

# Strategies to Create a Coherent Science Content Storyline

## Analysis Guide F:

### Making Explicit Links between Science Ideas and Activities

#### Part 1

<p>Activity Description</p>	<p>Students observe strawberries in a jar before and after rotting. They predict whether the jar of strawberries will gain mass, lose mass, or stay the same after the strawberries rot. They analyze data showing that the strawberries did not lose or gain mass.</p>
<p>Main Learning Goal and/or Focus Question</p>	<p><b>Focus question:</b> What happens to the matter that makes up wastes and dead organisms?</p> <p><b>Main learning goal:</b> Decomposers recycle matter by breaking down dead organisms into carbon dioxide, water, and minerals that plants can use again.</p>
<p>Supporting Science Ideas Intended to Be Developed through the Activity Setup, the Activity Itself, and the Activity Follow-Up <i>(Number Each Idea)</i></p>	<ol style="list-style-type: none"> <li>1. Organisms that eat dead organisms and wastes from living organisms are called <i>decomposers</i>.</li> <li>2. The main decomposers are mold (a type of fungus) and bacteria.</li> <li>3. Decomposers break down dead matter and wastes into small pieces.</li> <li>4. Decomposers take in and use some of these small pieces as food.</li> <li>5. Other small pieces are left behind as water, carbon dioxide, and minerals that enter the soil or the air.</li> <li>6. Plants can take in these small pieces of matter (water, carbon-dioxide molecules, and minerals).</li> <li>7. Plants use the carbon dioxide and water to make food.</li> <li>8. Plants use minerals in other ways to stay healthy so they can continue making food.</li> <li>9. Thus, decomposers change dead matter and wastes into forms that plants can use again to make more food.</li> <li>10. Plants make and use this food and pass it along to other organisms in the food chain.</li> <li>11. So matter is continually reused and recycled in food webs.</li> </ol>

**Part 2**

Criteria for Explicit Links between Science Ideas and Activity	Analysis of Explicit Links between Science Ideas and Activity		
<b>1. Setup for the Activity</b>	<b>Yes</b>	<b>No</b>	<b>Your Analysis of Links in the Setup</b>
a. Are students prompted to think or write about the focus question or goal statement?  b. Are explicit links made between science ideas and the activity?  c. Does the setup help students understand why they're doing the activity (e.g., what ideas they will learn from it)?			
<b>2. During the Activity</b>	<b>Yes</b>	<b>No</b>	<b>Your Analysis of Links during the Activity</b>
a. Do students think about science ideas during the activity?  <i>(Consider: Do students use ideas, or are they focused on procedures?)</i>  b. Do students know they're expected to connect science ideas with what they're doing in the activity?  <i>(Consider: Does the activity or the teacher help students connect science ideas to what they're doing?)</i>			

Criteria for Explicit Links between Science Ideas and Activity	Analysis of Explicit Links between Science Ideas and Activity		
3. Follow-Up to the Activity	Yes	No	Your Analysis of Links in the <b>Follow-Up</b>
<p>a. Are science ideas explicitly linked to the activity in the follow-up? If so, indicate what the teacher does or what the students do to link ideas and the activity.</p> <p>b. Are <i>students</i> involved in making links between the science ideas and the activity?</p>			

**Part 3:** Are the linked science ideas well matched to the main learning goal and/or focus question of the lesson? Explain your reasoning.

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