-based learning opportunities in school districts and community colleges across the State. This network explores ways to create equitable opportunities for students through both in-person and virtual learning. For more information on I-WIN and additional work-based learning resources, visit [edsystemsniu.org/i-win/](http://edsystemsniu.org/i-win/).

To access a resource bank of Team-Based Challenge templates, visit [edsystemsniu.org/i-win-resources/](http://edsystemsniu.org/i-win-resources/).