Principles of Agriculture- Plant Science Scope and Sequence

Virtual Prior to CI/BriefCASE

Day	Time	Discussion Items	Activity and Deliverables **Check-Off Item*
Orientation	Virtual (Pre CI)	• General Session • Introduction of Host • Introduction of Lead Teachers • CASE Institute Expectations	• CASE Curriculum Access (MyCASE) • Google Classroom Access
Pre-CI	Complete prior to CI	• Lesson 1.1 A World Without Enough Plants	• Complete ASP Pre-Work Scavenger Hunt Google Form*

In-Person

Day	Time	Discussion Items	Activity and Deliverables **Check-Off Item*
Day 1 (In Person)	10:00 – 12:00	• Welcome/ Logistics • AOE CASE Navigation • Lesson 2.1 Understanding Soil Properties	• Activity 2.1.1 Testing the Feel for Soil* • Activity 2.1.2 Adding Structure • Activity 2.1.4 The Sponge Effect
	12:00 – 12:45	Lunch and Host Logistics	

Day	Time	Discussion Items	Activity and Deliverables **Check-Off Item*
	12:45 – 5:00	• Lesson 2.1 Understanding Soil Properties • Lesson 2.2 Soil Chemistry • Lesson 3.1 Mixing Media	• Activity 2.1.5 Organic Matter's Influence • Activity 2.2.1 What is the pH Problem? • Activity 2.2.2 Correction of pH Problem* • Activity 3.1.2 Calculating Needs
	Homework:	Pre-read Teacher Notes for following day (Lessons 3.2-4.5)	
Day 2 (In Person)	8:00 – 12:00	• AOE Concepts and Performance Objectives • Lesson 3.2 Hydroponics • Lesson 4.1 Cells: Life's Smallest Units	• Activity 3.2.1 Hydroponically Thinking • Project 3.2.3 If You Build it, They Will Grow* • Activity 6.1.2 Detecting Nutrient Problems • Activity 4.1.2 Examining Cell Structure • Activity 4.1.4 Cellular Respiration
	12:00 – 1:00	Lunch	
	1:00 – 5:00	• Lesson 4.2 The Radicle Root • Lesson 4.3 Stems, Stalks, and Trunks • Lesson 4.4 Leave it to Leaves • Lesson 4.5 Flower Power	• Activity 4.2.3 Root Cell Differentiation • Activity 4.2.4 Just Passing Through • Activity 4.3.1 Examining Stems* • Activity 4.4.2 Sugar Factory
	Homework:	Pre-read Teacher Notes for following day (Lessons 6.1-7.1)	
Day 3 (In Person)	8:00 – 12:00	• AOE Teacher Notes • Lesson 6.1 Plant Food • Lesson 6.2 All Wet • Lesson 6.3 Lighting It Up	• Activity 6.1.1 In Search for NPK* • Activity 6.1.3 Fertilizer Figures • Activity 6.2.2 Translocation and Transpiration • Activity 6.3.3 Dissecting a Rainbow
	12:00 – 1:00	Lunch	
	1:00 – 5:00	• Lesson 6.4 Chilly Lilies • Lesson 7.1 Plant Genetics	• Activity 6.4.1 Comparing Growing Locations • Problem 6.4.2 Forecasting a Harvest • Project 6.4.3 Forcing Bulbs to Grow • Activity 6.4.4 How Low Can You Grow • Activity 7.1.1 A Closer Look at Mitosis • Activity 7.1.3 Mendel's Genetic Studies*
	Homework:	Pre-read Teacher Notes for following day (7.2 to 8.1)	

Day	Time	Discussion Items	Activity and Deliverables **Check-Off Item*
Day 4 (In Person)	8:00 – 12:00	• AOE APP Modalities • Lesson 7.2 Pollination and Dispersion • Lesson 7.3 Kernels of Life	• Activity 7.2.2 Biotic Potential • Activity 7.2.3 Seed Storage • Project 7.2.4 Dependency of Animals • Activity 7.3.2 Seed Structures and Enzymes*
	12:00 – 1:00	Lunch	
	1:00 – 5:00	• Lesson 7.4 Plant Multiplication • Lesson 8.1 Pesky Bugs and Plants	• Activity 7.4.2 The Great Divide • Activity 7.4.3 Buried Alive • Activity 7.4.4 A Grafting Experience • Activity 7.4.5 Best Buds • Project 8.1.1 Cause and Infect
	Homework:	Pre-read Teacher Notes for following day (Lessons 8.2 to 9.2)	
Day 5 (In Person)	8:00 – 12:00	• AOE Materials • Lesson 8.2 Diving into Diseases • Lesson 9.1 Tools of Plant Production • Lesson 9.2 Planting Seeds of Fortune • Preview Webinar Topic (*Lesson 5.1 Sorting Out Plants*) • AOE: CASE Navigation -Final Points	• Problem 8.1.2 Crop Scene Investigation • Activity 8.2.2 Spying on Bacteria* • Problem 9.2.2 School Farm Proposal* • End of CI Survey • ASP Certification

Virtual Webinar (Optional – Open for All ASP Certified Teachers)

Day	Time	Webinar Topic
Virtual	On Demand	**Sorting Out Plants** • Take a deep dive into *ASP Lesson 5.1 Sorting Out Plants. This* lesson introduces students to classification and nomenclature systems. The activities help students understand the conceptual basis of classification and the formal process of naming and identifying plant species. Students examine the role of the genus and species name in plant nomenclature and conclude the lesson by creating a plant species. (https://www.youtube.com/watch?v=yb87m_8l0c0)