



Curriculum Units by Fellows of the National Initiative
2026 Volume VI: Asking Questions in Biology

Questions to Discoveries, Exploring Temperate Grasslands and Temperate Forests

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This inquiry-based unit introduces sixth-graders to temperate grasslands and temperate forests as interconnected ecosystems shaped by climate, soil, and disturbance. The goal is to encourage students to ask questions as they explore how temperate grasslands depend on recurring fire and grazing to help their stability, and how keystone species such as prairie dogs shape the surrounding food web. The unit then shifts to temperate forests, examining how reliable year-round rainfall and four distinct seasons produce a layered, tree-dominated ecosystem, and how adaptations like deciduous leaf drop, hibernation, and migration allow organisms to survive seasonal extremes. Throughout the unit, students will compare while building precision in scientific vocabulary while learning about biomes.

The three core strategies: graphic organizers, specifically cause-and-effect chains and Venn diagrams, help students trace ecological processes and distinguish closely related biomes. Building models, including soil profile models and food web models, give students hands-on tools for visualizing underground soil structure and interspecies dependency. Think-ink-pair-share routines push students to reason independently, then write before discussing with peers. Together, these strategies move students from memorizing biome facts toward genuine ecological inquiry, asking not just what a temperate ecosystem contains, but how its parts depend on one another to function

(Developed for Integrated Science, grade 6; recommended for Science, grades 6-8)

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