APPENDICES
Appendix A

Researcher’s Journal

1st Grading Period, Week 1, September 2-5

Day-1 Five classes of energetic, early adolescent seventh-graders invaded my quiet domain. First day of school and already the curious invaders were looking around my classroom and asking questions about various pieces of science equipment. Today we worked on seating arrangements, introductions, and classroom etiquette. The length of time for classes for each of my five periods was 51 minutes.

Day-2 The schedule is shortened today for more paperwork. We worked on Who’s Who in Science 7 and each student wrote a BIOPOEM and used that poem to introduce their teammates to the class. The students were able to find out information about new faces and learn to express themselves. We talked about science policies and I mentioned the learning contract as the topic for the next day.

Day-3 We talked today about the learning contract and what components make up the learning contract. I presented a very short introduction in which I identified the learning contract as a written agreement between the student and the teacher in which the student can contract for a grade. The learning contract for this first six-week is printed on lavender paper for easy identification and retrieval from their science notebook. A cover letter introduces the learning contract to the student and explains how the points are assigned for the two types of activities, required activities, (RA), and additional activities, (AA). Students were asked to reread the cover letter tonight with their parents and together discuss the grade to be contracted. This cover letter is due back tomorrow with both student and parent signatures and the grade the student hopes to achieve for this six-weeks. Tomorrow I plan the go over the information again and differentiate between the two types of activities (required activities and additional activities) and discuss the student progress sheet which lists the activity points possible and documents the
students’ earned points for each activity. I also plan to discuss how these activities are to be prepared and what is not acceptable, namely copying information from other classmates.

**Day-4** My students arrived in class today full of questions about their learning contract. How does it work? How do points make a grade? What are additional activities? My orientation for today encompassed explaining how the additional activities work in the learning contract. Using the overhead projector with transparency, we looked at the point requirements for each letter grade contracted and looked at the extra requirements for an A and A+. Each of these letter grades requires that the students complete certain required additional activities, pass tests, and make either 150 or 200 additional activities points.

I further explained that required activities were team oriented, and they would work together in class to start these assignments. Additional activities assignments are individual choice assignments, namely each student has a choice about doing the additional activities; however, these additional activities must be completed in order to meet the point requirement for each grade contracted.

Next, we looked at the Student Progress Sheet and circled the additional activities’ numbers required for an A, and then put a “+” beside those additional activities’ numbers which were required for an A+. Students were reminded that on Friday we would add together the total points for the required activities to help keep focused on the contracted grade points. Students were also reminded that copying additional activities would be considered cheating and that the consequences would result in a zero for all additional activities for the six-week grading period for all of the offenders.

Resource materials to help find the answers to the additional activities will be the topic on Monday, Day 1, week #2. Students used the rest of the period to pick out their choices for additional activities and to put the total number of points possible on each worksheet. Additional activities 1-10 are due next Friday to be checked. After Friday, the regular additional activity due day will be Monday.
1st Grading Period, Week 2, September 8-12

Day-1 Today was the third day of the learning contract orientation. The topic today dealt with how the different resource books or reference textbooks helped to locate answers to the worksheets for additional activities. These worksheets were examined in more detail to allow the students time to find the names for each additional activities’ resource book. The students also got practice recording their returned required activity #1 points on the Student Progress Sheet. The CD-ROM Grolier was also introduced as another technology link to the additional activity resource bank. Students were then shown how to check out a resource book for one night and then to return it for zero period students the very next day.

Six new additional activities were added to the additional activity list, #36 -41. These included a signed learning contract; a covered science textbook; a science notebook; a signed letter to parents about the school year science policies; a signed computer policy agreement; and a BIOPOEM. These additional activities were generated during the first week of school and the points have now been added to their contract.

Students were next introduced to how to organize their Science Notebook into three sections: 1) contract and handouts, 2) required activities, and 3) additional activities. Tonight their assignments included science notebook organization and continue to work on additional activities.

Day-2 Today I continued with routines in the classroom and how to tie the learning contract to organizational skills. I have discussed Science notebook organization and given students an opportunity to ask questions about these routines. Students have asked about points and how to figure out which additional activities should be done for each grade. Some students have figured out that the points can balance a poor required activity grade. Two students are coming after school tomorrow to get more help with their contract.
One student asked if doing more additional activities would boost his points and then help his total points, and I responded that he should do as many additional activities as possible but to be aware of the requirements for an A and A+.

**Day-3** We used our red pens to correct the Lab Safety WS required activity 4, and they learned how to evaluate their work. Students were reminded how to check for assignments by using their learning contract descriptions for each activity. Points will be added up on Monday instead of Friday, since additional activities 1-10 are due Friday. More reference books may be needed since I have 136 students.

**Day-4** I am still reinforcing good start-up procedures and routines in my room. Students are taking heed and remembering to record their points on their student progress sheet and to look up a new activity’s points. Two students asked why we do contracts and “Why don’t you just make us do all the work and then you average the grade? Why do I have to keep up with my points? I stressed the importance of setting a goal to work towards and the value of trying to achieve the higher grade. One student said it was more important to try, even if not completely successful. They seem to have worked this out for themselves. Tomorrow we check the first set of additional activities for points.

**Day-5** First additional activities check day...The students did all 10. They really were enthusiastic and cooperative with the checking routine. Eager to pick up next set of additional activities (11-18) which will be due September 22. I plan to do a point check on Monday and clarify more about where to find answers for this next batch of additional activities.

**1st Grading Period, Week 3, September 15-19**

**Day-1** Today we checked our Student Progress Sheet and did a points tally. Only three required activity’s completed for 35 points = A+; 32 points will be the lowest A and 25 points is the lowest D. Most students working up to their expectations. A very few have not contracted for a grade or gotten parents to sign. I walked around today to visit those few. The new additional activities are all from our textbook so should be more successful with finding answers.
I plan to go to Kinko’s to make a large poster of six-week points for each grade and tell students how many have contracted for each grade.

The live animals are slowly returning from “summer adoption.” The two albino frogs arrived today, and the gerbil should be back soon.

**Day-2** Today was LASERVISION Day, required activity #2 with a laser disc, a reading activity with a worksheet. We talked about what it means to be living and what it means to be nonliving. Viruses are considered nonliving. A one celled organism is living.

**Day-3** Today was inventory your team supplies and make a collage of living and nonliving objects. Students were to bring in cutout pictures of these two types of objects and make a team collage. These collages were hung all around the classroom. This event was a reinforcement activity for required activity #2--LASERVISION. Tomorrow, the hermit crabs will be returned from “summer adoption.” Additional activities 11-18 are due on Monday, September 22. These activities are reinforcements from the text through p. 12.

**Day-4** Today we discussed science notebook organization and noted how to use the learning contract for additional activities. Students are still unsure about how to find out information and we looked up information about additional activity 13 and additional activity 14. How many points? Some students have mastered the way to find information and how to use the Student Progress Sheet to record returned assignments. This sheet also allows the students to look at a glance at missing work or total points earned. The students also got an opportunity to organize science notebook with their learning contract and ask questions about additional activities.

**Day-5** Students worked on additional activity and required activity #5, which was modified to be a video on Science Misconceptions. I had a substitute teacher this day so I could not observe.
1st Grading Period, Week 4, September 22-26

**Day -1** Today we went over the requirements for an A and A+ and used the new poster of the learning contract-1 that I made at Kinko’s. Students are getting better at finishing assignments and following directions. Routines are still being stressed especially with recording daily papers’ points on the Student Progress Sheet. The students are getting better at reading materials and using the resource materials. I now have an aid during the first period, who helps with my learning difference students. Tomorrow we will do a points tally.

**Day-2** Students used their Student Progress Sheet to calculate their mid-term progress report grade. Using an overhead projector, we added all the required activities 1 through 7 together. Next we added additional activities 1-10 and 36-41 together. By adding all three sums, we arrived at the total points for their calculation. The total points for this first half of six-week 1 was 190 points (required activities = 90; additional activities = 100). The students calculated their grade by dividing their total points by 190 and then multiplying by 100 to get a percent. They next translated the percent score to a letter grade; i.e. 90% is a B. Students were surprised to find that their good work habits and completion of assignments has resulted in very good grades. Several students asked if they could still get an A+ if they had only contracted for an A. I told them to go for it, but to remember to complete all requirements for the A+. Some students who have not turned in any additional activities immediately saw the damage to their total points and the next additional activities stack # 19-26 has quickly disappeared from the classroom.

**Day-3** Last night we hosted an open house for parents. Each period I discussed the learning contract and how their child had contracted for a grade. Several parents came up to me after my presentation and commented that their child loved the science worksheets that were the additional activities. One parent remarked that she was having just as much fun as her daughter with the additional activities. [Impression: The parents seem to like to be able to help their children with these activities because they are on a level that is easy to understand, since they were written for multiability students.] In class today we continued with the required activities, and students are now waiting for me to verify their grades from the progress reports.
**Day-4** We continued with the required activity #12 Metric Measurement Lab activity. No papers were returned for point recording. Students made observations of an added RA10A, Sterilization of Beef Bouillon. “A” means add-on to the required activities. I had a new student added to my first period and made a student switch from fourth to second period.

**Day-5** All classes worked on required activities #12, Metric Measurement Length Lab, and students are beginning to ask by number about due dates for required activities and additional activities. This is a new development, since prior to this week the students expected me to announce or post due dates. The responsibility for assignments is beginning to show. We had a good day, and I enjoyed walking around to each of the seven teams to check on their data collection and metric conversions. (Each period has seven teams of students cooperatively grouped with a team captain.)

**1st Grading Period, Week 5, September 29-October 3**

**Day-1** Students checked their additional activities 19-26 and then finished up required activity #12, Metric Measurement-Length Lab. Tomorrow required activity #10 is due with required activity #12. Observations with required activity #10A is also due. New additional activity’s will be available tomorrow, # 27-35. These additional activities will be the last set for this first six-week grading period. Students for the most part were focused and on task. A few students were not prepared with their additional activity but found class time to complete anyway. No late additional activities will be accepted. This rule has been reinforced each time we do additional activities.

**Day-2** Students worked on checking required activities #12 (Lab) and required activities # 10 (Text) and completed day 6 observation on their beef broth sterilization. Periods 4 and 5 did not finish checking, as they needed more time to ask questions. These two groups need a slower pace than early morning group. I need to rethink my strategies when working with them. Required activity # 10 was a long assignment that was assigned last Wed. Sept. 24 and due Tues Sept. 30.
Day-3 I posted a new homework poster for those who forget to check blackboard for assignments. Still working on reinforcing good classroom routines. This will pay off in the long run. Today we checked required activities #11 and saw a filmstrip on mass with the triple beam balance. The students used the rest of class time for additional activities and an individual student-teacher conference about their progress reports. Seventeen students are out for field trip. The group dynamic was different, much slower pace. After school we set up the aquariums and set out materials for Lab required activities # 13, Mass measurements.

Day-4 The mass lab required activity #13 took the entire period. Students were asked to complete the entire lab and answer the questions. Fourth period has asked to set up an aquarium. I gave them a $10 budget and a reminder to check on fish compatibility and size of aquarium. Other students want to add fish, as the aquariums become more available. Hermit crabs are again coming back to class. Never arrived from last time. Students stayed on task. Getting them to follow directions has been interesting. Tomorrow we check required activity #13 then move on the required activity #14--Volume and Temperature Lab.

Day-5 Today we started required activity #14: Metric Measurement Volume and Temperature. After viewing the filmstrip, the students were able to complete Part A on volume, and next Wednesday they will complete the other two parts. Next week is the end of the six-weeks. Tuesday is the Lab practical and Thursday is the six-week test.

1st Grading Period, Week 6, October 6-10

Day-1 Additional activities 27-35 were checked by students today. Good day to move around room and check on new fish that arrived during zero period and first period. My practicum student, Jack Evans, added the fish to the 10-gallon aquarium, and Courtney and Matt were responsible for the Beta in a small 3-gallon tank. They were given a $10 budget to stock one aquarium. The plan is to have seven live habitats up for the second six-weeks so students can start to observe the features of living organisms. Tuesday there will be a lab practical on Mass, Length, and Volume, required activities # 15. For homework, students were asked to do
required activity #16, the chapter review, p. 25-26. **Double points are available this week only to finish points for required activities.**

**Day-2** Required activities #15 Lab Practical was a new addition to this contract. The students rotated around the room and performed the operations following the directions at each station. All 28-29 students were accommodated. Time was allotted for the slower students by having each station with different sets of directions, thereby allowing each to work individually. The homework assignment required activity #16 was delayed until WED. for double points.

**Day-3** All classes checked required activities # 16 [new] chapter 1 review from text p. 25-26. The directions included to write out each statement along with the correct answer and letter. This activity was worth double points since this six-weeks is over this week and some of the contracted required activities were not done. Ran out of time.... but the contract held more than able to do.

**Day-4** Today was the first six-week test. Scantrons were used, and all 50 questions were multiple choice. Items included safety, lab equipment, terms, and metric measurements and units, as well as lab instruments for reading mass, volume, and length. Hermit crabs have joined the classroom habitats.

**Day-5** This is the last day for all work. I am really behind on my grading. I need two more days!!! Students worked on finishing required activity # 14 Volume and Temperature Lab.

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**2nd Grading Period, Week 1, October 13-17**

**Day-1** Today is the official last day of first six-week grading period. Today the students received all their required activities and additional activities that I had graded from previous week. The Final Grade Summary Sheet [new] was used to help student discover how to calculate their grade. Students recorded their returned grades from assignments on their Student Progress Sheet and totaled all required activities assignments, checking for completed required assignments. Additional activities will be returned Tuesday and added to the Final Grade Summary Sheet.
Day-2 Final Grade Summary Sheet was completed, and students analyzed their work for 1st six-weeks. Students were asked if their final grade was the same as their contracted grade and to comment on their success in attaining their grade goal. New GREEN contracts were handed out and assigned to be signed and returned for WED. Required activity #1 was assigned for homework, and students fixed their contracts for A and A+ required additional activities assignments. New additional activity’s 1-4 were assigned for Mon. Oct 20.

Day-3 Today I took a personal day to work on my paper. Students saw a filmstrip on the microscope, required activity #3, and worked on required activity #2, Study Guide on the Cell. Contracts were collected with grade for this six-week period. My grades are due this AM.

Day-4 The students were glad to see me back after being out one day. They worked on checking required activities 1 p. 35 section review and new words p. 30. Afterwards they worked on required activities #2 --study guide on the cell. Most classes checked this orally before we left for the day. While the students were working on this class assignment, I circulated to each student and confirmed their six-weeks final grade.

Day-5 Today we did a lab with the microscopes required activity #4. Most students had prior use of microscopes and several asked to bring in their own microscopes for class use.

2nd Grading Period, Week 2 , October 20-24

Day-1 Today we checked additional activities 1-4 and the new additional activities 5-10 were available for pick-up. Most students have returned their new green contract for a grade. The activity becomes additional activities #44 worth 10 points.

Day -2 Today the students worked on required activities # 5 in class and finished checking the microscope lab required activities #4.

Day-3 Today I had a substitute. She showed the class two filmstrips on the microscope required activity # 3 and then assigned the students required activity # 5, which was a three-part assignment. Monday read pp. 36-42; Tuesday define new words and do the section review and Wednesday work on identifying the cell organelles and their function on a WS.
**Day-4** Today we checked required activity # 5 and then we did the study guide required activity # 6 in class. Most of the assignments were checked using an overhead projector with transparencies.

**Day-5** Today we did required activity # 7, a lab on different types of cells, frog blood, cork cells, and lettuce cells. Students finished in the lab area and then worked on the questions and conclusions. This activity will be checked next Tuesday.

**2nd Grading Period, Week 3, October 27-31**

**Day-1** I had a substitute today. He checked the additional activities # 5-10, not additional activity # 6, and had students pick up new additional activity’s 11-15 which will be due on Wed. Nov. 5. Students were reminded to finish the questions for required activity # 7 so that we could check results for Tuesday.

**Day-2** Today we checked required activity # 7, a lab that explored different types of cells using a microscope. The students used the rest of the period to put together Team 3-D cell models and label all organelles and explain each organelle’s function in the cell. This activity was inspired by additional activity # 6, and the point value was changed to 30 points because all students were to participate. Cell Models were examples of creative thought and design, and many were edible. New turtles were added to the habitats.

**Day-3** The assignments required activities # 9-12 were assigned as class work so that I could circulate and see who needed help and to give them more time in class for the assignment. Homework for this group has not been as productive as I would like.

**Day-4** Today we checked required activities # 9-12. All very short assignments and I tried a new way of collecting points by submitting only one sheet with all required activities points. This made it possible for the students to use their required activities to complete the next assignment required activities # 13 Chapter review. We talked today about cell organization and organ transplants.
Day-5 Today we had an all-school Halloween costumes contest, and the kids were very hyper. We checked required activities #13 Ch. 2 Review, and then we played Cell Bingo, to reinforce the cell organelles for their test next week.

2nd Grading Period, Week 4, November 3-7

Day 1- NO SCHOOL—Parent-Teacher Conference 1-4 and 5:30 to 8:30. I developed a parent survey about the learning contract to get input from parents. I had 56 parents and everyone filled out the survey, a good collection of data. Also several parents noted that they had signed so much for school they were not even sure what they had signed. Others were not sure how their child was doing, and several remarked about their child’s love of science.

Day 2- NO SCHOOL—Teacher work day. We worked on room chores and new bulletin boards. Planned a new Lab for required activity # 8 since old one used cheek cells.

Day 3- Welcome back students. Today we checked additional activities 11-15. I need to find a substitute one since it involved an outdated computer program. My mistake. We started to calculate our mid-term progress reports with required activities 1-7, 9-13, and additional activities 1-10. Total points at 10-31 were 270. We test tomorrow on Ch. 2, the cell, with 30 multiple-choice questions and true and false.

Day-4 Today we tested on Chapter 2, the cell. Thirty multiple choice, scantron questions which took the students only 15 minutes—short. The question, which caused the most time, was a true or false question about whether or not I was an organ donor. Afterwards we calculated our total additional activity points for the mid-term progress report and then a little was shared about the chicken lab for Friday. Safety and being ready was stressed.

Day-5 This lab required activity # 8 was a new one for this curriculum. The objective was to observe a cell [chicken egg], tissue [muscle, skin, connective] and organs [liver, gizzard, and heart]. The information and questions for critical thinking were the basis for a lively discussion. I was amazed that so many of my students did not recognize the parts of a chicken, namely the liver, heart, and gizzard.
2nd Grading Period, Week 5, November 10-14

Day-1 Additional activities 16-18 were checked, and the new additional activity’s 19-23 were distributed. The students used the time to finish additional activities and start the new ones. Students also got back assignments and recorded their points. For homework they worked on required activity #14, new words Ch. 3 and the section review.

Day-2 Today we used the scalpels to make tissue slides from the chicken organs and drew them as a comparison among the three organs. All students completed the questions for discussion.

Day-3 The students checked required activity #14 and required activity #8. The test on Ch. 2 was returned for students to see their mistakes. Homework consisted of required activity #15, the study guide.

Day-4 We checked required activity #15 and began required activity #16 and required activity #17. I helped students with information on their periodic tables, and they used the eight grade science books for more information and to get help on new additional activities.

Day-5 Today we checked required activity #17 on the periodic table families and periods. I spent the rest of the period giving the students a lecture on atomic particles and energy level diagrams. Additional activities 19-23 are due Monday Nov. 17. I also handed out definitions common to the periodic table chapter and plan to do the review questions in a worksheet format, required activity #16, so that all classes can share the classroom set of physical science books and periodic tables.

2nd Grading Period, Week 6, November 17-21

Day-1 Monday the students checked additional activities 19-23 and then started on the last set for this six-weeks, additional activities 24-29. Students were reminded of the last day to turn in work for 2/6 week. Required activity 16 was assigned as homework due Wed.
Day –2 Tuesday, the students had a substitute, and he led the class with a filmstrip and worksheet on the Bunsen burner. He went from idea to a fact sheet on Bunsen burner to worksheet and test questions for a final evaluation. He also corrected and graded the four class sets and recorded the grades. He assigned required activity 19 for homework.

Day- 3 Wednesday we checked required activity16 and required activity 19. The students were eager to read their answers and comment on the different ideas. We set up a demonstration on osmosis, which will run for five days as a visual model of osmosis and the idea of passive transport.

Day –4 Thursday we reviewed the new words from required activity 19 and talked about active and passive transport. The students then checked required activity 20, and then we observed the egg that had been placed in vinegar on Wednesday. Students predicted what occurs during osmosis and wrote down their day-1 observations. Students were told to use the study guide on the board to study for tomorrow’s test on required activities 14-20 and required activity 8, as well as the vocabulary for the periodic table and Ch. 3 section 1-2.

Day -5 Friday we took the second test for the 2/6 week. It covered a two-week period and consisted of 30 multiple-choice questions. Afterwards, the students observed the osmosis demonstration Day 2 and wrote down their observations. At the end of the period I took the egg out of the vinegar solution and let the students feel the rubbery cell membrane minus the egg shell which was dissolved by the vinegar, and then I placed the egg in the sugar [Karo syrup] solution and let it sit until Monday. Students noted the size originally and will check Monday both for size changes and appearance. Additional activities 24-29 are also due Monday, and no late material will be accepted after this date for 2/6 grading period.

2nd Grading Period, Week 7, November 24-25 [Thanksgiving Week]

Day –1 Monday we observed the egg in the Karo syrup and checked the additional activities 24-29. Students’ Special Day is tomorrow...originally planned to have a guest demonstrator bring in a variety of animals, but he canceled, and I was not able to find a
replacement. The new plan is a trip to the computer lab for a special paint and draw of the cell with organelles.

**Day -2** Tuesday we went to the computer lab, and instead of paint and draw of the cell we surfed the Internet using science web page addresses. Students were to investigate a site from the list and then report if it was interesting to save for future visits. Cells alive.com was a popular location with lots of pictures of different types of cells.

**Days 3 -5** Thanksgiving Break. Report cards due Tuesday, December 2. No assignments for the students. Computer lab was a very good experience for all.

**3rd Grading Period, Week 1, December 1-5**

**Day –1** Monday the students went over the results of Test # 3 on Chapter 3 and looked at the corrections for their mistakes. A three-point bonus was added to each score because of poor test questions. The grades were not as high as the previous test for this marking period. The students next worked on their habitat observations, which is a daily observation of 1 of 7 habitats. For homework they were to get the new [blue] learning contract signed for additional activity # 65, and also add up all their additional activities and required activities points to date for the final 2/6 grade point summary sheet.

**Day –2** Tuesday the students received the rest of their papers back to record on their old green Student Progress Sheet. Next they transferred the information to a Final Grade Summary Sheet so they could self evaluate their 6-week progress and calculate their unofficial grade. Chapter 3 was added to the bottom of the new Student Progress Sheet from the last contract so that the students could finish Chapter 3. This modification was necessary since the time spent on lab experiments has doubled due to the class size.

**Day –3** Wednesday the students received the rest of their new learning contract on blue paper, and together they circled the additional activities required for both an A and an A+. Required activity # 23 was assigned for tomorrow. The video, The Cell, was used to review the old 2/6-week material and to introduce the new 3/6-week with a topic on the cell.
Day -4 Thursday-The students ran a lab called Cellular Respiration, [required activities 25] in which they watched yeast organisms produce carbon dioxide, which is then released into a solution of Bromthymol Blue [BTB] indicator. If the color changed from blue to yellow, then CO2 was released. If no color change was noted, then the student had not followed directions. Habitat observations have been in progress all week, and today the team observing the hermit crabs discovered that someone had de-clawed three of the organisms. Tomorrow I will speak to all the classes and try to find out who is responsible for the damages. Until I find out who is responsible, all lab activities, observations and anything that would have the students move around in the classroom are suspended. This will definitely send a positive statement to the students about preserving life and appropriate behavior.

Day -5 Friday the students listened attentively while I related the unfortunate circumstances involving the hermit crabs. Two were dead this AM, and the third is barely alive. They expressed their concerns, and most agreed that what I proposed to do seemed acceptable until I found out more about the incident. Several students visited during the day to express their grief and concerns about the hermit crabs. I hope to avoid any future mishaps and instill a love for living organisms with all the students. We checked required activities 24 and 25 from Ch. 3, and talked about the additional activities 31-35 due Monday. Students continue to hand in their signed contracts for 3/6-week grading period. I plan to visit Kinko’s this weekend to make up a learning contract blue poster for the class bulletin board. So far this has been a most helpful visual aid both for me and for the students.

3rd Grading Period, Week 2, December 8-12

Day -1 Monday we checked additional activities 31-35. This is the first set for the 3/6 week. Students were reminded that their additional activities point goal for next week and this week should total 75 points. Next set of additional activities’ #36-37 and additional activities 1-2 were set out. Students were reminded to work on their additional activities’ for homework. Students still grieving for the hermit crabs. Three have died. The poster with the learning
contract has been delivered for laminating. Should be up by end of day. Blue color same as their contract.

**Day -2** Tuesday I had a substitute and the students worked on required activities 27 and 28. The substitute report was favorable.

**Day -3** Wednesday we checked required activities 27-28 then we watched a video on cell division: Mitosis. Students were to read, define new words, and answer section review questions.

**Day-4** Thursday we checked required activities 2 and then we set up Lab: Let’s Find Out, required activity 1 for Ch. 4. This lab required observations for six days of pinto beans soaked in wet paper towels. The students were to infer what made the seeds sprout. Homework was to work on their additional activities.

**Day-5** Friday we cut open the pinto bean that had soaked overnight and then observed both the 24 hr. soaked bean and the beans in the wet paper towels. Observations were recorded, and then we learned how to outline the steps for Mitosis using required activities 5 [New] part 1. Students were to finish this activity at home for Monday. Most classes finished all but Telophase. This will be checked Monday since the additional activities are very short.

**3rd Grading Period, Week 3, December 15-19**

**Day -1** Monday we checked additional activities 36-37 and additional activities 1-2. We then checked required activities 5 outline of Mitosis. Students were to work on part 2 of required activities 5 to be checked Tuesday. Day 4 observations were recorded for required activities 1--pinto bean lab.

**Day -2** Tuesday we finished the observations for required activity 1 and answered the two questions at the bottom before turning it in. Students then collectively checked required activities 5 part 2 and then played Cell Bingo—Cell division—biodegradable—cell energy transport as a review for the test tomorrow. Students received their graded papers back to record...
on their student progress sheet and by Thursday, hopefully all papers will be returned. I had over 20 students absent today...too close to holiday break!

**Day –3** Wednesday the students took a test on Ch ¾ after we checked the study guide required activity 3. Because of the high rate of absenteeism yesterday, I hope students will be back today and prepared for class. Required activities 3 and 5 may be used for this test. Open notes using only these two assignments.

**Day-4** Thursday the students had a substitute as I developed an upper respiratory infection, which precipitated into no voice for 4 days. They worked on the next required activities # 6 and 7 and watched a video on DNA.

**Day-5** Friday the students again had a substitute...a first to have one two-days in a row...the students finished up required activity 7 as only two classes met and the rest of the periods watched a school movie for the holiday treat. No assignments for the holidays. Students adopted the habitats, and all pets were taken home by Wednesday. They will be returning in Jan., as will the students.

**3rd Grading Period, Week 4, January 5-9**

**Day 1**-Monday the students received their papers from the last week of class in December, and they recorded their points and discovered what work was missing for mid-term progress reports. The new additional activities [5-8] due 1-12 were made available, and students were given the choice of working on the new additional activities or catching up on missing assignments...More than 50 absences were recorded the last week before Christmas...an extension until 1-9 for make-up work should catch everyone up. Periods 4 and 5 worked on required activity 7, which was checked and collected before class was dismissed. As a group we REFLECTED on 1997 and talked about rules and procedures for 1998...a renewal of what needs to be done to be a good student. The list included 8 ideas...pick 1 or 2 to make improvements. [organization of the science notebook, reading the textbook, tardy rule, red pen, corrections and additional activity’s rule, paper set-up and form, as well as neat and timely work.]
**Day –2** Tuesday the students watched a filmstrip on Mitosis and Meiosis and worked on required activities 8. TP Master of the cells during Meiosis. Students were called up to discuss their individual Progress Reports and to check on missing work. This six-week I have used the computer program Grade Machine to record all grades as they are turned in to me. It has sped up the process. I have eliminated writing the grade in my grade book first. What a difference!

**Day -3** Wednesday started with the students checking required activity 8 on Meiosis and as a group we read pp. 86-91 for required activity 9. The students also got a three-page study guide on Meiosis to read and then finish required activity 9. Additional activities 3 and 4 were made available on Mitosis due Monday with the other additional activities.

**Day- 4** Thursday we checked the new words and the section review on DNA and saw the filmstrip on DNA, RNA, AND MUTATIONS, required activity 11. We discussed DNA and the lab for Friday using a model, and each student is to bring a shape to class for the nitrogen base in their DNA model. Required activity 10, DNA study guide was assigned.

**Day -5** Friday we checked required activity 10 and then discussed the DNA model lab. Each student was to pattern their shape and make 12 copies so that as a team they could build their DNA molecule, required activities 15. Several colors of construction paper were placed on the supply table with extra scissors and tape. Each team cut out their shapes, and as the period came to an end, they placed all shapes on an envelope to assemble on Tues, Jan. 13. All make-up work for Dec. was due today also. Students were reminded that Monday additional activities 3-8 were due.

**3rd Grading Period, Week 5, January 12-16**

**Day –1** Monday we checked the additional activities 3-8 and worked on the next set, 9-18. This six-weeks will end with additional activity 18 and required activities 18. New this contract was required activities 5, 12, 15, 16, and 17. Required activity 18 will be test # 2. After school I met with the computer assistant, Amy, to set up a computer lab for Friday, Jan 16, with periods 0, 1,2, 4 and 5. This will also be a new activity [required activity 12] to weave computer
technology into the science 7 curriculum. The students will construct an “instructional chart” using Power Point program and then plug in four facts about the nucleic acids, RNA, and DNA.

**Day –2** Tuesday we worked on assembling the DNA models that the students had cut out on Friday [1-12]. The teams then taped or glued their model on large construction paper for display in the classroom. At the end of the day, there were 34 team models of DNA on display, and this helped the students see the concept that all DNA is arranged differently for each person, just like a fingerprint. They were very pleased with themselves. The rest of the period they worked on the questions for required activity 15, Lab for DNA Models, and required activity 12, questions about DNA. These latter required activities reinforced their concepts about the parts of DNA and served as a great MODEL for their understanding.

**Day –3** Wednesday we checked required activity 15 and required activity 12, and read in our textbook on pp. 95-96 about transgenic organisms. The computer lab exercise for Friday 1-16 involves DNA and RNA [organizational chart] and genetic engineering of a transgenic organism [paint and draw functions] all in Power Point for presentations. The rest of the period we worked on the section review required activities 13 and 14, a study guide on transgenic organisms. Students were reminded to make up a DNA and RNA chart for Friday’s computer lab. The four facts were to include shape, where found, bases, and a fact they made up.

**Day -4** Thursday: NO school. Ice.

**Day –5** Friday required activity 16 computer lab with Power Point. This program was a first for almost all the students, and therefore I arranged them in pairs on the computers, and it went very smoothly. It is much easier to work with 14 computers at a time than 28. All classes were productive and most had their charts, however, no school on the day before did not produce as many charts as I would have liked. Students were reminded that Monday additional activities 9-18 were due and that the test #2 will be Thursday, Jan 22. It will cover required activities 6-17.
3rd Grading Period, Week 6, January 19-23

**Day -1** Monday we checked additional activities 9-18, the last additional activities for this 3/6 week period. No new additional activities this next week as we get ready to cover new material and close out grades. Students were reminded to have required activities 13-14 ready to check Tues from last week on transgenic organisms and patents.

**Day –2** Tuesday we checked required activities 13-14 on transgenic organisms and talked about how they have helped mankind. The CD-ROM on genetic engineering was shown to help the students visualize the DNA “gene” splicing in genetic engineering. Students next worked in teams on the Skill Builder on page 97 about summarizing DNA and RNA. Chapter 4 Review [required activities 17] is due Wednesday for double points.

**Day -3** Wednesday we checked the chapter review and discussed the test for Thursday. Students then played “team wars”, a cooperative team competition in which they pooled their class questions [each student made up five questions with answers]. They students had to stand up first and be spotted by the spotter, and if the answer was correct, then that team got a point; if incorrect, the team lost a point. No harassing allowed or talking out of turn. This activity produced a lot of fun and a lot of usually quiet students answered a lot of questions, much to their classmates’ amazement. Students were reminded to study for the test.

**Day –4** Thursday the students took the 50 point test first and then worked on required activities 1 [Ch.5] listing five characteristics of transgenic organisms, and then they drew their genetic inventions. This is a pre-lab exercise for next Wednesday when we go to the computer lab to finish our Power Point presentation on nucleic acids [RNA & DNA]. They were also instructed to have an idea of how their ‘organism” could benefit mankind. This activity should help build confidence and promote creativity and critical thinking skills.

**Day -5** Friday, the last day for 3/6 week grading period. Grades due Monday. Today we worked on the Final Grade Summary Sheet and recorded our two test scores and then went over both. Next the students added up their required activities points and added these numbers to the Final Grade Summary Sheet. A list of supplies good for 25 points was assigned for Tues, Jan
27, day 1 of 4/6 week. The list of supplies included: 1. Covered textbook, 2. Red pen, 3. Loose leaf paper supply, 4. Notebooks with dividers. Students were asked to read pp. 106-112 for Tuesday and to get ready for 2nd semester.

End of Researcher’s Journal
Appendix B
Interview Questions for the Teacher-Researcher

1. How does the learning contract affect your planning?

2. How does the learning contract affect your role in the classroom?

3. How time intensive is the grading component for the learning contract?

4. How do you use the learning contract with your students?

5. Would you recommend using the learning contract again next year? Why?

Other comments:
Appendix C
1/6 Final Grade Summary Sheet

NAME ___________________________________ Period_______ Date_________

Total Points for [RA] ____________

RA 15 = Lab Practical ____________
RA 18 = Ch. 1, Safety, Lab Equipment Test ____________

TOTAL RA POINTS ____________

Total AA Points

Check for AA REQUIRED WRITE # ___ ___ ___ ___

AA REQUIRED NOT DONE ___ ___ ___ ___

***GRAND TOTAL = [RA + AA] = ____________

Unofficial grade for this six-weeks = ________
[see contract for total points]

ORIGINAL CONTRACTED GRADE WAS

1. Were you successful? ______ Explain__________

2. How can you improve for the next six-weeks?
Appendix D
Student Survey

Mrs. Harmon has my permission to use my comments in her research. Yes No

Directions: Circle the answer that best describes your feelings about the learning contract for the first three six-week grading periods.

Choices: SA = strongly agree
A = agree
U = undecided
D = disagree
SD = strongly disagree

1. I thought the learning contract helped me to know what was going on in the classroom with respect to homework assignments and daily classroom activities

   SA   A   U   D   SD

2. I did more additional activities (AA) than required with the learning contract.

   SA   A   U   D   SD

3. I think that the learning contract helped me to be better organized with my daily assignments.

   SA   A   U   D   SD

4. It was easy for me to find the assignments using the required activity, RA, and additional activity, AA, numbers found on the learning contract.

   SA   A   U   D   SD

5. I discovered that the learning contract helped me to set my goals to earn high grades in science.

   SA   A   U   D   SD

6. I found that the total points for an assignment were easier to work with than letter grades.

   SA   A   U   D   SD

7. I felt good about my grades in science using the learning contract.

   SA   A   U   D   SD
8. My friends and I never talked about the learning contract assignments.

9. The learning contract’s additional activities (AA) helped me to learn more about life science.

10. I found that I did not need any special skills to use the learning contract.

11. I discovered that if I set high goals for grades that I could succeed.

12. I liked working with my team on assignments during class time.

13. I liked working alone on my assignments outside the classroom.

14. I signed up for an A more than any other grade for a six-week grading period.

15. I recommend that the learning contract be used again next school year.

My story to share about my learning experiences in Science 7:

Note. I asked the students to reflect on a learning experience and to write about it.
Appendix E
Interview Questions for Students in Grades Eight

1. How did you feel about the learning contract motivating you to do your best?
2. What part or parts of the learning contract helped you stay organized with your assignments?
3. When you signed up for your grade on the learning contract, how did you follow up or what helped you make a good grade in science 7?
4. How did the learning contract affect your feelings about grades?
5. How did the learning contract help you with your science assignments?
6. What skills did you need when using the learning contract?
7. How did you work with your team on the learning contract assignments?
8. How did you use the contract as an individual student?
9. What grade did you contract for the most?   A+   A   B   C   D
10. Would you recommend using the learning contract again?

Other comments:
Parent Survey

PARENT - TEACHER CONFERENCE SURVEY NOVEMBER 3, 1997

Science 7 Mrs. Harmon

Please complete the following questions. Thank you.

Parent’s Name_____________________________________________

Student’s Name____________________________________Period_______

First Six-Week Learning Contract

1. What grade did your child contract? A+ A B C D
2. What grade did your child earn? A+ A B C D F
3. Do you feel that your child was successful? Yes No
4. Do you have any questions about the Learning Contract? Yes No

Explain:

5. Do you talk with your child about his /her Science class? Daily Weekly No
6. Are you aware of your child’s assignments in Science? Yes No
7. Do you have any special concerns that I need to address concerning your child’s educational efforts? Yes No

Explain:

Second Six-Week Learning Contract

8. What grade did your child contract? A+ A B C D
9. Did you sign this new Learning Contract? Yes No

10. Other comments:

Thank you,

Mrs. Harmon
Appendix G

Teacher-Researcher Interview Transcript

Tape 1 [Teacher-Researcher interview by Professor (Advisor)]

Sally: “So your question to me was could I teach without a learning contract? And I wouldn’t have any trouble being effective in the classroom without a learning contract. But I am finding that with this particular age level that I feel more effective with them because of their organization skill, because of them being able to keep up with assignments, because a lot of the material we are covering is on worksheets, does involve some written work from the students and because we are covering the material in clips—it is like little clips—and then we go back and work constantly putting something together, that we go forward and then spiral back, pick it up again and then go forward again. A lot of the materials that are being used in the classroom go together— they keep going together— and it is easier to keep up with a piece of paper that has a number on it. That’s really, I guess the bottom line, the fact that it has a number. It has a description on a piece of paper that the students have in their notebook. So, to me, I feel that I am more effective with the students keeping up with the assignment on both a daily and long-term schedule if they have a learning contract. And, I guess, that is one reason that I have enjoyed using it on this particular group of students.”

Advisor: “One of the things that you get out of learning contracts is, you think, superior organization? That is correct?”

Sally: “Right”

Advisor: “I think that that is the process that you’ve got to go through, you’ve got to go down through the area, and think about the—’I’— before the,” yeah, I could do better with the organization here, but this process, this really helps in this way. OK? And you think that also the students are given some choice on the grade? You are beginning, well, you are going to share some grade responsibility. The other is, it’s an interesting thing…that’s the other thing I want to…you talk about it, but you don’t get at it really well, but it’s so hard, so that is not a criticism, but it’s the grading thing. You see that reward in the past structure in school is one of the most
important things that you can get after. I’ll mention some stuff like a guy named Doyle. I think you should get some of his stuff- I don’t think you have any yet- his name is…Walter Doyle. Now this stuff is a little old, and there might be some newer stuff around, but I am going to give you his book too, cause I am thinking that it might be good. Academic tasks is the stuff that I am talking about, and let’s see if he sites it, so we should save some bickering then. Mark my book up any way you want, (garble….) that’s all right, but you ought to go through the contents in detail and say like this. Let’s go through this and see what kind of things may pop out. (Garble…) Teaching with room observation (garble…) see-there you are, there might be something that you ought to know, and this general chapter may be a helpful thing for you to read for example. All right? Because of the increased awareness to our answered question…. (Garble) All of this stuff will get you, you know about expectations, you see? So, you know what you may find is that this is the thing that really helps you to begin to zero in. Cause what you are doing is coming up with a classroom technique, “well this is what is working in the classroom” and that is what it’s all about and what you study really is, is a teacher’s reflection on a process. So what you’ve got to do is try to figure out how to package this reflection and you’ve got to have it tied to really good classroom stuff. Well, nobody knows, I mean, this is a particular view of the classroom that is pretty compatible with what you are talking about. All right? And this is, I mean, this is absolutely choked full and it will give you a research base for that which you are talking about is at the end of each chapter. The one that I was telling you about before was this motivation chapter. In some ways I think you ought to even start with that one, because that is what you are after with all this. And (garble) students to value academic activities, motivated by many to obtaining success expectation…there is a whole bunch of what you are talking about in this chapter on motivation.” Sally: “Yeah, there really is. It is motivation… Advisor: “Yeah, it is important to keep them engaged, so you can come off of that, you see…Project enthusiasm, Project… I mean all of this stuff. So I think that as you continue to think about your work, settling down with some appropriate chapters in this book will really help you bring some of this together. It’s not real management for you…. That’s how it is, it is motivation and you’ve got
cooperative learning in there, I mean, you know about cooperative learning and you will find other sources in there such as active teaching. O-K?"

Sally: “That was good. Thanks. “

Advisor: “It’s the most comprehensive book.”

Sally: “Thanks”

**TAPE 2 [continued from Tape 1]**

Sally: “In the beginning of the year, I didn’t feel like I was covering material, but I felt that it was important for the students to feel comfortable with what we were doing together and to get an understanding.…”

Advisor: “What did you mean by that?”

Sally: “I didn’t feel like I wanted to rush them through or jam material in just to say that we had covered three chapters.

Advisor: “Yeah”

Sally: “But that was not the idea. I really went slowly, and it was more of a nurturing effect, because our students come from an elementary school to a middle school. The idea of having a lot of travel from class to class. There are a lot of new things going on.”

Advisor: “So that is an important factor? What’s going on in the kid’s life.”

Sally: “What is going on with the kids, and the fact that they have gone from sleeping till eleven o’clock and my classes start at seven thirty-five. So I really took them one step at a time. We did a lot of talking, like-‘ this is what we are going to be doing through the year’;’ why don’t you get use to it now?’ And’ give me feedback’;’ do you understand the assignment?’ talk to me about it’”

Advisor: “So when you say “this”, what does “this” refer to?”

Sally; “The learning contract”

Advisor: “That’s right”
Sally: “Really the learning contract”

Advisor: “That’s right. How long would you say that is in the process of (garble)?”

Sally: “Still going on”

Advisor: “Still going on?”

Sally: “It is amazing, because the students still want to ask me how many points an assignment is worth. And they will remind me ‘Well Mrs. Harmon, remember you changed the last one, you changed the points on us for the last one’ and I said ‘You’re right, I did’ and I said ‘This is a section reviewing new words…what do you think?’ and they’ll say ‘It’s always ten points. She never changes that one.’”

Advisor: “Well, don’t you have that all spelled out?”

Sally: “It is. But once in a while they will do something…sometimes on the assignments I’ll add something to it…I’ll do a modification and when I make a modification, I might add five more points to it and tell the students that since this comes out at the beginning of the six-weeks, the total points on an assignment I might say change from RA 18 to 25 points. (Garble from the Advisor) …I do that. Also the last week of the six-weeks, if there is something that we’re just not going to get to, I do something that is called “double-points”. Which is a bonus to the students…. To make sure that last week, that they’ve got it all together, and got all of their points. And I found that this was very effective for students that sort of had just slowed down… cause it was end the end of six week and it was like ‘I didn’t get all of my points’, or ‘Gosh, I don’t think that I am going to make it.’ …’And this is double point…. …For this assignment. Double points!!…Gosh!”

Advisor: “It’s like a marketing device, isn’t it?”

Sally: “Yeah. I call it “double-points assignments and there are maybe two.”

Advisor: “Like grocery stores do?”
Sally: “Yeah, it’s a kind of boost. Yeah. It’s a boost. An innovative boost.”

Advisor: “When did you discover that stint?”
Sally: “This year. This year. This was the first time that I had ever done double points was this year.”
Advisor: “So this is the first double points…So that with the reward system, the reward system you find that your grades need adjustments?”
Sally: “I’ve made modifications for double points.”
Advisor: “What makes you decide…. I mean do you just wake up some the morning and think that it is a double points day?”
Sally: “What I’ve been doing… is when it is getting near the end of the six-weeks, there might be one or two things that we will not going to cover, and I will move them to the next six-weeks. So I might need twenty more points. So that is when I decide that this is a double point thing, or when the students have really worked, worked... done a nice job on an assignment. I’ll say, “You’ve really done a good job on this assignment.” It’s a reward.”
Advisor: “Now, do you have it in your head what that (garble) means? When there are points, do you pretty much know because you know what the running total of the points?”
Sally: “I don’t really have a running total, but what I do is to put all of the grades on a grade machine…it is all computerized…. And I can pull up the grade machine on any student and if I see holes, then I know that those assignments are missing, and I send them a quick note.”
Advisor: “And notice that their completion is going to be way low?”
Sally: “Yep. There are going to be holes.”
Advisor: “How does that compare to how you used to grade (garble)?”
Sally: “What I usually do…. I would always give the students something in writing every three-weeks. I’m used to doing that automatically. I give the students a written handout of all their assignments that they have turned in for grades and the reason for that is that I can make a mistake. And that is what I tell the students. ‘Mrs. Harmon can only put the grades in, and if the telephone rings and I have your grade, I will turn it over…. I have a little system that I turn it over until it is in the computer. And if the telephone rings, and I didn’t turn it over and I missed it, sometimes I will put a grade in like it was an eight and it was a ten. So I tell them that this is a check up on me and it is also a check up on them. And I have found that I will have given an assignment back and I have put my mark on it and that means that it has been reported, and for some reason it is not in the computer. I have no understanding about it at all. So it is two fold. To check on me to make sure that it is in the computer, and it is a check on the student to make sure that they actually turned it in.”

Advisor: “What do you think are the most essential elements of this program?”

Sally: “I think number one, it gives them a goal. By contracting for the grade, it gives them a goal, something to work towards. The second thing, it helps them with their organizational skills, which I find with the adolescent learner, there are several students that just need all of the help that they can with organizing. I am also finding that a short, like a number, works better for kids then to say that you need to read pages 230-235 to find all of the new words and work on the section review so you will be ready for what we are doing tomorrow. I find that they have lost that. (Garble) I’m finding that even though we start students with assignment pads at the beginning of the year, they are gone. They are long gone. It’s not a waste of money, I’ve not seen that, I am finding that they will keep up better with a number rather than a lengthy description. I’m finding that they are very good about recording their points…when I give them their assignments back, they are very good about recording their points and there is an immediate conversation and a team about ‘where’s yours? Why didn’t I get mine back? Did she give this back…when did she give this back? How come I don’t have mine? Mrs. Harmon!’ You know, it’s an immediate…it’s…. I’m finding that it is a very good check on the
students completing their assignments and completing the reports, and for me getting the reports, so paperwise, it has been a great
system. I am also finding that they are very curious to find what we will be doing the whole time we are together.”
Advisor: “They like that too?”
Sally: “They like to know…they like to know what we are doing and where we are going. And they want to know how soon we are
going to get there. They want to know why we can’t go any faster.”
Advisor: “These are all of the students?”
Sally: “They want to know why we can’t go any faster…. These are across the spectrum.”
Advisor: “These are different…they all like what they are doing?”
Sally: “They want to know what is next….’What are we doing? And when are we going to do it?’ Like today, I said check the board...
And when are we going to be doing this?’ Like today, I told them that because all of our live things are coming in and I’ll be flipping,
flip flopping, the RA’s will need to work with the labs…. We will have live organisms and then we will go back to something else.
So, I said, you really need to stay with me. And immediately they will say ‘Well, what’s coming next? We’re not going to be here
next week. So what am I going to do?’ So there is a definite, I’m still seeing a definite enthusiasm in my students with respect to the
assignments that we are going to be doing.”
Advisor: “Alright. Is using this approach with students the way you think about teaching?
Sally: “I think that this is a really good approach for this age level. I have not used this approach before, but I am finding out that the
longer I use it, the more I am modifying it and adapting it more to my particular style. I’m adapting it more to the way that I like to
present material to my students. On the bottom line, I’m finding that I still have the flexibility to be creative and original and still stay
within the parameters that I have laid out. I’m finding that my students really want to know what we are doing on a daily basis, which
is common. Every time I give a talk they want to know what we are doing, and where we are going, and why we are doing it. And why are we doing this in this sequence or something like that? “
Advisor ”Well, one of the things that we were talking about before is that they were thinking of how they were able to get points?”
Sally: “I am thinking much more advanced. What I need to do foundation-wise, so I can just sort of slide into the next area and there won’t be gaps.”
Advisor: “ So you are dividing them up into six. …You are dividing them into six chunks?”
Sally: “ Six chunks”
Advisor: “ And before you had twenty chunks?”
Sally: “Four chunks.”
Advisor: “ But you were going one to two weeks at a time?”
Sally: “Yes.” I find that this is true.”
Advisor: “And you were using template segments more than teaching segments?”
Sally: “I was finding that I was teaching one chapter at a time during it, and I feel that I am more effective as an instructor because I have the big picture for me…I have the big picture.”
Advisor: “Yes.”
Sally: “ And I think…in fact, I had a student today look at the assignments and say ‘Well, we are missing chapter 23. You didn’t cover chapter 23 ‘….’So I don’t even know what chapter 24 is about. So let’s check it out together” and he got his book out and it was on reproduction. And he said ‘when are you going to cover reproduction?’ because you had said you would cover it this fall?
Well, we haven’t covered it yet!” So I was thinking well this is cute because he already knows that it is not on my items to cover, and he wants to know why we are not going to do reproduction in the classroom.
Advisor: “Well, how much of these are (garble). Has that changed at all because of this learning process?”

Sally: “I think that it has shown me that organizational skills are really a weak area in this particular age group. I’ve seen it more this year than I’ve seen it before. I think that I am getting more used to this particular age group…. Seeing more about what they are capable of doing and how they are working within the parameters of this learning contract. I am also finding that students set very high goals for themselves…the majority of my students have contracted for A’s…. And when they achieve that A, then they are ready to sign up for another A. The kind of students that sign for that A and don’t make that A, they are not as…. I don’t know what the word is…. They are not as eager or they come down a notch saying that ‘I couldn’t get it last time, I probably won’t get it this time.’”

Advisor: “They don’t want to kick themselves again.”

Sally: “Yeah. They don’t want to punch themselves again.”

Advisor: “Do you find that your grades are higher now?”

Sally: “I found that they were higher the first semester. And I think that goes along with the time of year, and new things. I found that my first six-weeks, grades went down, and I went back and evaluated them. And I was curious to know why things went down the first six-weeks. I put more projects; I did a project sequence for six-weeks that perhaps needed to be done in another way. Some other things I’d done that six-weeks might have precipitated that. But in our school, all of the teachers found that their fall six-weeks grades had plummeted, and we decided that we had a real problem as a faculty with our first six-weeks sinking, so we came up with ways to help students that were just sinking.”

Advisor: “Well, isn’t that interesting?”

Sally: “Sinking…. So this six-weeks, we put in something called a class participation grade of 100 points to help off set those grades that were for six week and to give students credit for those behaving properly in class.”

Advisor: “This was the whole school that did it?”
Sally: “All of the teachers.”
Advisor: “I’ll be darned!”
Sally: “And it’s on the contract. You can see it there. Class participation 100 points.”
Advisor: “Right”
Sally: “And we found that this helped a lot of our students that needed a little more of…. What you might say was a little boost…who were with us in class and were actually on task…. But still having a little bit of trouble getting those better grades and this really helped them out. This last six-weeks, the fifth six-weeks…the fourth six-weeks, this last six-weeks was the first six-weeks that we actually put it into…we actually did this as a faculty.”
Advisor: “Well, I’m impressed. You actually did this as a faculty? If I wanted to try this approach in a classroom, what kind of advice would you give me?”
Sally: “I think what I would want to do first, was to sit down and talk about the age level that you were working with. And what group you were working with…and what kind of timeline are you talking about…are you talking about….”
Advisor: “Sixth graders.”
Sally: “Then I would try a six-weeks…. Like a mini learning contract. All right. It depends also on whether you are doing it at the beginning of the year when your students come in…it’s a new thing.”
Advisor: “I want to start it next fall with my new group of sixth graders.”
Sally: “I would start with parents first and send a letter home to the parents telling them the type of learning contract. That this is to be used in the classroom. This is an up front…. I would start with the parents first, and when we had an open house at school, I would have a copy for the parents to see…the students to see. And I’d let the students know what they would be doing orientation period to
be getting used to how thinks are being done, what requirements were, and how grades and notes in school… and then also let the parents know that the learning contract gives them an opportunity to see what their students are doing in school. I had parents that will call and say that they saw their students’ learning contracts and they noticed that some are missing a few assignments and it was a two-way determination. So it’s also for the parents too.”

Advisor: “Yeah”

Sally: “So I figured in getting the parents involved and also the students involved, and of course as a classroom teacher the three of us, three different groups getting involved, that would be a good way to start out. And then talk to the students about this is the way that we built the learning contract and how we take different activities and put them in and give them a number. And if we don’t always go in that particular sequence or order, I guess that is a good term, start out a little bit slow and give them a chance to get use to it, you know what I mean? One of the things that I am going to be asking the students in the survey, is whether or not they would recommend my using the learning contract next year. “

Advisor: “What are they going to say?”

Sally: “I hope they are going to say ‘yes’ but I’m not sure…. It will be interesting.”

Advisor: “How are you going to ask that question?”

Sally: “I’ve got copy. Strongly agree, agree, and disagree…”

Advisor: “Uh…”

Sally: “I fixed this survey up for the students as a final evaluation tool, and I am still working on them.”

Advisor: “O-K. Yes, let me ask you some questions as a teacher. …I do more activities with using the learning contract than with my typical teaching before I used…. As compared to when I used my contract. Would you strongly agree or strongly disagree?”
Sally: “I would agree. I find that I am covering more material with the students. I am introducing more concepts with the learning contract, and I think a lot of that goes to better planning.”

Advisor: “I think that the learning contract helped me to be better organized with my daily assignments for the students.”

Sally: “I definitely would agree with that, because I feel that I’ve done a better job of planning a lesson and what I want to do, I complement it with something that is going back and picking up…. Like spiraling…. Going back and picking up something that we have covered, bring it forward, talk about it. Talk about something new and then give them an opportunity to work with that concept and then get some hands on activity, involvement with it.”

Advisor: “I’ve discovered that the learning contract helps me to set my goals to provide high quality instruction and science.”

Sally: “I’d agree with it. Definitely. I feel that the learning contract is going to keep me on task…. Target those particular areas. And because I have used it last year, this year I am sort of aware where the students sort of got off track or had difficulties with a particular concept and already made adjustments to the new contract this year.”

Advisor: “I felt that my grades in the science using the learning contracts were more reliable.”

Sally: “A lot more reliable because I have a longer trail working with the students…I have more of a daily feedback about whether the students were with me, with the idea, or whether or not they were actually retaining the information, and attention. I think, is something that we are always concerned about with students.”

Advisor: “How many teachers have asked you about learning contracts?”

Sally: “I do have resource teachers in my school. A resource aid, first period, because I am working with thirty students and seven of those are spending part of the day with a special teacher, so they have special learning problems some are difficult, and these teachers are finding that it is very easy to keep up with their students…in fact they usually come down to my room at the beginning of the six-weeks standing in the door until they get their contracts so they can help the students with those. The other students are hearing in
their classrooms what we are doing and I usually find that my afternoon classes usually know exactly what I am doing in the
classroom because there has been a feedback. ‘Mrs. Harmon, we’ve heard that you did this today in the classroom and this happened.
or something like that…”

Advisor: “Well, you see what I am driving at as I think you ought to take a similar kind of test that you give to the student. See which
ones of these would apply to you in your teaching, and see how you match up. Cause I think that these are real good questions and I
think you ought to assume a real good feeling…. Really good.”

Advisor: “You’ve bumped up against this a couple of times, but I want to ask you a specific question. What are the most significant
student outcomes you see in using this learning contract?”

Sally: “I think the students feel good about themselves and what they are doing in the classroom. I’m seeing a real….”

Advisor: “Do they have a good sense of accomplishment? Let’s talk about that.”

Sally: “They have a sense of accomplishment. For example, on this computer technology project where they take some of the
concepts, we did the animal kingdom period, we didn’t go into the (garble). I am seeing a real self-worth concept coming out of the
students. The student that perhaps failed the last six-weeks is doing a really awesome job on the particular animal user computer, yet
in the classroom is very shy, I didn’t even know that this person was even thinking along these lines. So I am feeling that with the
assignments that are given to the students and the several of the students, I am seeing that they do well on the assignments. Uh…. I
guess the other thing is that when they feel good about themselves, I’m finding that I’m not going to have as many people in the
classroom that get lost. ...Because if someone knows what is going on, they usually help the person beside them. And since all of my
students sit at tables…I have eight tables in my class…and I have seven teams of students, usually I’ll have teams if I have a student
that is really lost, usually by the end of that period, they are caught up. I guess the team wants to keep up. You know it’s real
cohesive…. Very cohesive. That is the other thing, for example today we were working on a study guide of words that they had just
looked up.

And they were sort of helping each other. And someone said ‘Mrs. Harmon, can you help me?’ And I said ‘Check with your team
first. Let them explain it to you, and if you still don’t understand it, I will come back.” So I circled the room to give them time to talk
about it and then said ‘Do you need any help?’ ‘Oh, no…. I understand exactly what you want me to do…. So and so just gave me
the hint.’ So things like that are good. I feel that there is a definite learning process going on. Sometimes, it is very subtle learning
because you don’t get any immediate feedback, you are not always aware that something is being learned, and sometime later
something will come up and the student will say ‘I remember this’. And I will say ‘Oh…. So you were here with me that day.’ So
little things like that make me aware that learning is going on…it’s a different level but I think they feel good about what is they are
doing so that is an incentive to me.”

Advisor: “Well…do you think that their achievement is better or not?”
Sally: “ Having not worked with this group, other than with this particular instrument, I really don’t have a comparison. I can’t
compare it to anything. I have a history of working when I taught at the high school at other levels. I have a real history of my
students and would say that 98% of my students do really well.”

Advisor: “ Well, don’t you remember how well these students did in science last year?”
Sally: “They were not. They were at elementary schools. We only have seventh and eighth graders in our building. They came from
two different elementary schools, I mean elementary completely. And so this is their first time in this type of environment.”

Advisor: “So you didn’t have a science grade?”
Sally: “ They did and it was on their permanent records, but I didn’t go back. I just assumed that when they walked in, this was a
clean slate. I just assume that they know nothing when they get here, and just build them up.”
Advisor: “It might be interesting to see what their science grades were.”

Sally: “To see if they’re past performance…”

Advisor: “Sure. How are they performing in your class versus how they are performing… I know that this is very different when they are learning from a learning contract, but can’t you get an idea. If they are a “D” student and now they are getting B’s or A’s from you, that might tell you something. Can you access that data?”

Sally: “I’ll have to go back through the permanent records of the students, and it should be in the sixth grade.”

Advisor: “How many groups are you studying?”

Sally: “I have five.”

Advisor: “So you could choose a random selection across all five grades. Are they homogeneous or heterogeneous?”

Sally: “Homogeneous.”

Advisor: “Well,”

Sally: “I’m sorry…heterogeneous.”

Advisor: “So, you could do a purposeful sampling of some students that are doing well, some students that aren’t doing so well and some students that are in the middle.

And see how they all did in there fifth grade science.”

Sally: “And see if there was a trend.”

Advisor: “Yeah. In fact you could get a correlation; you could get a correlation out of that. You could rate them as doing high, medium, and low. And then do the same thing…. I mean have some criteria…. I mean that the grades are…. A is high…B’s medium…. C is O.K….D is low. See how they match up. I think that people will be impressed with that, you know?”
Sally: “That’s true…one of the things about being in an intermediate school or in an elementary school or intermediate school, I think that the time of assignments varies.

I don’t know that they would have…”

Advisor: “Yeah. It doesn’t matter. I mean. It doesn’t matter. It’s an apple. I mean it’s two different things. But it is still all-relative, I mean, how did they do in science last year? So...you are comparing the science last year to the science this year. The kids are under their own control really. See. So it’s not across kids or anything else. You are not doing a mean. You are going to do, in fact….

You are…you could do…. And what I would do is look at…. I don’t know…ten kids in each category, high, medium and low, and that way you could get five from each school. So you want the schools equal...so that would only be thirty kids…And you would just go and get their science grades from last year.”

Advisor: “I think that would be interesting. The other thing is did you ask them ‘I think you want a contract…’ You could also ask them a question, Sally, about how did you...’I like science in fifth grade...'I like science in...seventh-grade.’ Are you asking their names? Will that make a difference?”

Sally: “I don’t know that I will leave that on.”

Advisor: “Oh, I like teaching with contracts…. I like teaching with seventh-graders…. You haven’t taught seventh-graders before?”

Sally: “I taught them last year, but this is my first contract.”

Advisor: “What I was trying to get is some indication from you as to how you felt about teaching with a contract?”

Sally: “Prior to teaching the seventh-grade, had I ever used a contract before? No.”

Advisor: “When you are doing that, they’ll talk to you, they’ll tell you things, so you never cut the tape off till they are gone. Cause you never know what…. They’ll turn around and you’ll say something on their way out the door and they will turn around and say something...even starting. So...o-k.... Great...I’ve got some things.”
Sally: “Well, the other thing is, I brought in pieces of the contract from first six-weeks…. Pieces with me…these have to do with an orientation for the students, a sample contract and these are the originals, and they haven’t been put on hold paper yet… And then I brought in some of the things, some of the activities they have done. The big thing was getting them used to the terminology that I used… like I used “RA” as required activity and I used the “AA” as additional activities. And they are required on their contract to get so many points for additional activities.”

Advisor: “Where do the activities come from?”

Sally: “O-k, the activities are generated from the SOL’s of the curriculum (standards of learning) and for that particular life science curriculum, and then the activities that would complement a particular concept.”

Advisor: “And where do you get them from?”

Sally: “O-k, those activities are…some of them…I used a variety of text books, and a Lot of them is worksheets. We just adopted new textbook…last year was the first year with the new textbooks, so I have taken some of the old material and woven it into the new material, and this six-weeks we are entirely in the new material…. Completely.”

Advisor: “So, when you put together a new…this wasn’t the way that I was going to start…. But when you get ready to put together a new six week project, tell me how you approach that.”

Sally: “O-k, what I do is look at where we are in our development of our curriculum, what we need to do together as a team, also look at what kind of year it is…for example…if I want to do flowers…. I would not do them at the beginning of the year…. cause the availability is just not there. I think it is important to build on foundations, so I would usually start with the curriculum like this cell…. And then I would start with the nutrients…and things like this and build from there. So if you were thinking of building a body, I’d start with the cells and build up and then get more complex. For example, this six-weeks we are working on the five kingdoms and since we have already done the processes that this takes us into, like the next step. I sit down with my textbook and
look at where we are in the book, and correlate them with the SOL’s and then look at the curriculum choices for worksheets and labs and the concepts.”

Advisor: “Now when you say that you correlate with the SOL’s, do you look at the content that is in the text book, and then you match that up with the SOL’s?”

Sally: “Right…the objectives”

Advisor: “How do you do that? Cause they’re not wound up to same, right?”

Sally: “There are fourteen SOL’s for this curriculum, and the textbook that we have adapted actually parallels these. So right now I am pretty much into twelve, thirteen and fourteen of the SOL’s, working on getting ready to go into divisions and ecosystems. So we have taken the kingdoms and our next step would be to put them together on a large scale. The whole biosphere, and where does this all fit.”

Advisor: “So now, you have your content match…. With you SOL’s…. Now what do you do?”

Sally: “So then I go back and look at the chapters that complement those concepts, which chapters are going to be used, so the students have, like, a reference, and what laboratories can I use…. What hand-on activities will help complement …so I look at my film strips, I look at computer technology and then I would look at what I was doing...at CD-ROMS.”

Advisor: “Can you give me an example, then, of how you would pick some activities to go with the contents?”

Sally: “O-k. For example, we are working with plants right now. We have already worked with three kingdoms, and are working with the plant kingdom. The students need to understand the processes and the different organization of plants and how to classify them. So we would start with a reading activity and perhaps vocabulary words, because these particular terms are not real common, Vascular and non-vascular plants. The different divisions, and then I would have them do a vocabulary list first, work with those new words we have talked about in class and have a discussion. Then we talk about what facts we already know about plants. …What do
we already know about plants? Where are we in our development? And then we…today for example, I showed them with the computer and the big screen, we did an introduction to plants from a CD, so they could hear the words, get some pictures to line up those terms with some visuals and then they got…where can we see what comes up next? …Where do we go from here? So we went from introduction of plants to maybe one or two next sections on seed plants, and then tomorrow, for example, just to follow up on that, we will be doing a laboratory where we actually work with the parts of the flowers, so I actually try to give them something in writing, (…) vocabulary, something where we can discuss the concepts that we are going to start with, then a visual aid, usually a video or filmstrip or something that they can see, hear, (…without touching), so those three things wrap a concept, wrap a lesson, we call it a lesson wrap.”

Advisor: “So you…um…you plan this wrap, alright when you plan this wrap in a six week chunk? Um…. And you’re using these learning concepts. Is your planning now different than it used to be?”

Sally: “My planning has changed a lot. With the learning contract, I can get a wider scope on what I want to accomplish. I think that usually I do a lesson plan for a week at a time, and maybe I can get to two weeks, but that’s really as far as I get. I’ll put down page number, concept, and objective and how I am going to evaluate it (maybe my lesson plan). But with the learning contract, what I am finding, is that with longer chunks of time, I am actually more effective because I am actually able to cover that material, because it is planned out. I feel like I am a better planner. I feel like my organizational skills are sharper because I know what is coming up in the future and how I need to get the students ready for this new plan that we are getting to.”

Advisor: “Yes.” So that longer plan actually helped you?”

Sally: “Yes.” And because the learning contract actually comes out in the beginning of the six-weeks, I sort of commit myself to making sure we cover these materials.”

Advisor: “So it’s a contract for yourself, too?”
Sally: “Yes.” It makes me…it’s more of a commitment for me to make sure that the students have this material, and that we do get these things together.”

Advisor: “I don’t think that you had mentioned that before!”

Sally: “It keeps me on the ball.”

Advisor: “Yeah, I remember reading that in your paper, yeah…I don’t think you talked about it from your end so much as for the students.”

Sally: “I think that when we were in the last discussion, I think that is one thing that they stopped and said, well these are good questions for you. And we sort of went to other topics.”

Advisor: “O-k…um…”

Sally: “Last year, when I took over from the teacher that was using these, I found that it was very difficult using her contract, because she had so much more in the contract. I was finding that I was taking…. and going to the next six-weeks with things. And this year I’m more committed to getting through what I had scheduled with the kids, and I have done a more realistic time, realistic timeline with the kids. And I feel like I am more comfortable with the material this year. Last year I was really, like…I literally walked in off the street and started teaching material that I hadn’t seen in a long time.”

Advisor: “So there was a big difference?”

Sally: “A big difference.”

Advisor: “You know there was a big difference. Well, after you…assuming that I am a colleague of yours, and you are sitting in the teacher’s lounge (…garble…) and I’m curious about what you are doing. I know you are doing something and the kids are telling me about a contract that they make with you and…. Can you describe that to me as though I were a colleague of yours?”
Sally: “O-k. A learning contract with respect to the students, is perhaps a tool or it is a strategy for them to keep up with what we are learning. Basically it is a list of activities that we are going to cover together in the classroom, and it gives them an idea of how they will be evaluated, because the points…there are some many points that each particular item is worth, so they have an immediate feedback…there is no guess work about what we are going to be doing today. When they walk into the classroom, there is an agenda on the board about what is going to be covered, whether I am going to collect it. I put a little check besides “check and collect”. All of the assignments are checked in the class so there is an immediate feedback. If someone is actually lost or I have someone who completely misunderstood the question, then I am able to catch that person up right away. There is no…you know….’I am lost…catch me up…I didn’t understand something from way back when. A learning contract helps students to set goals. I help them set a goal for a six-week period of time, so it is a realistic time period. It allows the student to feel good about what they want to accomplish, because they have everything up front. I’ve had students come in and say ‘Mrs. Harmon, I didn’t have any homework last night, so I did the next RA’s ahead.’ I’ve had more students come to me with ‘I’ve gone ahead because I know what I need to do, and I’m working ahead.’ Students that go out of town, students that have prearranged absences…. They know up front if I say that I am going to cover RA’s ten and eleven while you are gone…it’s done. So that is another benefit of having this up front assignments.”

Advisor: “That sounds like outcomes and benefits…. But what about the process itself? You described…and I don’t want to take you back to what you told me about planning…. But…. Let’s say that I am this teacher, and you are telling me about this process,”

Sally: “The learning concept sets up…. I guess the big things for the students…. Sets them up with a particular grade goal…. A certain grade that they want to make…They have a choice. Yes. Their choices are A, B, C or D and if they don’t follow through, in other words…if they don’t follow through on what they contracted for, and there is a good possibility that they will come up with an F. It also gives them an opportunity to come back on track. There is something called a student progress sheet…. Which allows the students to record the grades as the assignment is turned back, then they record their grade. This is a very quick check for the student
if they have been absent and forgot to make up something…then this is a very good opportunity for them to…’oh gosh, I know I did
that assignment, why didn’t I turn it in?’ So it’s a real good catcher upper, so to speak, for the student that has missed assignments.
The other thing is, students have a tendency to have very short, short things to remember,’ In class today, we are doing required
activity one, RA 1. They already have a list of assignments for the six-weeks, they just need to put down in their assignment books
‘RA 1”. They don’t need to write down any other information, because they know they have it in their notebooks. They are
couraged to keep assignment notebooks for organizational skills, and …so all of this together would give you a particular type of
student that is really academically challenged, and sort of committed to following through on their assignments and their work.”
Advisor: “I see that this is going to elicit in chapters. What does that…? I don’t quite understand that. Why does it go by chapters?”
Sally: “O-k. These are the…. For example…every six-weeks the numbers repeat. So in the first six-weeks, it is going to go RA
1,2,3,4…. Etc. The next six-weeks, we will start the numbers over again. “
Advisor: “So…. Why does this have to do with chapters?”
Sally: “O-k. This is just to let the students know what chapters we are going to be getting material from.”
Advisor: “I see. So I know if I am a student…. This is from Chapter 9. But it’s not…this isn’t…o-k…this is Chapter 9 and then this
is required assignment one, two, three, four. …. One through seven. But is it by day, or what determines how many you have?”
Sally: “What I want to cover in that particular chapter and what is available with respect to hands-on work, lab work. Um…for
example…the computer technology program that we just invented…. I made it up…We just got computers this year, and I wanted the
students to have a chance to put science and technology together. So I built an adopt an animal project and gave the students an
opportunity to (…) for five days planning. They went out on the Internet. They surfed the Internet and went to the different zoos in
the world, and they picked an animal that they wanted to work with and then collected picture data, background data, and then I used a
wildlife book file from Time-Life magazine which is a collection of animals from all over the world. And then they found their
animal in that particular file and they were able to scan the project involved, finding out the life style of the animal, the mating
patterns of the animals, the period of gestation, whether they were babes or how the young were produced, how many, the age of
maturity, related species, conservation…this type of thing. And then all of that goes along with some type of science, but then they are
using some type of technology at the same time.”

Advisor: “Well, I noticed that there are varied points for chapters?”

Sally: “Right. If they are doing new words…in other words, if definitions are in a section review that’s a ten pointer. If they are doing
a lab activity, that is usually fifteen points. If there is really something major, for example, the computer technology projects, because
they were there for five times, that weighted out to be 100 points. I look at the amount of time spent on an assignment, and whether or
not it involves more than the individual or a team and varied points they are obtaining…”

Advisor: “The amount of time in your quest or the amount of time overall that you are spending?”

Sally: “Overall. Planning time. Class time. Those that are done in the classroom…. In teams, have more weight. Things that are
done at home that are usually…I try not to give the students assignments that are not meaningful…I try to give them assignments of a
preview of what we will be covering in class, they don’t come into class cold…. I call them, like warm-up assignments. The
vocabulary words and reading. Sometimes we will read in class and if the terminology is very difficult, we will read in class
together…”

Advisor: “Well, how do you come up with the criteria for a B, C or A?”

Sally: “Well, what I do is to go back and check my contract for total points, say 600 points for a contract, then I look at 93.5% of 600
is x points. So that is where I get the range. If you were to go back and put 350 over the total points times 100, you would get
69.5%.”

Advisor: “Oh.”
Sally: “That’s the same as saying that if you have 70% of your work...if you have 70%...yeah...actually credits...then you should have this many total points. What I do for the students...it is easier for me to record points than to record actual grades, because then I have to take my grades and do a quality point, say if you have an A I make it a 4, if you have a B, I make it a three. It is going to come out the same. But this allows them a wider range, when you are working with points. You could get eight points one day and nine points the next.”

Advisor: “Well, the other thing is that it doesn’t..... A lot of kids feel that the (garble) is 10 points. Do they know that 8 out of that 10 are not too bad? How do they figure that out?”

Sally: “I think so. Well, sometimes they will say...especially on tests...because when I give a test back, we have.... Say it is a 30 point test and they get 26 points, they will say ‘what is my grade? This has got 26 points....’ They have a really hard time on the test, taking the number of points and figuring out a grade. We have done that a couple of times together, but they’re so used to seeing 10 or 15 points, that when I give them something for 30 points it’s like...”

Advisor: “Right. Till the end they don’t know if they got an A, B or C. Well, how do they figure out that ‘Well, I’m doing o-k’?”

Sally: “What they do, they take the number of points that they have earned.... For example they can take the first column on the student assignment sheet, supposed we have finished the first column sheet, they take the total number of points available, and take their total and divide it by the total available and they know where they are. For example, it we had 500 points available in the six-weeks and we have covered.... Say...250 points, they would just divide their total over the total possible.”

Advisor: “Well, if I had 200 points, then I’m at 80%. I’m making 80% at this time?”

Sally: “Right”

Advisor: “So that tells me, if I contracted for an A, I’d better get moving. I’ve got to do more. So they’ve got some idea?”
Sally: “Right. And what I have done is, or what I did the first three in the first semester at midterm, we did our grades together. I had them…”

Advisor: “So you helped them figure it out?”

Sally: “Yes, I did that. I said ‘Here is the total number of points that you had that was available for the first portion of this six week, take the number of points that you have earned and’…I did it together in class until they got it…. How to do it.”

Advisor: “So you think they all know how to do it?”

Sally: “I doubt it. Well, I’ve got to be realistic, though we did go through the motion. I think they understand the points and I think that they understand the totals. And I have several that carry calculators, and I’m forever adding their points together.”

Advisor: “Now, can they go back and do activities?”

Sally: “On a midterm, they can go back…. I do give them a couple of days. …For students that for one reason or another were not successful with the first portion of the six-weeks…”

Advisor: “If they got 5 out of 20 points on number 2, you let them go back?”

Sally: “Yes.” If they fail an RA, that would hold them back from getting an A, I usually write them a note ‘You really didn’t understand this material, …go back and try it again’ And then I take it back.”

Advisor: “So they get do-retakes?”

Sally: “Yeah. They get retakes.”

Advisor: “And why do you do that?”

Sally: “Because in some cases they don’t understand the questions. And when we first started with the book, we had a lot of questions that were like double meanings or very obscure. I am finding now that they are doing so much better…like today…it’s amazing the change from the beginning of the year. (Tape stopped)
Appendix H

Students’ Interviews

Tape 3 (A and B) [Student Interviews with former students, now in eighth grade]

Sally: “Eighth grade science student who was in my class last year and our plan is to talk about the learning contract, and for me to get input from her on several questions. I have ten questions that I am going to ask her and then get her feedback. Just ignore that machine, and if I ask you a question that you don’t understand, just ask me to put it in another way.”

[Student 1]

Sally: “How did you feel about the learning contract, or how did you feel about the learning contract motivating you to do your best?”

Sally: “How did you feel about the learning contract giving you a push to do your best?”

Student: “I thought it was a pretty good idea. It helped us to keep track with what we were doing day by day and what our range should be…”

Sally: “O-k. Did you feel that it motivated you or gave you a goal?”

Student: “Yeah…. It gave us a goal.”

Sally: “What parts of the learning contract helped you to stay organized with your assignments?”

Student: “I have to say when you listed our grades.”

Sally: “When I listed them on the blackboard?”

Student: “Yeah”

Sally: “That helped you to stay organized?”

Student: “Yeah and much (garble) of our grade.”

Sally:”When you signed up for your grade in the learning contract, how did you follow up or what helped you make that particular grade in science?” How did you keep up…say you contract for an, B or C…How did you keep that goal? What were some of the things that helped you to stay on contract.”

Student: “Mostly when you did all of my assignments and extra credit stuff… (Garble)

Sally:” And the additional activities”
Sally: “How did the learning contract affect your feelings about grades? What feelings about grades did you have and how did the learning contract affect those feelings? Do you have any feelings about grades? How do you feel about grades? Supposed something…you can make an A if you do this or you could make a B if you did this, how did you feel about it?”

Student: “I felt that if I tried, I would stay where I wanted to be.”

Sally: “How did the learning contract help you with your science assignments?”

Student: “I’m not sure.”

Sally: “For example, if I had written something on the blackboard and said you need these pages and look up the words…was there anything special about the assignment that the learning contract helped you with?”

Student: “Sometimes it explained the word better. …(Garble)

Sally: “More definitions?”

Student: “Yes.”

Sally: “What skills did you need when using the learning contract? Did you need any special skills to work with the learning contract?”

Student: “Not really.”

Sally: “You didn’t need any special skills?”

Sally: “How did you work with your team on learning contract assignments?”

Sally: “That’s a long way to think back, isn’t it?”

Student: “(Garble)”

Sally: “How did you work with your team, or how did you work as an individual? Which way learning style did you prefer more…? Maybe I could reword that question…. Working with your team or working as an individual?”

Student: “I think that I liked working as a team. If you didn’t understand, then you could ask your neighbor and maybe he or she could explain it better or …(garble)”
Sally: “So… the same question, but thinking about it as an individual. Were there opportunities for you to work with your team, and then as an individual?”

Student: ”Yeah, pretty much.”

Sally: “What grade did you contract for the most?”

Student: “B”

Sally: “B? Would you say that you were successful, say out of the six times you contracted for a B? Were you successful most of the time, or four of the six times?”

Student: “Pretty much. I think I ran into some problems.”

Sally: “When you contracted for a grade, was it pretty much what you made? Or did you go well than you made? In other words, say you contracted for a B, did you sometimes make an A?”

Student: “Yeah”

Sally: “What was that?”

Student: “(garble)”

Sally: “So you went beyond your goal?”

Student: “Yeah”

Sally: “How would you feel about me working with the learning contract again next year? Would you recommend using the learning contract again and why or why not? What would you give me as advice from a prior student to a teacher on ways to improve or ways with the kids…? What would you like me to do?”

Students: “I think it is reasonable for you to continue the contract.”

Sally: “To continue to use it? Why do you feel like that?”

Student: “I feel that it helps us with keeping the RA…(garble)…. And our charts.

Sally: “You felt that…If I were to say what was the one single thing you remember from your learning contract in the seventh-grade, what would you say? What would be, say, your most memorable occasion from your learning contract? Was it your required activities, your R’s or additional activities?”

Student: “I think it was pretty much the RA’s and (Garble)”

Sally: “Did you have preference with the RA’s and the additional activities?”
Student: “Sometimes, the additional activities were easier than the required activities.”
Sally: “Did you like the additional activities added to your contract?”
Student: “Yes”
Sally: “Did it enhance your work or give you more opportunities to learn something?”
Student: “Sort of gave us more opportunities to learn more about what we were studying about.”
Sally: “Do you have anything else to tell me or anything else that you want to add about the learning contract? Any other comments?”
Student: “No, not really.”
Sally: “Well, thank you”

Tape 4: [Student Two]
Sally: “This is a student who was a former student last year, and the questions concern the learning contract. If you were to talk to a new student about your science class last year, what are some of the things that you would say to that new student?”
Student: “Um…. I’d say, try to keep as organized as possible. That will make it easier to keep track of things, and get work in on time.”
Sally: “O-k. Is there anything that you would like to bring out to her…? Like…what is so different from seventh-grade science, maybe, from what you did in the sixth grade?”
Student: “Um…be prepared to work and discover in doing new things. Seventh-grade science is a lot different from six grade science.”
Sally: “How so?”
Student: “Um…well the…. Just the material in general was different…going from earth science to biology.”
Sally: “Subject matter?”
Student: “Yes”
Sally: “Did you ever use a learning contract prior to seventh-grade?”
Student: “Yes”
Sally: “What were some of the things you thought about when you first heard about the learning contract with Miss Fortune last year? What were some of the things that might go through your head?”

Student: “At first I was wondering…. A contract? Why would we need a contract to learn something in her class?”

Sally: “Once you started working with it, how long did it take to get familiar with the concept idea, and then start adjusting to setting goals for yourself…how long did that take?”

Student: “Uh…. I believe it was about a month that it took to get adjusted to it. It was fairly simple to get used to it. It gave you kind of a standard…to help you set it, like for high school next year.”

Sally: “Did you feel like…what ways might you tell a new student that they need to be organized to work with this learning contract? What were some of the things that you did, yourself, to keep up with assignments or where you were on a daily basis?”

Student: “Uh…. To make sure that you write down the assignments. Always to check to see on a contract what assignments were coming up and what you should do to be ready for those.”

Sally: “Did you sometimes work ahead of what you were doing in the classroom?”

Students: “Slightly, but not really…. Just to prepare yourself for it.”

Sally: “Did you find that you had a better grasp for using different textbooks or different resource materials to find information or did you feel like you just needed to stay in your own textbook?”

Student: “Well, you used many different textbooks…”

Sally: “Well, did you think that that was a good way of learning something or did you feel that maybe just working out of one book would have been a better idea.”

Student: “I liked using many books, because it gave you a better idea of what we were studying.”

Sally: “How would the learning contract help you to keep up with your science assignments?”

Student: “It kind of gave you an idea of what the semester or six-weeks was going to be like, to consist of. It is….you know…. Whether you were a day ahead, a week ahead, or a month ahead…. Just to see what you were doing, and then it helped with…. It helped to consolidate many things into one.”
Sally: “How did you keep up…how did you like the concept of working with points instead of working with letter grades? Were you more comfortable working with points?”

Student: “Well, actually I was more comfortable working with the letter grades. Uh, what I do now, is because so many other teachers in eighth grade work with points also, they use them (the points) and they figure out like what it would mean as a letter grade.”

Sally: “Hold that thought. The assignments that I asked you about and the points and the numbers. When you first started working with the point system for the letter grades, after a while, was it easy for you to translate the points into a percent?”

Student: “Yes it was. It became easier and you got into, like, a system so that you could easily tell them. Say, like on the side, the total from where you had from the last.”

Sally: “Well, when you recorded your points…when you got your papers back and you used the daily progress sheet to record your points…did this help you if you were absent, if you were missing an assignment…how was the student progress sheet helpful for you as a student?”

Student: “Well, it made it very easy to look down to see what you were missing, and what you needed to make up…. However.”

Sally: “How did the additional activities? How do you see the additional activities…complementing or were they too much work, what were your feelings about the additional activities that were added each six-weeks?”

Student: “Um…some of the additional activities were a little too hard and a little too challenging…but most of them seemed to be just challenging enough, and very complementary to what we were studying.”

Sally: “Did you enjoy working with those additional activities…did you feel like they helped your grade?”

Student: “Yes, I did. They gave you …some of them even gave an interesting perspective onto what we were studying.”

Sally: “Got to see it from someone else’s’ viewpoint?”

Student: “Yes.”

Sally: “What grade did you originally contract for?”
Student: “A”

Sally: “You contracted for an A? Of your 6, six-weeks, how many times do you think that you contracted for an A?”

Student: “Four or five.”

Sally: “Four or five. And why did you go for an A? Why was that your goal…why did you set your goal for an A?”

Student: “Because it is just…. I felt that I could accomplish an A in that six-weeks. I thought that the material that we were doing was going to be challenging enough that I could do…. That I could make an A.”

Sally: “O-k. If you were to go to another school, and you were given the option of working with a teacher that used a learning contract and a teacher that did not use a learning contract, based on what you have done this past year…what do you think you might do and why?”

Student: “I probably would work with a teacher that had a learning contract.”

Sally: “Why? Why would you want to go in that direction?”

Student: “Because it would make it almost easier to do the work.”

Sally: “What do you mean, easier?”

Student: “It would be more uniform, more organized.”

Sally: “Do you think that a teacher that uses the learning contract is more structured? Or more prepared…has done more planning to lay out a six-weeks for her students up front?”

Student: “Yes.”

Sally: “In using the learning contract, did you find that you had enough activities on a daily basis in the classroom?”

Student: “Yes, I did. I felt that sometimes we would have more activities than we had time.”

Sally: “Did you feel that this pushed you to do your best, or did you feel like it just was too much?”

Student: “Most of the time it pushed me to do the best that I could. Occasionally it was too much.”
Sally: “How did you like working with your team? In what capacity did you feel that your team either supported your work or complimented your work?”

Student: “Um...I think it gave it a kind of interesting twist to it because it gave... You know... You could talk about your assignment with your friends or team, and they could help you out or something if you really needed help or if the teacher was busy, and just like a critiquing of each other.”

Sally: “Yes.” Did you feel good about yourself using your learning contract based on maybe the way you felt about science in the sixth grade...? Did you feel better about yourself when you had the learning contract? How did you perceive yourself?”

Student: “I don’t thing it was any different.”

Sally: “O-k...was there anything that you perhaps did in the seventh-grade with the learning contract that you took forward to the eighth grade? Was there anything...transition to the eighth grade and maybe you are using now that you picked up from somewhere with the learning contract in the seventh-grade?”

Student: “Yes. All classes that use points keep a directory in my notebook for what points I got. That way I can keep track of my grade. Making sure I would. (Garble)”

Sally: “Are any of your teacher using the learning contract this year?”

Student: “No”

Sally: “They are using a point system?”

Student: “Yes.”

Sally: “And do you know how many total points there are in each six-weeks? Do they give you an idea of how many points there are in the six-weeks?”

Student: “No, it is open-ended.”

Sally: “O-k.... Do you have opportunities this year with additional activity types or extra credit that you had in the seventh-grade? You know.... Those opportunities.... Do you have much extra credit work?”

Student: “Well, in science, we have a lot of extra credit work if we want to.”

Sally: “In science 8?”
Student: “Yes. But the difference is, you could easily just do the work and still pass, whereas in seventh-grade, you had to do some additional activities to pass.”

Sally: “Um…is there anything else you would like to say? Um…about the learning contract? Any general comments or anything?”

Student: “No, not that I haven’t…”

Sally: “Thank you.”
Appendix I

Sample Learning Contract Grade Requirements for Poster

LEARNING CONTRACT-1
FIRST 6-WEEK

SUGGESTED GRADE REQUIREMENTS:

POINTS CONTRACTED

D = 350 - 384 Total Points
C = 385 - 434 Total Points
B = 435 - 469 Total Points
A = 470 - 500 Total Points +

Complete ALL RA Pass Tests (Average)
AA# 7,12,20,30,35
at least 150 points in AA

A+= 550 + Total Points +

Complete ALL RA
At Least a “C” on Tests (Average)
A.A.#7,12,20,22,30,31,35
at least 200 points in AA

RA= Required Activity
AA= Additional Activity
### Appendix J

Students’ Survey Responses for All Classes (Non-Weighted)

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### Appendix K

Mean Differences in Grade Points between Contracted Grades and Earned Grades for Five Classes for Three Grading Periods

#### Table K.1

Grade Point Averages for Students in Zero Period for Three Grading Periods

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Appendix K

Mean Differences in Grade Points between Contracted Grades and Earned Grades for Five Classes for Three Grading Periods

Table K1

Grade Point Averages for Students in Zero Period for Three Grading Periods

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Table K2

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Table K2

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Table K5

Grade Point Averages for Students in Fifth Period for Three Grading Periods

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VITA

PERSONAL INFORMATION

Name: Sally Baden Harmon
Address: 1108 Potomac Drive
Stafford, VA 22554-2102
email: sbharmon@earthlink.net
Date of Birth: March 20, 1948

EDUCATION

1994-2001
Virginia Polytechnic Institute and State University
Blacksburg, VA
Graduate Student, School Leaders Program
Doctor of Education
Educational Leadership and Policy Studies
May 2001

1997
Virginia Polytechnic Institute and State University
Blacksburg, VA
Certificate of Advanced Graduate Studies, Educational Administration

1988-1989
James Madison University
Harrisonburg, VA
Master of Education, Administration and Supervision

1969-1970
University of Virginia
Charlottesville, VA
School of Medical Technology, MT (ASCP) Registry # 074068

1966-1970
East Tennessee State University
Johnson City, TN
Bachelor of Science Degree, Medical Technology
PROFESSIONAL EXPERIENCES

1998-present
Potomac Senior High School
Dumfries, VA
Prince William County Public Schools
Science Teacher

1997-1998
Dalton Intermediate School
Radford, VA
Radford City Schools
Science Teacher

1995-1996
Roanoke Valley Governor’s School for Science and Technology
Roanoke, VA
Roanoke City Public Schools
Science Teacher

1991-1995
Mount Vernon High School
Alexandria, VA
Fairfax County Public Schools
Science Teacher
Science Department Chair

1985-1991
Wilson Memorial High School
Fishersville, VA
Augusta County Public Schools
Science Teacher
Administrative Internship

1984-1985
Buffalo Gap High School
Swoope, VA
Augusta County Public Schools
Science Teacher
1982-1984
Big Bend Community College
Bamberg, West Germany
Basic Skills Educational Program with Army, Teacher

1979-1981
Louisa County High School
Mineral, VA
Louisa County Public Schools
Science Teacher

1978-1979
Louisa Preparatory Academy
Louisa, VA
Science Teacher

1970-1978
Medical Technologist
BS, MT (ASCP)

1970-1971
University of Virginia Clinical Laboratories
Charlottesville, VA
School of Medical Technology
Clinical Chemistry, Teacher

1971-73
Betsy Johnson Memorial Hospital
Dunn, NC
Medical Technologist, Bacteriology

1973-74
University of Virginia Clinical Laboratories
Charlottesville, VA
Medical Technologist, Bacteriology Quality Control

1974-75
Towers Hospital
Charlottesville, VA
Laboratory Supervisor, Medical Technologist
1975-1978
Louisa Medical Center
Louisa, VA
Laboratory Supervisor, Medical Technologist

Sally B. Harmon