

<i>Teacher encourages students:</i>	<i>Frequently</i>	<i>Sometimes</i>	<i>Rarely</i>	<i>Examples</i>
To explain: <ul style="list-style-type: none"> • what they are doing to solve the problem • why they are doing it. 		X		Teacher walked around room and asked groups questions while they worked on task.
To make logical arguments while explaining their reasoning.	X			Students reported to class on the playground layout they chose as the team's favorite and why they chose that one.
To explain why the answer they have found is reasonable.			X	Teacher did not ask students if the areas and perimeters they found were reasonable.
To try to make sense of others' mathematical thinking.	X			Each group member was asked to examine fellow teammates' playground layouts.
To ask useful questions to clarify or improve others' reasoning.		X		Students asked presenting team questions about their layout.

Note: We thank Judy Walsh, an instructor of math methods at the College of Staten Island, City University of New York, and a former supervisor and teacher of mathematics, for her lead role in developing the math tools.

Tool 24a: Teacher Behaviors Keyed to Accountable Talk

Explanation. A learning concept that has recently emerged from the accountability movement, and cooperative learning is accountable talk. It is based on the principle that classroom talk that is accountable to the learning community and to the academic disciplines is essential to learning. The following observation tools (see Tables 3.28 and 3.29) are based on the four ways that student talk should be accountable: accountable to the community (polite listeners), accountable to knowledge (use evidence), accountable to standards of reasoning, and accountable to standards of reasoning appropriate to a subject area. For further information on accountable talk, contact the Institute for Learning at the Learning Research and Development Center at the University of Pittsburgh or click on the following link: <http://ifl.lrdc.pitt.edu/ifl/>.

Tool 24b: Student Behaviors Keyed to Accountable Talk

Explanation. Once the teacher has analyzed and modified where appropriate his or her modeling of accountable talk, the observer can focus in on the students' use of accountable talk. This tool can serve as an assessment of the students as well as the effectiveness of the teacher's modeling (see Table 3.29).

Table 3.28 Teacher Behaviors Keyed to Accountable Talk

Class: 9-2

Date: 4/17/04

Time: Humanities Block

<i>Teacher Indicators</i>	<i>Response</i>			<i>Observations</i>
	<i>Yes</i>	<i>No</i>	<i>N/A</i>	
<p>Engages students in talk by:</p> <ul style="list-style-type: none"> • Providing opportunities for students to speak about content knowledge, concepts, and issues • Using wait time/allowing silence to occur • Listening carefully • Providing opportunities for reflection on classroom talk 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Teacher consistently waited for students to answer. You could see her thinking about the response. At the end of the class, group reflectors reported on the process in their groups.</p>
<p>Assists students to listen carefully to each other by:</p> <ul style="list-style-type: none"> • Creating seating arrangements that promote discussion • Providing clear expectations for how talk should occur • Requiring courtesy and respect • Reviewing major ideas and understandings from talk 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The class reviewed the guidelines for discussion before going into circles of small groups where a reflector and facilitator were chosen. No time remained at the end of class to review group work.</p>
<p>Assists students to elaborate and build on others' ideas by:</p> <ul style="list-style-type: none"> • Modeling reading processes of predicting, looking for key words, engaging prior knowledge, and so on • Facilitating rather than dominating the talk • Listening carefully • Asking questions about discussion ideas and issues 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The introductory whole-class discussion of the topic allowed the teacher to model the skills the students needed in their small-group discussions. She asked the class what reading process she had just used at least three times. No time to debrief about the discussions at the end of class.</p>
<p>Assists in clarifying or expanding a proposition by:</p> <ul style="list-style-type: none"> • Modeling methods of restating arguments and ideas and asking if they are expressed correctly • Modeling and providing practice at responding appropriately to criticism • Modeling expressing own puzzlement or confusion 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The teacher modeled all these methods in the introductory discussion and encouraged them as she walked from group to group.</p>

Table 3.29 Student Behaviors Keyed to Accountable Talk**Class:** Social Studies**Date:** 2/2**Time:** 2:15 p.m.

<i>Student Indicators</i>	<i>Response</i>			<i>Observations</i>	
	<i>Yes</i>	<i>No</i>	<i>N/A</i>		
Students are engaged in talk when they: <ul style="list-style-type: none"> • Speak appropriately in a variety of classroom situations • Allow others to speak without interruption • Speak directly to other students 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The whole-class and small-group discussions were very lively. Many students spoke, primarily to each other. Sometimes they interrupted each other.	
Students are listening attentively to one another when they: <ul style="list-style-type: none"> • Make eye contact with speaker • Refer to a previous speaker • Connect comments to previous ideas 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		It was often difficult to determine if eye contact was being made. Students usually referred to the person whose ideas they were addressing.
Students elaborate and build on others' ideas when they: <ul style="list-style-type: none"> • Make comments related to the focus of the discussion • Introduce new, related issues • Listen carefully • Talk about issues rather than participants 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Students work toward clarifying or expanding a proposition when they: <ul style="list-style-type: none"> • Model methods of restating arguments and ideas and ask if they are expressed correctly • Model and provide practice at responding appropriately to criticism • Model expressing own puzzlement or confusion 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Students actively reflected back what they heard and questioned what they didn't understand.	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

QUALITATIVE OBSERVATION TOOLS

Tool 25a: Detached Open-Ended Narrative

The observer records every person, event, or thing that attracts her or his attention, known as selective verbatim (Acheson & Gall, 1997) or script taping (Hunter, 1983). Whatever the observer considers significant is recorded. The