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From a distance the greenhouse dominates the landscape, but from closer range its strength diminishes. Wind whistles through its unfinished walls, and vacant squares await glass fillings. Inside, unopened seed packets and clusters of bulbs huddle next to stacks of empty clay pots, and sacks of peat moss sag against the wall. Nothing green stretches toward the sun from sawdust; nothing living inhabits this glare. What will it take to turn this structure into a productive greenhouse?

For me, the greenhouse image conveys the essence of **journals** in a writing-to-learn class. My students/gardeners use journals to store their work in progress. Conditions both external (from the teacher) and internal (from the writer) provide the development of thinking. The journal is not a diary or a place to put already formed ideas. Instead, the journal develops ideas from one nub of growth to a garden of observation, reaction, analysis, and evaluation.

In all my classes the course journal addresses the following objectives.

To encourage students to become independent thinkers directly involved in and aware of their learning

To encourage students to be creative thinkers who develop new connections rather than memorize "facts"

To encourage students to use writing as a process for discovery and clarification of ideas

To encourage students to build trust in one another and accept and appreciate the differences of opinions

To encourage students to learn that writing is thinking and to expose them to the thinking of others through sharing writing orally

Achieving these objectives with a course journal takes time. Students need to learn how to be gardeners and to develop the trust and respect essential for self-confident writing. From the beginning, students need to know that when they write in their journals, they are actively engaged in cultivation of thought. Throughout the course I continue to refer to the greenhouse, complimenting them on the "seeds" for potential growth and gently admonishing them for a crop of "weeds."

This chapter contains three sections. The first deals with community building to develop trust in the classroom and respect for others' opinions. The second section deals with specific writing-to-learn activities used during the first ten minutes of class, and the third section develops a lesson using a sequence of journal assignments.

When the basic concept of greenhouse/journal has been established, we use the journal daily. Then I introduce this statement from Richard Eastman's *Style:* "Writing is a social act. It is carried on with readers and because of readers. The presence of your reader—possibly an embarrassment at first—can become your greatest stimulus."

Sharing journal entries allows students to learn from one another's perspectives, gives them responsibility for their thinking, allows them to respect each other's ideas, and encourages active involvement in their own learning; they cannot be passive. Even though we discuss these ideas in the beginning, the journal begins to have more relevance as students actually experience their audience. The sense of community that fosters this sharing takes time to establish, and during the first month I emphasize activities and experiences to encourage students' enthusiasm for sharing. (For further discussion of classroom atmosphere, see **community building** in the Glossary.)

As sharing becomes more comfortable, I request students to read from their journals, always with the option that they may "pass." Obviously, passing every day is not acceptable, and students use that privilege only occasionally. I usually do not collect journals but evaluate this oral sharing with a grade in my gradebook.

As students write in their journals, I write in mine and share when they want me to. Usually students are pleased to see me write. "If Mrs. Juell takes time to do this journal writing, then it must have some value for us," commented a student in his own journal. I was made even more aware of the impact of my journal sharing when one of my students at the end of the year recalled my entry on the funeral of one of my former students and my subsequent confrontation with the frailty of life. After hearing my journal, he developed an entry explaining what he considered important in his own life and to whom he needed to be kinder. In recalling this journal entry later in the year, he said, "It was then I knew I couldn't just think of myself anymore. I wonder if

this is what it means to grow up." I also know that sharing my journal matters when the description of my first black eye corresponds to many of my students' experiences and they see the universality of childhood wounds and traumas. Consistently I find my own journal sharing makes a difference to my students and to their own understanding.

Another important part of the sharing is to have students hear good examples of a writing-to-learn strategy from their classmates and to realize that variety is not only acceptable but it is encouraged. For many students having the exact answers given to them is comfortable; they can write them down, memorize them, and then recite them on a test or essay, never questioning the material, never thinking about the implications of the information. I want them, instead, to be motivated and excited by the connections they are able to make on their own when they begin to question, evaluate, and resolve.

Also, in journal sharing the audience motivates the writer to think through an idea. In the sample below, Annie Strawn begins her entry addressing a certain reluctance to read because she feels competition to be more entertaining. But in the development of this entry she unexpectedly confronts the questions of writing to express her own thoughts regardless of their entertainment value. Ending the journal entry she clarifies her understanding of the writing process. This analysis began as a tentative series of questions and ended with a clear statement of what she needs to do in order to write well; she must write what she believes and thinks in a style appropriate to her.

The time has come again when I or we the class must probe our minds to come up with an original journal entry. I read my entry Monday. I didn't want to, but did because I have passed all my chances to read before. I don't like reading my journal entries because I feel they aren't entertaining to my audience. I can't entertain a audience with my writing, or should I say can't? Maybe I can, writing just doesn't come as natural to me as it does to some of them. There are some in my class that have an entertaining "style" to their writing and their audience enjoys listening. They were born with a writing talent. Writing is a talent as is music, but a person tends to believe that writing takes more brain power than music. This is true to me, only because music comes easier to me than writing. But to those that have natural writing talent, do they believe that music takes more will power? What an audience wants to hear and what I want to write are two different things. What does an audience want to hear? If I go about writing to an audience that I don't have anything in common with, I lose my inspiration to write anything, because I don't know them and I'm trying to please their ears. Now, comes the question: What do I want to write? I want to write something that tells me that I have sorted out the

many cobwebs and mazes that lay deep in my mind. I want to express on paper my thoughts that no one else can see in my head. If I write to please an audience, I lack any individual or independent style, because I have not written to please myself, but only to please those who don't know me.

Annie Strawn

After she read this entry, I discussed with the class those factors which made this an excellent example for the journal/greenhouse. Annie had stated her uncertainty and as she wrote, she clarified and justified what she wanted from her own writing. Through this writing she developed a self-confidence which wasn't apparent when she began. The advantage of classroom sharing is that it enables the teacher to point out and support strong examples of writing/thinking.

So far two factors have been established. First, students must be comfortable with the greenhouse/journal concept of using writing as a process and catalyst for thought. Secondly, students must understand the sharing process and be willing to participate. Once those two positions are established, specific writing-to-learn strategies can be introduced and emphasized. Students in my classes write every day for ten minutes at the beginning of the period. Usually I introduce a writing technique (such as **clustering, free writing,** or **lists**) which generates the seed thoughts, provides mulch, and suggests future blossoms. Once they feel comfortable with a strategy by sharing and discussing strong examples, I use that technique as part of the lesson for the day. Other chapters will develop in detail the use of writing to learn with specific course content. What I want to discuss here is sequencing this ten-minute writing and applying it to all stages of the writing process.

Lists

Even before they get to class, students are familiar with lists, even though they usually have not been timed or asked to write nonstop. Generating a lot of material enables them to realize one item produces another, and the longer they write the more complex their items become. There are other advantages of beginning with the list as a thinking mode: everyone has success with it; all students are able to acquire a body of material; some of this will contain seeds; some will be weeds. As students go over their lists, they are able to see the distinctions between noteworthy and not so noteworthy elements. In fact, other students in the class will point out particularly special parts of a list that has been read. The self-confidence which emerges from the listing leads students to choose this kind of journal writing when they are given the directions "write for ten minutes."

Free Writing

Kim's free writing struggles at first with the blank page, but she pushes herself past the intimidation to develop a list of clichés. Given enough time students are able to pass the "weed" stage in a journal entry to substantial writing with purpose as Kim does by focusing on clichés in language.

Kim Dunham

Trying to think of something to write all I see is a blank sheet of note-book paper staring me in the face.

I know I'll make a list of clichés.

Oh boy, I can't think of one, maybe if I . . .

O.K. I've got one.

Time flies when you're having fun. Before I go on with my list I would just like to say, "I love your hair band Lori, elephants are my favorite!

Number 2—on, no, I'm stuck again, that's it "stuck"

He's an old stuck in the mud.

I'm sorry this is so short and stupid. And yes, Mrs. Juell, I am apologizing! For some reason today feels like a Monday to me. Number 3 as quiet as a mouse

as quiet as a mouse go fly a kite easier said than done over the hill what's a nice girl like you doing in a place like this fat as a cow I couldnt have done it better myself skinny as a rail better late than never, huh Jenny? stiff as a board

From listing I move to free writing. Some students want to take free writing as an invitation to talk only about the weather, how bored they are with school, or what they are going to do after school. But the potential of the free write is, as Susan Jenkins reveals, the honest and aware sense of what can happen between the writer and the thought.

My Swedish friend and I sat drinking coffee after the movie. We talked about each other, things that have happened, things we want to happen. It was like one big free write. Fragmented sentences, unfinished thoughts . . . but still each of us knew what the other meant . . . honest, open . . . I guess you would call it aware.

In another version of this free writing Michelle develops a descriptive image out of having to come to school on a dark, miserable winter day but instead of complaining about disliking to get up, she approaches it with descriptive flair using the concepts of making ideas specific, the lesson we had been working on for a week. Here she is able to reconstruct and formulate her experience into a rich descriptive passage.

Michelle Hurst

The alarm clock ringing loudly against my sleep. The warmth of a hot shower pouring over my goose bumps. The soothing liquid orange juice melting the crunchy toast in my mouth. The wind and rain water blotching the street. Bushes and trees swinging in the breeze. Tall shadows of lamp posts beating their light into the cement. Fluffly dark clouds churning through the sky...

Screaming bus brakes . . .

Thudding feet finding room to sit. Steady rumble of motor. Screaming bus brakes . . .

Thudding of feet as they find their way off the bus. More wind.

The school doors open and out floods the heat of the morning.

Gone with that terrible wind.

Free writing allows students to choose topics that seem relevant to them at that moment and many times in addressing that topic, they realize through the writing process that they have solved a problem or come closer to a solution. Steve Joy begins with the frustration of not making his time in track. As he explains what has happened, he stops in the middle by saying "I can't believe I just figured out my problem." From that point the thinking becomes the solution. The writing process has allowed him to question, to discover, and to resolve a problem.

Nice day, says Steve. I am not going to Pasco!! Well I can't say I didn't expect it. My consistent 2:09 job is not cutting it. Rob has done a 2:07, 2:08, 2:17 for a 2:12 average. I will really have to get mad and get my times down. I lost my concentration when Frank passed me at the 480m pt. I even forgot that I had planned to pick my pace up on that corner. I felt like quitting at the 600m pt. and thought to myself, "I can't hold this pace." Well at the 700m pt. I decided I wasn't through and decided to kick. This lasted about 10 steps, then I realized it wasn't getting me anywhere so I went back to the usual. I didn't care about the guys in front of me but instead the guys in back of me, which seems to be a totally negative attitude. I can't believe I just figured out my problem. I'm a positive person with a positive outlook on life and while I've been racing the negative side seems to appear. I never knew I had a negative side until last week when a guy passed me at the line. I saw my frustrated side of my negative side. Yesterday I wasn't frustrated just a bit disappointed. Well on to a positive thinking for next week's race.

The free write strategy requires enough confidence to let the words and ideas push their way through the pen onto the paper. "See where the writing will take you and what you realize when you get there" takes an adventuresome gardener/journal writer. Many students beginning the journal need much more direction until they develop a sense of confidence in themselves and what the writing-to-learn strategies can do for their awareness, concentration, and discipline for thinking. Mike

Getty uses the journal write to develop a rationalization for running out of paper. Even though he discusses his problem, he uses the style and vocabulary of the lawyer/narrator from "Bartleby the Scrivener" by Herman Melville, a story we had just been studying that week. The free write gives him the opportunity to "fool around" with the tone and style of the story.

I am writing my journal on a 8 1/2" by 11" piece of notebook paper with three holes, 32 vertical blue-green lines and one horizontal red line. The reason why I am doing this is because the journal that I normally write in is full of previous day's scrivenings and thereby has no parchment left to scrawl my thoughts of the day. I should have bought myself a rather well-stocked spiral notebook with many pieces of paper in it because then it would last much longer and I wouldn't be reduced to slouching over and scribbling this unimportant statement on this piece of compressed pulp with my shaft of graphite encased in wood. It is possible if not probable that I will purchase another collection of paper before the morrow. If not, my dwindling supply of paper will be exhausted and I will be reduced to twiddling my thumbs, drawing stupid pictures on my pee-chee, and daydreaming during the first ten minutes of Accelerated Senior English.

This is an exceptional entry in many ways. Mike has listened to the lawyer's voice in his reading of "Bartleby" and developed an obvious sensitivity to the syntax and rhythm of Melville's prose. Faced with the problem of no paper, he begins in his own voice but by the second sentence has slipped into the tone of another character not his own. He continues by parodying the situation knowing that his class audience will appreciate the humor, and gentle but effective way to make fun of the lawyer and the Melville assignment.

Along with free writing and listing opportunities, **focused writing** allows students to focus on one idea and explore its potential for new understandings. Not all focused writing need begin with quotations, but I have found the quotation does give students a point from which they can agree, disagree, or expand. Theodore Roethke's statement "I cannot be human; I haven't the time" is a striking example. In eight words, he condenses what it means to be inhuman and by implication what it takes to be humane. Bob Flick reacts by confronting the effects of not taking the time to give. His last statement reveals newfound maturity. His writing/thinking process involves a recollection of the past and a resolution for the future.

"I cannot be human; I haven't the time." I feel like this applies to me sometimes. Sometimes I have so many things going and so get involved in certain things that I forget or neglect to do the little things that are important to me. I remember last spring when I was involved in three different plays at once. I had one rehearsal in the morning before, one during third period, and one at night. At the same time I was seeing my adopted grandmother, but as I got more exhausted I visited her less and less. When I found out that she died, I had to reevaluate what I wanted out of life and what was important to me.

Free association is another writing-to-learn strategy important for helping students to make connections. They begin with one word and see where that word takes them. The pleasure of this associative thinking is the element of surprise; when students begin writing, they do not have any idea where they will go. After journals are written, sharing increases the students' appreciation for the variety of possibilities with just four words, because each student makes a totally different set of connections. Given four words, students are to use all of them in a narrative; if students want to write a poem or develop exposition, they may, but I encourage them to try narration when they begin this strategy. Most writing that students do in their classes is confined to expository prose; free association gives them an opportunity to make different connections with ideas and increases their ability to see new relationships. Marian has taken the four words/phrases, I put on the board: fork, one kernel of popcorn, shower curtain, and Elements of Style, to deal with the universal frustration of having "the munchies" with nothing in the house to satisfy this hunger.

I got hungry last night and decided to find me some grub to eat. I get that way you know. So I checked in the kitchen to find nothing there. I searched through the cupboards and cabinets but there was only air and a couple of dirty forks. This was not a joyful sight for me. My tummy was growling and I was missing "Hill Street Blues." Frantically I tore into the miscellaneous drawer. The only food in there was one kernel of popcorn, green and moldy. I remembered that Mom put the left over Halloween candy in a sack above the fridge. Someone has swiped it all and left nothing but an overused copy of *Elements of Style*. I could hear the end of the commercial and the show starting. I screamed and grabbed a knife. I flung myself into the bathroom and tore down the shower curtain. I shoved this into the microwave with some floor tile and made some nachos.

Free association promotes the use of voice and sense of pacing. With practice, students avoid squeezing all four words into the first paragraph; instead they develop a feeling for timing of characters and conflict. Marian establishes her character's voice in the first sentence and maintains it through to the last line.

Throughout the first few months of the semester I introduce additional writing-to-learn strategies which students have an opportunity

to practice during the first ten minutes of class. As they share, I am able to comment on qualities which show thought. Steve's entry, written in response to a **guided imagery** where the directions were to "imagine yourself in this seat in another place," develops an image of being in the cockpit of the airplane. He carefully constructs an event, distilling important elements in preparation for takeoff. As he continues to write, he presents problems in vibration which he solves by adjusting the throttle. In just a short amount of time he is able to select and emphasize cause and effect relationships.

Steve Arbaugh

The seat is comfortable, not the recliner at home, but it's okay. Another seat like yours is on your right. First things first—seat belts and shoulder harness. Now we can begin the starting procedures. All electrical systems off, radios off, fuel on left, mixture rich, cut heat off, master on to 'up' prime twice, make sure everyone is clear, and push the starter button. The starter engages, pushing the big engine around slowly at first, then faster. When it catches, the whole frame vibrates. Adjust the throttle so it runs a little smoother. Oil pressure is in the green, oil temp is moving up, switch mags to both, the battery is charging. The sound of supersonic gyros just starting to spin fills the cabin. Turn on one of the radios to warm it up. Checking wing clearance, we begin to taxi.

Another writing-to-learn strategy used during the ten-minute journal writing is the **creative definition**. This activity asks students to invent definitions for words unknown to them.

In the following example Susan begins with a definition, develops its supposed etymology, and formulates other grammatical forms of the word, and ends with a form that has restricted meaning. Susan Jenkins

Jicama: (pronounced hic'-a-ma)

A word of exclamation used to tell your mother you disapprove of a food, job or curfew.

Once three separate words "jic", meaning a show of disgust, and "a Ma", as in "ah, ma, why do I have to do this?"

Jicama should be spoken in a distasteful tone, and is only used properly by a Mexican child.

It originated when an Aztec boy first tasted chocolate unadulterated by sugar. The bitter taste made him exclain "jic . . . ah ma, do I have to eat it?" and this contraction was now in existence.

Since then, all signs of contractions have been disposed of, and it has become a word accepted by authors, professors, scholars and poets alike. Especially those authors specializing in Hispanic literature and dialect.

Other forms:

Jicamed—what a mother has been after being faced with "jic . . . a ma!" $^{\prime\prime}$

jicamaly—other phrases of complaint can be done this way.

jicamation-the act of "jicaming."

Slang—just a jic-a-man, used in New York, Los Angeles, and Dallas. Street lingo usually used against the police.

Students do not know the dictionary definition of the word. After finding out that jicama is a crunchy white root vegetable, they are disappointed. Their definitions, based on the sound and structure of the word, formed elaborate connections not inherent in a vegetable definition.

Another writing strategy, the **metaphorical question**, is one of the most difficult for students because it requires them to make unusual connections between two seemingly unrelated elements. It is a strategy that needs more practice than others, and I begin with a simple relationship—"if you were a breakfast cereal, what would you be and why?" This helps students think in comparative terms with familiar subjects. Later they use metaphorical questioning for evaluation. When students were two weeks away from their research paper deadline, I asked them to develop a ten-minute journal entry on "if your research paper were an animal, what would it be?" Kendall's comparison evaluates her writing. In comparing the erratic actions of the rabbit and her own work, she realizes she needs to work for depth and substance to eliminate "bugs and dirt."

Kendall Couch

If my research paper were an animal, it would be a hare. It is similar because the rabbit took off in his race against the tortoise, but did not finish in time. My paper started with a large acceleration, but stopped in the middle to take a break. Like the hare, my paper took too long of a break and did not finish in time. It is also similar in that when a rabbit runs, his legs appear to be a blur. My ideas were a blur when I started. Also a rabbit hops. My paper also was composed in a hopping pattern. I would find one significant idea and then find one unimportant idea. Another way that my paper is similar to a hare is that when a rabbit eats, he quickly devours the food, then later digests it. At first I too grabbed lots of information, then I later digested it. The appearance of a rabbit is similar to my paper. At first glance it looks smooth and calm, but underneath there are bugs and dirt.

Two more strategies introduced for the ten-minute journal are: **role playing**, a method for students to understand ideas from another view-

point; and the **unsent letter**, which gives students an opportunity to classify ideas by advising a specific audience. In the following unsent letter, Lynn writes to Jason in *Medea*. He has left his wife and children for a younger and wealthier woman; in revenge Medea kills her children knowing Jason's anguish will be unbearable. Lynn speculates on who is to blame and what each character could have done differently. She takes a stand in Medea's behalf, then suddenly realizes Jason might have had reason. Her third sentence considers the harm Jason did when he left Medea, then moves into consoling Jason with a final admonition of not "screwing up the next marriage."

Jason:

You really shouldn't have left your wife and family for the princess. But, then again maybe it turned out for the best because you saw what an evil woman Medea was. Maybe none of this would have happened if you hadn't left her. I know people like you. I kind of think maybe it is better this way because what if you never fell in love with the princess, you could have come home later for dinner; or maybe you wouldn't like her dinner sometimes, and being the evil woman she is, she could have zapped you right then and there. So, I hope you try and forget her, and I also hope you find a decent lady to marry. And if you do, don't screw up the marriage; for God's sake, make it last. Oh, and if and when you ever do find this new lady, consult your nearest god, and make sure she's right for you.

The unsent letter enables students to make their feelings conscious, particularly with material that arouses emotional response; in the case of *Medea*, students wonder why characters took such extreme actions and for Lynn, the unsent letter was a clarification and definition of the characters and their motivation.

After using the unsent letters and practicing with a defined audience, students are ready for the more complex relationship of the **dialogue**. In role-playing another voice, writers must synthesize what they know already about the other voice in the dialogue and apply it to the question/answer exchange. Dialogue is most useful, I find, when students are having difficulty delineating arguments or issues from their reading. While reading Mortimer Adler's *How to Read a Book*, students found the language tedious and felt insulted by the title; after all, they felt they knew how to read. The dialogue with Adler forces them to be Adler and clarify and justify his book to the student writer, thereby enabling the student to understand Adler's thesis.

In the following student dialogue *A* stands for Adler while *M* stands for me, the student's identification.

A: I hear you are studying my book.

M: Yes, but not enjoying it; Mrs. Juell is forcing us to read it. You know you've brought a lot of pain and agony to me and the class—this is a real bitch.

A: Why do you think Juell has forced you to read my book?

M: She enjoys watching us suffer.

A: Besides that, why do you think it's important to spend all this time on suffering through the book?

M: She says it will help us read more intelligently and carefully when we are forced to read difficult material—she's getting us ready for college!

A: What do *you* think?

M: Well, I guess I have to answer this—you do seem to have a system; in fact, now that I think about it your organization looks like an essay.

A: What do you mean?

M: Well, you seem to introduce your main ideas for the chapter, then explain them, then you give a summary. Don't tell Juell but sometimes I've just read the summary.

A: Did you feel that was enough?

M: It was for a while, but then Juell seemed to ask questions that I couldn't answer with just the summary.

A: Give an example.

M: Well, your chapter on philosophy was boring; I really didn't know what it was, but when Juell asked us to develop questions based on our understanding of the chapter, I didn't know what to write so I went back and had to read the chapter.

A: What did you find out?

M: Well, I found out what philosophy was, that writers raise questions about why we exist and why it is important. I guess that's important because we think we know the answers but maybe when we get to be adults we see things differently, maybe because then we have more experience.

A: Is it important to know the questions?

M: No, I really don't think so because once you decide what you're going to be, then you set your goals and work toward them—well, maybe it is important now that I think about it. Sometimes you begin to wonder if your choices are right and if you'll be happy—I guess philosophers even ask what happiness means.

A: How does this all relate to reading the chapter on philosophy?

M: I guess by giving us areas to look at and different categoies of questions asked then we might understand what the philosopher is saying—maybe even disagree with his view if we wanted to.

In writing this ten-minute journal entry, the student begins disgruntled with me for even assigning Adler, but, as the dialogue develops, we see the writer finding reasons for reading and even coming to conclusions about the meaning of philosophy, a term he was vague about when he began the dialogue.

Students are pleasantly surprised at the outcome of dialogues; they say it clarifies their thought. I have found, however, when I get impatient and do not allow much time (dialogue seem to take more than ten minutes), students are not able to get past the basic amenities of opening conversation.

By writing in their journals ten minutes a day, students develop a sense of audience, and learn to appreciate the variety of thinking offered by the other students in class. But the greenhouse will not produce if the gardener spends time only on mulching, watering, and tending plants daily. There has to be a time when the gardener selects, prunes, and transplants developing ideas outside the greenhouse. The last section of this chapter develops a sequence of journal entries that make the roots nurtured in sawdust independent ideas strong enough to stand on their own outside the journal.

As part of the Renaissance unit in Humanities, students become personally involved with one of the "greats" of the period. They begin this project by choosing one person to research and become apprenticed to: a scientist, artist, musician, mathematician, or philosopher. After spending two days in the library completing the research, students write **first thoughts** in their journals about the "master" on whom they did research. What is their emotional reaction to this person? Wendy, who had researched Johannes Kepler, reveals in her journal: "I like him; he is independent, a rebel; he made people question tradition. . . . He is going to be difficult to work with. He seemed moody, preoccupied." Here Wendy not only makes an emotional connection with Kepler, she also understands qualities necessary as catalysts for cultural and scientific change.

The second stage of this role-playing sequence helps students generate enough material for the final stage of their research project, the **biopoem**. The biopoem assignment focuses on the student's relationship as an apprentice to his Renaissance master. Most students have difficulty leaping from research to writing the biopoem because the structure calls for perceptive thinking about the essence of the "master." A biopoem which only states facts does not reflect the potential for evaluation and synthesis so necessary to the success of the biopoem. Therefore, I take the students through two more journal stages before the final biopoem. After the research in the library and writing first thoughts, students list or cluster at least twenty things important about their "master." Here students are able to develop a cache of important information. When they complete the list or cluster, they are ready to write the unsent letter to their master explaining why they feel it would be an honor to work with him. Before they write, I suggest they consider what their master needs, what he feels, what causes him to worry. They have twenty minutes to complete this part of the sequence in their journals.

Up to this point, ideas in each stage are being selected, formulated, clarified. In the final biopoem stage, students need to synthesize. Since this is a summative assignment, students have overnight to complete the biopoem in their journals to be ready to share with the class the following day.

Wendy's example below makes Kepler more than just an historical figure. She explores his frailty, his sorrow, his humanity while clarifying his contributions to humankind.

Wendy

Motivated, inquisitive, enterprising, but moody

Protege of Johannes Kepler

- Who developed the three laws of planetary motion, the first nonmystical explanation of planetary attraction, the foundations for Isaac Newton's theories.
- Who feels Copernicus' astronomical system is valid, Euclid's geometry is the image of perfection, and Renaissance man's reason must triumph over superstition.
- Who needs the friendship of scientists like Galileo, the support of his petulant wife, and the instruction of a speech teacher.
- Who gives amazingly accurate astrological forecasts, unbelievable meaning to the word "persistence," and incredibly complex lectures.
- Who fears that God has forsaken him, that he will never attain salvation, that he contributed to the arrest of his mother as a witch.
- Who would like to see an end to religious fanaticism, an end to war, and an end to famine.
- Who lived in the cities of Graz, Prague, and Linz under the rule of Rudolf II.

Pare.

Sharing their biopoems allowed students in the class an in-depth view of approximately thirty Renaissance masters. The class took notes and asked questions about each of the biopoems read. After accumulating that information, students were ready for a test on those masters.

I was delighted by the quality of thinking evident in this sequence. Again, knowing it would be presented orally to the class motivated students to work harder on the project. As they worked on polishing the

biopoem for structure and parallel construction to enhance rhythms and sound, students gained control in their thinking. They appreciated the structure of this research project because it gave them the freedom to make decisions about what was important but offered the control of writing within the stylized biopoem structure. Finally this journal sequence engaged students in inquiry where the questions were as important as the answers.

The course journal offers students opportunity to understand the function and importance of their intellects. They are no longer bent on asking for "the answer"; they know how to search it out on their own. They no longer wait for someone else to provide an answer; they are enthusiastic about the vitality of their own speculation, reflection, and resolution. They understand that the seed of an idea can be transplanted to a larger assignment, perhaps a research paper, perhaps a test, but all the essential material has begun in their journals. Here a student evaluates the progress of a paper after using the journal to clarify her writing process.

Once I received the assignment, I did a free write as a journal entry on numbers. In this journal entry I came to a conclusion and listed the importance of numbers. After realizing that the idea of classifying numbers was not a unique idea, I started looking at music and especially Bach's music because I play it so often. The first thing I did was list different terms of music and ideas that I had about music. Once I completed the list, I grouped them into three categories. Again this was not a unique idea so I dropped it. I then found three unique ideas about Bach's music and listed them as the titles to three groups. Under these I listed what, how and why these unique ideas should be played. At this time I could not form a thesis so I just started writing. Finally on my second draft I formed a thesis, but I did not feel it fit my purpose, but I kept it anyway. In my revision I tried to get my paragraphs parallel and make the sentences flow smoothly by taking out fat and putting in more support; I then typed out my paper.

The course journal/greenhouse has been a source of pride for me and my students. Their comments "I didn't realize I knew so much" or "I have grown to respect others' ideas" or "I understand better when I write in my journal" all contribute to enthusiastic learning. But as with the greenhouse, the journal requires patience and commitment from the writer as well as the teacher. Given that attention, the journal can give life to the roots in the sawdust.