Introduction

We learn from exploring "what's on our minds." As we interact with people and texts, we search for patterns that connect our current experiences to past events, texts, and feelings. It is through these connections that we are able to make sense of those experiences, to create some kind of unity that allows us to understand the relationships across our experiences. As we share what's on our minds, however, we not only search for connections but we attend to difference. It is the "yet to be understood" that fascinates us and that serves our natural desire to learn. When we are faced with an anomaly, an unexpected occurrence or surprise, our attention turns to generating hypotheses to explain that anomaly. Once we reach a working solution, our attention turns elsewhere.

This tension in learning reminds us that knowledge is always tentative. The next anomaly could cause us to make major changes in our beliefs about how the world works. Tension keeps us alert, monitoring our experiences for ambiguities, stretching ourselves and our capabilities. Only when outside forces act coercively on learners do they disregard or refuse to deal with anomalies and their own connections because the price of pursuing them is too costly.
In schools, the focus on correct answers has led students to edit what’s on their minds. They only share the responses they think the teacher wants. They are sure no teacher wants to hear or values what they are really thinking about. We need curricular engagements that encourage students to explore the connections and tensions they are thinking about so that these can be examined in conversations with other learners. These engagements legitimize the messiness that is an essential part of learning.

### Materials/Procedures for *Anomalies*

1. Multiple copies of a reading selection
2. Four 3" X 5" cards or slips of paper per reader

1. Readers are asked to read the same selection or engage in the same experience. The selection or experience chosen should con-
tain issues that are potentially controversial or new for the particular students involved.

2. Students are asked to write one quotation from the selection on each of four 3" X 5" cards, either during or after reading. The quotations selected should be items that were new and exciting or that caused them problems as they read. They can also be points at which readers found themselves stopping to rethink or reread.

Students record the questions and issues that trouble them as they read the selection or engage in the experience.
3. As students finish writing the four cards, they rank order their four cards from most anomalous or surprising to least anomalous.

4. When students come back together in a group, each person reads his or her top anomaly to the group and shares why that item was surprising.

5. After sharing, discussion turns to why certain tensions were similar or different across the people in the group.

**Materials/Procedures for Graffiti Board**

- A large sheet of brainstorming chart paper
- A marker for each person
1. Students engage in some type of shared experience such as reading from a particular Text Set or shared book set, exploring a particular concept, or participating in a science observation.

2. During the shared experience, students sit in small groups at tables with a large piece of brainstorming paper in the middle of the table. At various points throughout the experience, students are invited to stop and write their observations and reflections on the paper in the form of graffiti. Each person takes his or her own corner of the paper and works alone, sketching and writing images, words, and phrases that come to mind. There is no particular order or organization to these images and words. They are simply added randomly to the graffiti board.

3. Students within each small group share their graffiti entries with each other and use these to identify issues and connections to begin a dialogue or to create a more organized web, chart, or diagram of their connections, either in the small group or as a whole class.

**Materials/Procedures for Webbing What’s on Your Mind**

1. A large sheet of brainstorming chart paper
2. Markers

1. After engaging in a shared experience such as a literature discussion of a text set or initial engagements in an inquiry focus, students take the time to share their initial responses, connections, and anomalies with one another through conversation. Sometimes this sharing is supported by engagements such as Graffiti Board, Anomalies, or Sketch to Stretch. As in any brainstorming engagement, all responses are accepted.

2. When students have shared what's on their minds and want to find an in-depth focus for dialogue, they create a visual web of their connections and anomalies. One member of the group serves as the scribe and writes the focus (title of the book, the concept, or the name of the experience) in the middle of the web. The group works together to create an organized visual web of the connections and anomalies that were shared as well as any new ideas.
and issues that are raised through the webbing. These items are not discussed, simply placed on the web. As suggested, related ideas and issues are placed together, the web, although greatly by the group and how much they have already group examines the web.

3. Once the web has been created, the group wants to discuss at their decision on what they preparing for that next meeting. Students are then responsible how they will prepare and may spend time talking discussion.

4. As the group continues to meet can middle of their group so that the web is always placed in the be referred to for other topics.
of discussion. New ideas and issues are added in a different color of marker as they arise. Not everything on the web is discussed in depth. The group selects from their web the issues they feel are worth examining together.

5. When the group finishes, they either add to their web in another color or create a new web showing the ways in which their thinking has changed over time. These webs can be used to share informally with the rest of the class or as the basis for deciding what ideas they want to present to others.

Establishing the Learning Context

These engagements depend on a learning environment that encourages students to take the risk of pursuing tensions and personal connections rather than looking for further support for beliefs they already hold. Depending on students' past instructional histories, they may hesitate to pursue anomalies and instead search for the "right" answer that they believe the teacher will ask them to provide. Students may need to be involved in these engagements several times to demonstrate that it really is okay to search for and think about what's really on their minds.

Variations

1. These engagements can also be used with a presentation or lecture, a piece of art, a musical composition, a dramatic presentation, or other form of communication. As students listen or observe, they write down their anomalies and connections.

2. Students can record their anomalies or connections on a worksheet highlighting that these come from what's on their minds.

3. Students can be asked to write about an experience that "caused them to think." This invitation gives writers the space to formulate as well as to generate possible alternatives for responding to a problem. When students share these pieces of writing,
others will be able to follow the mental processes of the writers to see how they resolved the tensions they felt while thinking about possible responses.

References