Ecosystems: Goals and Assessment Strategies

Concepts	
Goals	**Assessment Strategies**
An ecosystem is a community of organisms and its interaction with its environment. Lessons 1–17	Lessons 1, 7, 11–12, 16–17 ▪ Pre- and post-unit assessments ▪ Class discussions and brainstorming sessions ▪ Students' observations ▪ Notebook entries ▪ Class presentations ▪ Record sheets
Organisms can be categorized by the functions they serve in an ecosystem: producers, consumers, or decomposers. Lessons 1–12, 17	Lessons 1, 6, 12, 17 ▪ Pre-unit and post-unit assessments ▪ Notebook entries ▪ Record sheets ▪ Class discussions
Organisms in an ecosystem have dependent and interdependent relationships, which can be illustrated by food webs. Lessons 1–12, 17	Lessons 1, 7, 11–12, 17 ▪ Pre- and post-unit assessments ▪ Venn diagrams ▪ Webbing activity ▪ Class discussions ▪ Teacher's observations
Factors that affect growth and reproduction of organisms in an ecosystem include light, water, temperature, and soil. Lessons 1–14, 17	Lessons 1, 7–11, 17 ▪ Pre-unit and post-unit assessments ▪ Notebook entries ▪ Class discussions ▪ Webbing activities ▪ Oral presentations ▪ Record sheets
Natural and human-made events can "disturb" an ecosystem. Lessons 1, 7–9, 11, 13–15, 17	Lessons 1, 7, 9, 11–12, 17 ▪ Pre- and post-unit assessments ▪ Notebook entries ▪ Class discussions ▪ Record sheets
A pollutant is anything that can harm living organisms when too much of it is released into an ecosystem. Pollution is the condition that results when pollutants interact with the environment. Lessons 8–16	Lessons 9, 12 ▪ Class discussions ▪ Class presentations ▪ Class lists
Pollutants can affect the stability of an ecosystem; solutions can help minimize or alleviate the effects of pollutants. Lessons 10–16	Lesson 16 ▪ Class presentations ▪ Teacher's observations
Model ecosystems can be used to learn more about the complex relationships that exist on earth. Lessons 2–16	Lessons 2, 6–7, 11–12 ▪ Lab procedures ▪ Teacher observations ▪ Class discussions ▪ Notebook entries

Skills	
Goals	**Assessment Strategies**
Using a hand lens, pH paper, measuring devices, and other testing equipment appropriately. Lessons 2–12	Lessons 2, 6–7, 10–12 ▪ Lab procedures ▪ Teacher's observations ▪ Record sheets

Goals	Assessment Strategies
Conducting, recording, and organizing daily observations. Lessons 2–13	Lessons 2, 6–7, 10–12 ▪ Teacher's observations ▪ Record sheets ▪ Students' observations ▪ Lab procedures ▪ Notebook entries
Planning, implementing, and analyzing experiments and drawing conclusions from the results. Lessons 10–16	Lessons 10–12, 16 ▪ Planning and record sheets ▪ Notebook entries ▪ Lab procedures ▪ Teacher's observations
Making and testing predictions. Lessons 1–13, 17	Lessons 1–2, 6–7, 10–12, 17 ▪ Pre- and post-unit assessments ▪ Class discussions ▪ Record sheets ▪ Notebook entries
Identifying ecosystems as stable or disturbed and recognizing the causes of a disturbed ecosystem as natural or human-made. Lessons 1, 7–9, 17	Lessons 1, 7, 17 ▪ Pre- and post-unit assessments ▪ Classroom discussions ▪ Notebook entries
Reading for more information about ecosystems and pollution. Lessons 3–6, 8, 10, 14–16	Lessons 9, 16 ▪ Notebook entries ▪ Class lists ▪ Class presentations
Communicating information through writing, drawing, and discussion. Lessons 1–17	Lessons 1–2, 6–7, 9–12, 16–17 ▪ Pre- and post-unit assessments ▪ Notebook entries ▪ Class discussions ▪ Class presentations ▪ Record sheets
Applying previously learned information to analyze a problem and suggest solutions. Lessons 10–16	Lesson 16 ▪ Class discussions ▪ Class presentations ▪ Teacher's observations ▪ Record sheets

Attitudes	
Goals	**Assessment Strategies**
Developing sensitivity toward living things and understanding that human behavior can positively or negatively affect them. Lessons 2–16	Lessons 1–2, 6, 9, 11–12, 16–17 ▪ Pre- and post-unit assessments ▪ Record sheets ▪ Notebook entries ▪ Teacher's observations
Respecting evidence from an experiment and recognizing that evidence can inform a decision. Lessons 10–16	Lessons 10–12, 16 ▪ Record sheets ▪ Teacher's observations ▪ Lab procedures ▪ Class discussions ▪ Class presentations
Developing an interest in investigating ecosystems. Lessons 1–17	Lessons 1–2, 6–7, 9–12, 16–17 ▪ Pre- and post-unit assessments ▪ Class discussions ▪ Teacher's observations ▪ Notebook entries ▪ Lab procedures
Recognizing the importance of repeating experiments to get valid test results. Lessons 10–13	Lessons 10–12 ▪ Lab procedures ▪ Record sheets ▪ Teacher's observations