

Strategies to Create a Coherent Science Content Storyline

Analysis Guide F:

Making Explicit Links between Science Ideas and Activities

Part 1

Activity Description	Students make observations about three surfaces—carpet, tile, and sandpaper—and link their observations to ideas about why the toy car stopped at different distances on the three surfaces.
Main Learning Goal and/or Focus Question	<p>Focus question: What force makes a moving object slow down and stop?</p> <p>Main learning goal: When bumps on the surfaces of two objects touch, the push between them creates a force called <i>friction</i>. Friction is the reason that moving objects on Earth eventually slow down and stop.</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>	<ol style="list-style-type: none"> 1. There are bumps on the surfaces of most objects. 2. When an object is in motion, the bumps on the surface it moves over pushes against the object in the opposite direction of its motion. 3. The push of the bumps on the surface of one object is a force that causes another object in motion to slow down and eventually stop. 4. The force that pushes against motion is called <i>friction</i>.

Part 2

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

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 Follow-up
<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.
