

Ecosystem Explorer

How do we define ecosystems?
How do abiotic and biotic factors change between ecosystems?
What is climate?

Objective

Students will explore an open space near their school or home. They will make observations and collect evidence of the biotic and abiotic factors and create an ecosystem guide. Students will compare their observations and evidence to build on their conception of ecosystems.

Preparation

Students should have an *Ecosystem Guide* worksheet. Students should have an open space near by, a backyard or garden.

Delivery

Review the *Ecosystem Guide* worksheet with students. Review what counts as evidence, what types may be found during this activity, and what scientific illustration is. Review how to do a soil type test and what info students should find about the climate of their ecosystem (and where they might look).

Vocab

Ecosystem—a community of biotic and abiotic factors that depend on each other and live within a certain area.

Abiotic vs. **Biotic**—non-living vs. living

Climate—The general weather conditions prevailing in an area over a long period of time.

Sit spot—a comfortable and safe place where you can sit for a period of time and observe nature

Evidence—information used to establish facts or support a viewpoint

Understory—the layer of vegetation under the canopy of trees

Debrief

Has there been any consistent observation across all student guides?

Has anyone found evidence of a biotic factor that no one else had in their guide?

Why are ecosystems so different?

How does water factor into your ecosystem? How does it enter, where does it go?

How is your ecosystem affected by humans? How is it connected to other ecosystems?



Theme

Ecology: Biodiversity & Food Webs

Age

All Levels

Duration

45-60 mins

Materials

Ecosystem Guide Worksheet, pencil

Standards

NGSS: LS2

EP&C's: P.2-C.A ; P.4-C.A