Lesson Design - The Logic of Sequencing

I have been talking a lot recently with a colleague about the logic of sequencing in classroom activities and assignments. As we have talked I have come to see more clearly that large part of what I have come to see as the art of teaching critical thinking - or any other subject - resides not just in the design of lessons, but in their sequencing. A poorly-designed sequence will give the students the sense that this happens and then that happens and then something else happens, with no apparent logic or connection. In a well-designed lesson sequence, students will know - or at least be given reason to believe - that there is a logic to what they are doing and why they are doing it. Even if they don't completely understand the logic while they are engaged in the sequence, if they sense a connection, then each part of the sequence strengthens the other. For example, if students know that a group discussion activity is really a rehearsal for a writing assignment to be given later, they may pay a different kind of attention to what is being said in the group than if their sense is that there will be no followup.

The logic of any particular sequence is inevitably shaped by the assumptions and intuitions of the teacher, which may in turn by shaped by any number of factors including (but not limited to) the teacher's personality, previous teaching experiences as a student, previous experience as a teacher, and goals for the course, as well as such external factors as departmental or parental expectations, community demographics, and so on. More important yet are the needs of the students and the interactive dynamics of each particular class.

As a teacher of critical thinking within the context of English, I have plenty of assumptions of my own, including the following:

• The most important goals of education are not content goals but process goals. You don't judge how well-educated people are by what they remember. You judge them by what they know how to do, and how well they do it. As B. F. Skinner says, "Education is what's left over after you've forgotten what you've learned."

• My students don't need to know what I think. They need to learn how to articulate what they think. A corollary assertion is that direct instruction - that is, lecturing - is the most efficient and least effective method of instruction.

• Students are inherently interested in themselves and in one another. Activities and assignments which are linked to their interest in one another are more likely to go over well.

• Students learn in lots of different ways. Some learn visually, some learn interactively, some learn by talking , some learn by writing. Too much of any one mode of instruction or interaction in a classroom is deadening.

• Being a critical thinker means being aware of one's own thinking: what is shaping it now, how effectively it is proceeding, whether it is working. The goal of CT instruction is to provide students with the ability to monitor themselves in process, and to adapt or change the process when it's not working.

• Ideas don't appear of out a vacuum. The "aha!" moment doesn't just happen. (Well, perhaps once in a great while it does, but it's not the norm.) Ideas emerge from sustained thought, dialogue, and interaction. Some students know how to ask good questions and brainstorm answers. Many do not. All can benefit from regular practice in the process.

• From a CT perspective, writing is not simply or most importantly a vehicle for conveying thought. It is

also a perhaps the single most powerful for generating thought. Students need to be given lots of practice in learning how to use this tool effectively.

All of these assumptions play a role in shaping my point of view as a teacher, and play a role in determining how I set up a sequence of lessons. Here, for example, is a hypothetical - but not atypical - sequence of events in my classroom. It assumes that the students have come to class having completed a common reading:

Day One:

1) At the start of class each student is asked to write down two **relevant**, **significant** questions about the reading.
2) Students share the questions they have written with a partner (or, depending on class size and time available, two partners) and discuss them.
3) Are they the same? Are they different? How? Between them they should agree on one question to share with the class.
4) One student from each pair of partners goes to the board and writes the question.
5) The students are given three minutes to scan the list of questions and decide individually which ones are in their judgment most significant and most relevant. (This is how we will decide the order in which we will address the questions in class discussion - most significant questions first.)
6) I poll the class. Each student is allowed to vote twice. I read each question on the board and students who have voted for that question raise their hands. I record the votes.
7) I tell the students that at the beginning of class tomorrow they will have a written quiz in which they will be asked to write a **clear**, **precise**, **plausible** answer to one of the questions listed on the board. The question will be chosen at random from among the top three (or four, or five) vote-getters. The class discussion about to take place will be a chance to brainstorm answers, share ideas, think through the possibilities.
8) The remainder of the class is a Harkness discussion in which I do not take part. Students work through the questions, considering possible answers.
9) If at the end of class the students need any additional information or need to think through the questions further, they can do that work on their own for homework. They have to be prepared to answer any of the questions, but they will actually be asked to answer only one. They don't know which one (and, of course, neither do I.)

Day Two:

10) At the beginning of the class I bring in a four or five sided die and roll it to see which question they will answer. (Any other form of randomization would work as well: pulling numbers out of a hat, drawing from a deck of cards, whatever.)
11) Students take the quiz, writing out the answer to the question in class. Sometimes I'll give them a file card and ask them to limit their answer to what can fit on one side of the file card.
12) We return to the text and approach it from another point of view. I ask them to consider the possibility that while everything they have said so far is true, it doesn't get to the heart of the matter. Their task is now to consider how to get to the heart of the matter. I ask them to work in groups of four for ten minutes to come up with an action plan for their group: what process can the group design that will allow them to go deeper.
13) The groups share their plans orally.
14) The groups now have five minutes to decide whether to use their original plan, borrow one from another group, or come up with a new plan that combines features of both.

15) The remaining fifteen or twenty minutes of class the students try out their plan: they try to arrive at a deeper understanding of the text using the process they have selected.
16) Homework assignment: Write a reflection paper in which you discuss your group's work today: what your group did, what conclusions you came to in the group, whether the process satisfied you personally, why or why not, anything that in retrospect you would do differently if youwere starting this process over.

Day Three:

17) Collect the homework, and hand out a sheet on which you have transcribed four of the answers to yesterday's quiz. (I usually type these up using selections from another class, and without names on them.)
18) Students must read the four sample responses and rank order them in terms of their overall effectiveness. Which one is, in your judgment, the best answer? The second best, and so on?
19) Students then meet in small groups and compare rankings. Tell which one you picked as best, and explain what you see in the piece that you like. See if the others in your group agree. Then see if your group can agree on the number one choice. In five minutes I will ask your group to report. If you agree, tell which one you have picked and why. If you disagree, report on the nature of your disagreement.
20) Debrief: Project a transparency of the sheet on the board. Ask for reports from each group and collate the results, listing various individual criteria as they emerge.
21) There is now a list of criteria or standards for this assignment on the board. As you did yesterday, ask the students to scan the board and decide on which two of the indicated criteria are most relevant and significant. They get to vote twice. Ask them to write the prioritized list in their notebooks.
22) Lots of ways to go here. Hand back their first drafts ungraded, ask them to re-draft the answers in the light of the new criteria, and then take the papers home and grade them, using the rubric generated in class.

In summary, this three-day cycle of activities integrates reading, writing, thinking, and speaking in ways that are interconnected and self-reinforcing. Each of the small group discussions, for example, leads to another step in the overall process, at the end of which there's a payoff. Sustained engagement in the process is self-rewarding. Students who have followed the whole process attentively should have a very good sense of what is expected, and the grades which will ultimately arise out of the process should be satisfying both to the students and to the teacher. In fact, the grade becomes at least in part a means of verifying or authenticating the process understandings the students have been working to master. Notice that I have said nothing about the content of the reading. It simply doesn't matter. Whatever content is at issue will be covered in some depth as a result of the design of the process: having the students ask good questions, brainstorm through the answers, articulate their ideas, set standards of excellence, and work their way toward meeting the standards they have set for themselves.
share then revise their writing with those standards in mind.