

Natural Resources and Ecology Scope and Sequence

Virtual Prior to CI

Day	Time	Discussion Items	Activity and Deliverables <i>*Check-Off Item</i>
Orientation	Virtual (Pre CI)	<ul style="list-style-type: none"> • General Session • Introduction of Host • Introduction of Lead Teachers • CASE Institute Expectations • AoE: CASE Navigation: Introduction 	<ul style="list-style-type: none"> • CASE Curriculum Access (MyCASE) • Google Classroom Access
Pre-CI	Complete prior to CI		<ul style="list-style-type: none"> • Unit 1-2 Review*

In-Person

Day	Time	Discussion and Demonstration Items	Activity and Deliverables <i>*Check-Off Item</i>
Day 1 (In Person)	9:00 – 12:00	<ul style="list-style-type: none"> • AoE: Concepts & Performance Objectives • Unit 1-2 Review • Lesson 3.1 Water Basics 	<ul style="list-style-type: none"> • Activity 1.1.1 My Initial Thoughts • Activity 3.1.1 Cycling with H₂O • Activity 3.1.2 Water Movement*
	12:00 – 12:45	Lunch and Host Logistics	
	12:45 – 5:00	<ul style="list-style-type: none"> • Lesson 3.2 Water Function 	<ul style="list-style-type: none"> • Activity 3.1.3 Bodies of Water • Project 3.1.4 Lake Ecology News • Activity 3.2.1 Factors of Water Quality • Activity 3.2.2 Water Quality Index Test* • Activity 3.2.3 Cleaning Water
	Homework:	Pre-read Lesson 4.1 – 6.1 Teacher Notes	
Day 2 (In Person)	8:00 – 12:00	<ul style="list-style-type: none"> • AoE: Materials • Activity 3.2.4 Running Watersheds (Demo) • Lesson 4.1 The Role of Air • Lesson 4.2 The Smog Has Lifted 	<ul style="list-style-type: none"> • Activity 3.2.5 Water Quality in Ecosystems • Activity 4.1.2 Cycling Through the Air • Activity 4.2.1 Particulates Matter* • Activity 4.2.2 Indoor CO₂ Concentrations • Activity 4.2.3 The Greenhouse Effect

Day	Time	Discussion and Demonstration Items	Activity and Deliverables <i>*Check-Off Item</i>
	12:00 – 1:00	Lunch	
	1:00 – 5:00	<ul style="list-style-type: none"> • Lesson 5.1 Energy of Life • Lesson 6.1 All Natural Flora • Activity 6.1.1 Exploring Biodiversity (Demo) 	<ul style="list-style-type: none"> • Activity 4.2.4 AQI and Me! • Project 4.2.5 Ecosystem Air Activity • Activity 5.1.1 Energy Transfer • Project 5.1.2 Carrying Capacity • Activity 5.1.3 Ecosystem Energy*
	Homework:	Pre-read Lesson 6.2 – 7.3 Teacher Notes	
Day 3 (In Person)	8:00 – 12:00	<ul style="list-style-type: none"> • AoE: Teacher Notes • Lesson 6.2 Flourishing Fauna • Activity 6.2.2 Adaptive Avian (Demo) 	<ul style="list-style-type: none"> • Project 6.1.2 Vegetation Releve' • Activity 6.1.3 Ecological Succession • Activity 6.2.3 Population Pressures • Project 6.2.4 Managing Populations*
	12:00 – 1:00	Lunch	
	1:00 – 5:00	<ul style="list-style-type: none"> • Lesson 7.1 Agricultural Stewardship • Project 7.1.3 Stewards of the Land (Demo) • Lesson 7.2 Timber! • Lesson 7.3 Digging and Drilling 	<ul style="list-style-type: none"> • Project 6.2.5 Focus on a Species* • Activity 7.1.2 Fertilizing Right • Activity 7.2.1 Value of a Tree • Activity 7.2.2 Calculating Board Feet* • Activity 7.3.1 Digging for Ore
	Homework:	Pre-read Lesson 8.1 – 9.1 Teacher Notes	
Day 4 (In Person)	8:00 – 12:00	<ul style="list-style-type: none"> • AoE: APP Modalities 	<ul style="list-style-type: none"> • Activity 7.3.3 Enhanced Oil Recovery • Activity 4.1.3 Measuring Air Temperature • Activity 7.3.4 Oil in the Environment • Problem 7.3.5 Separating Oil and Water*
	12:00 – 1:00	Lunch	
	1:00 – 5:00	<ul style="list-style-type: none"> • Lesson 8.1 Urban Sprawl 	<ul style="list-style-type: none"> • Activity 8.1.1 Carbon Footprint • Activity 8.1.2 Bartering Energy • Activity 8.1.3 Recycling Matters • Project 8.1.4 Landfill Decomposition • Problem 8.1.5 Waste Not
	Homework:	Pre-read Teacher Notes for following day	
Day 5 (In Person)	8:00 – 12:00	<ul style="list-style-type: none"> • Lesson 8.2 A Walk in the Park • Activity 8.2.2 Natural Destination Guide (Demo) • NRE SAE for All Foundational Checksheet • Preview Webinar Topic • AoE: CASE Navigation-Finals Points, PD Certificates • End of Course Reflections 	<ul style="list-style-type: none"> • Activity 8.2.1 Human Invasion* • Project 8.2.3 The Great Camp Out • Final Checklist Sign-off • End of Institute Awards and Certification

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

Day	Time	Webinar Topic
TBD (Virtual)	TBD 2024 – 2025 School Year	Unit 9 Past, Present, Future <ul style="list-style-type: none">• Take a deep dive into <i>Unit 9</i> where students learn about the policies, practices, and agencies responsible for conserving natural resources and wildlife. Revisit the opinion survey from the beginning of the course and see how students develop a multiple-use management plan for their ecosystem.