

## Soils: Goals and Assessment Strategies

Concepts	
Goals	Assessment Strategies
Soil contains particles of different sizes. Lessons 1, 3–8, 12, 14–17	Lessons 1, 8, 12, 14–17, and Additional Assessments 1, 2, and 4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
Soil may contain animals, plants, and their remains. Lessons 1–17	Lessons 1, 12, 14–17, and Additional Assessments 1–4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Teacher’s observations</li> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
Over time, dead plants become part of soil. Lessons 1, 2, 7, 10, 13–17	Lessons 1, 17, and Additional Assessments 1, 2, and 4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Teacher’s observations</li> <li>■ Individual student conferences</li> </ul>
Composting—especially with worms—is an effective way to recycle old plants and other discarded organic matter. Lessons 2, 7, 10, 13	Lessons 1, 17, and Additional Assessments 1, 2, and 4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Teacher’s observations</li> <li>■ Individual student conferences</li> </ul>
Sand, clay, and humus are three of the basic components in soil. Lessons 1, 3–17	Lessons 1, 8, 14–17, and Additional Assessments 1–4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Record sheets</li> <li>■ Class charts and discussions</li> <li>■ Individual student conferences</li> </ul>
Every soil component has unique properties that can be identified using simple tests. Lessons 3–8, 11, 12, 14–16	Lessons 8, 14–16, and Additional Assessments 1, 3, and 4 <ul style="list-style-type: none"> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
Different soils absorb water at different rates. Lessons 9–12, 14–16	Lessons 12, 14–16, and Additional Assessment 1 <ul style="list-style-type: none"> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
Many factors, including soil, affect plant and root growth. Lessons 9–16	Lessons 1, 12, 14–17, and Additional Assessments 1–4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussions</li> <li>■ Plant logbooks</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>

Soils: Goals and Assessment Strategies (continued)

Skills	
Goals	Assessment Strategies
<p>Performing simple tests to describe and identify soil components. Lessons 1–8, 11, 12, 14–17</p>	<p>Lessons 1, 8, 12, 14–17, and Additional Assessments 1–4</p> <ul style="list-style-type: none"> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
<p>Observing, recording, and organizing test results. Lessons 1–17</p>	<p>Lessons 1, 8, 12, 14–17, and Additional Assessments 1 and 4</p> <ul style="list-style-type: none"> <li>■ Teacher’s observations</li> <li>■ Record sheets and plant logbooks</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
<p>Interpreting test results to draw conclusions about soil composition. Lessons 1, 3–8, 13–17</p>	<p>Lesson 8, 14–17</p> <ul style="list-style-type: none"> <li>■ Class charts and discussions</li> <li>■ Record sheets</li> <li>■ Science journals</li> </ul>
<p>Reflecting on test results to predict how plants will grow in different soils. Lessons 9–12, 16</p>	<p>Lessons 1, 12, 16–17, and Additional Assessment 3</p> <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussions</li> <li>■ Science journals</li> </ul>
<p>Assembling and handling equipment for soil experiments. Lessons 1–12, 14, 15, 17</p>	<p>Lessons 1, 8, 14, 15, 17</p> <ul style="list-style-type: none"> <li>■ Teacher’s observations</li> <li>■ Science journals</li> </ul>
<p>Communicating results and ideas through writing, drawing, and discussion. Lessons 1–17</p>	<p>Lessons 1, 8, 12, 14–17, and Additional Assessments 1–4</p> <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Class charts and discussion</li> <li>■ Teacher’s observations</li> <li>■ Record sheets and plant logbooks</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
<p>Applying previously learned concepts and skills to analyze unfamiliar soil samples. Lessons 8, 14–16</p>	<p>Lessons 8, 14–16, and Additional Assessment 3</p> <ul style="list-style-type: none"> <li>■ Class charts and discussions</li> <li>■ Teacher’s observations</li> <li>■ Record sheets</li> <li>■ Science journals</li> </ul>

<b>Attitudes</b>	
<b>Goals</b>	<b>Assessment Strategies</b>
Developing enthusiasm for investigating soil. Lessons 1–17	Lessons 1, 16–17, and Additional Assessments 1 and 2 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Teacher’s observations</li> <li>■ Class charts and discussions</li> <li>■ Science journals</li> <li>■ Individual student conferences</li> </ul>
Appreciating the importance of soil for plant growth and animal life. Lessons 1, 2, 9–14, 16–17	Lessons 1, 12, 16–17, and Additional Assessments 1–4 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Teacher’s observations</li> <li>■ Class charts and discussions</li> <li>■ Plant logbooks</li> <li>■ Individual student conferences</li> </ul>
Accepting that a range of outcomes is valid. Lessons 1, 3–8, 11–17	Lessons 1, 8, 14–17 <ul style="list-style-type: none"> <li>■ Teacher’s observations</li> <li>■ Class charts and discussions</li> <li>■ Record sheets and plant logbooks</li> <li>■ Comparison of plants, roots, and compost</li> </ul>
Valuing the importance of recycling. Lessons 1–17	Lessons 1, 17, and Additional Assessments 1 and 2 <ul style="list-style-type: none"> <li>■ Pre- and post-unit assessments</li> <li>■ Teacher’s observations</li> <li>■ Class charts and discussions</li> <li>■ Individual student conferences</li> </ul>