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TEACHING PRACTICUM

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by

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Abstract

During 210 combined observation hours at Sullivan Middle School and South High School, I was exposed to several different teaching styles and techniques. Both Sullivan Middle School and South High School are in the Worcester Public School System. At South High School I observed an 11th and 12th grade physics class, and at Sullivan Middle School I observed two 7th grade general science classes. Throughout this paper these styles and techniques, seen in and outside of the classroom, are discussed, focusing on the topics of class preparation, management, and assessment.

Chapter 1; School Summary

Dr. Arthur F. Sullivan Middle School

Sullivan Middle School is part of the Worcester Public School system, and is located in the Main South area of Worcester. The area that surrounds the two schools is made up of the most economically troubled neighborhoods in Worcester. The population of the school, Sullivan Middle School, is 908 students. The ethnic breakdown of this school is 39.4% white, 38% Hispanic, 12.4% African American, 9.4% Asian, and 0.8% Native American. The percentage of students that need special education is 23%. The percentage of students that are Limited English Proficiency is 13%. Since the surrounding area is made up of quite a bit of poor income families, the number of students that qualify for free or reduced lunch is 75% (http://www.wpsweb.com/).

The state of Massachusetts wants to make sure that all of its schools are teaching the correct information and are following the Massachusetts (MA) Frameworks. To gather this information the state uses Massachusetts Comprehensive Assessment System (MCAS), a standardized test based off of the MA Frameworks.

MCAS scores (%)

2005	Advanced		Proficient		Needs Improvement		Warning/ Failing	
	School	State	School	State	School	State	School	State
7th Grade English	4	10	32	56	44	27	21	7
7th Grade Mathematics	-	-	-	-	-	-	-	-
8th Grade English	-	-	-	-	-	-	-	-
8th Grade Mathematics	5	13	11	26	23	30	62	31
8th Grade Science	1	4	11	29	28	41	60	26

2006	Advanced		Proficient		Needs Improvement		Warning/ Failing	
	School	State	School	State	School	State	School	State
7th Grade English	3	10	35	55	37	26	25	9
7th Grade Mathematics	6	12	16	28	28	33	51	28
8th Grade English	6	12	41	62	33	19	20	7
8th Grade Mathematics	5	12	9	28	23	31	64	29
8th Grade Science	2	4	8	28	30	43	59	25

2007	Advanced		Proficient		Needs Improvement		Warning/ Failing	
	School	State	School	State	School	State	School	State
7th Grade English	5	9	39	60	33	23	22	8
7th Grade Mathematics	8	15	13	31	24	30	55	24
8th Grade English	6	12	51	63	30	18	13	6
8th Grade Mathematics	9	17	16	28	28	30	47	25
8th Grade Science	0	3	9	30	38	44	52	24

(http://www.doe.mass.edu)

The tables above show that over the past few years there has not been a dramatic change in the MCAS scores. The scores however have not decreased and have slightly increased, so there is some positive to this. These scores are around the average for other middle schools in the Worcester Public School System.

South High School

South High School is located in the same area as Sullivan Middle School. The parking lots of the two schools are actually connected together. South High School is a 9th – 12th grade school with an enrollment of around 1450 students. The ethnic diversity of the school is 38.5% Hispanic, 34.1% white, 14.6% African American, 12.7% Asian,

and less than 1% Native American. At South High School, 53.2% of students come from households that do not have English as their first language. The Worcester district as a whole only has 37.8% as an average for students that don't come from a household with English as their first language. Around 14.2% of the students are Limited English Proficient. Also 21.3% have an Individualized Education Plan (IEP), and are receiving special education services. A large number of students come from low-income families, with 69.8% qualifying for free or reduced lunch. A couple of worrying statistics are the graduation and dropout rate. Overall, South High School's graduation rate is 66.7% and a dropout rate of 18.7%. For special education the graduation rate is 44.4% and the dropout rate is 22.2%. For the Limited English Proficient the graduation rate is 59.2% and the dropout rate is 25.5% (http://www.wpsweb.com/).

MCAS scores 10th grade (%)

2005	Advanced		Proficient		Needs Improvement		Warning/Failing	
	School	State	School	State	School	State	School	State
English	8	23	26	42	37	25	30	10
Mathematics	8	35	16	27	29	24	48	15

2006	Advanced		Proficient		Needs Improvement		Warning/Failing	
	School	State	School	State	School	State	School	State
English	11	16	37	53	36	24	16	7
Mathematics	15	40	24	27	29	21	32	12

2007	Advanced		Proficient		Needs Improvement		Warning/Failing	
	School	State	School	State	School	State	School	State
English	14	22	38	49	34	24	14	6
Mathematics	26	42	18	27	32	22	23	9

(http://www.doe.mass.edu)

As seen in the tables above, South High School has improved their MCAS scores over the past three years, and has lowered their percent "Warning/Failing" from 48% in 2005 to 23% 2007. This is decrease of 52.08%. South High School is still below the state average, but it is still around the average for Worcester Public High Schools. These scores are higher than the scores of Sullivan Middle School, which show that between the two years, the focus of MCAS does raise the student's scores.

Chapter 2; Course Summary

The course I worked with at Sullivan Middle School was 7th grade general science. This goal of this course is to build on the understanding of the sciences: biology, technology, physical science, chemistry, and physics. This material covered in this course as well as the material in 8th grade general science, will give the students the background to take the individual science classes in high school.

After talking to the teachers I was observing I found out that the curriculum they were using was new this year. The two teachers had been previously following the Massachusetts (MA) Frameworks and making their own curriculum based on their strengths and the class' interests. This did give the students knowledge, but without consulting the other grades and making a sequential and standardized curriculum, some students would be negatively affected by that system. Over the past couple of years Joseph Buckley, the Science Liaison for the Worcester Public School System, has been standardizing all of the grades. This system is getting all of the teachers to teach the same topics and also lets teachers from other grades to know exactly what the students know.

This stops the teachers from guessing what they should know or having to review more subjects because some students learned a topic that some didn't. Joseph Buckley still has a few more grades to complete before the entire system is put into place, but from the sound of it the system will be completed within the next year or two.

The new curriculum that is being put into place still follows one guideline that has been around for a while, the Massachusetts Frameworks. The MA Frameworks serve two purposes. The first purpose is to set a standardized guideline for all teachers. This creates a situation where every school in Massachusetts has to teach the same topics. This allows the creation of MCAS, to discover the knowledge of the students from each school. The second purpose is to allow other grades to know what was taught previous. The framework is a basic idea of what to teach for each grade, and looking at it will give an idea for what the students should already know. The MA Frameworks is required to be used by all of the teachers. The lesson plans that are passed in by the teachers must show the use of the framework. On most lessons plan forms I saw, each teacher had to list the MA Framework covered. An example of this can be seen in Appendix 1. The course of 7^{th} grade general science at Sullivan Middle School is the preparation for the further studies in science in high school.

Chapter 3; Class Preparation

The new curriculum being put into place by Joseph Buckley has created a solid guideline. This guideline allows the teachers to make the most effective lesson plan to waste the least amount of time. The two teachers I observed went about teaching in slightly different manners. One of them started off this year mainly lecturing, having the

students take some notes and every so often would giving them a worksheet to review what he had gone over. He changed this system to one where he handed out worksheets more often, to the point where his lesson plan was almost based off of them. The other teacher would start with the students taking notes out of the books. For example, writing down definitions to key terms in the chapter. After this he would lecture and then hand out worksheets to reinforce the subject. These two methods both got the basic idea across to the students, making them effective.

There was one problem I noticed with one of the teacher's lesson plan. The curriculum made by Joseph Buckley was arranged into four quarters. At the beginning of the observation the one teacher was on earth science, the second quarter, and was supposed to move onto technology, the third quarter, within the next few weeks. This change did not occur: the teacher stayed on earth science doing short, one day lectures based on the weekly sample MCAS question, which did include technology at times. The problem this created was that the third quarter of information was jumped over and at the moment biology, fourth quarter material, is being taught in the class. The teacher did do some short lectures on the material, other than MCAS questions, but this might negatively affect the students when technology is studied in more depth and when they take the MCAS. A suggestion to not allow this to happen would be to set an exact timeline for how long you have to teach a certain topic. This would allow the teacher to cover all of the required topics.

The majority of work given to the students was meant to be done during class. Homework became difficult to assign due to the lack of resources that the students would have outside of the classroom. Both teachers I observed looked for the following factors

to grade the student's work: correct answers, spelling, and complete sentences. The teachers wanted their students to be able to form a complete thought and to show their thought through their work. Spelling did become a problem with a few students, specifically the ones who had either a low reading level or were Limited English Proficient students. These students were still pushed to have correct spelling, but were allowed slight leniency. The teachers demanded the best out of their students. Around the time I started observing the teachers had already spent quite a bit of time with the students and had gotten to know about what they could expect out of them. Countless times the teachers would be upset after class because they knew that one of their students could have done much better on an assignment if the student would have just put more effort into it. The teachers wanted the best for their students and wanted to make sure that they would live up to their potential in all aspects.

Chapter 4; Class Management

The student body at Sullivan Middle School presented several problems over the time period of this IQP. First, middle school the students are not always on their best behavior. The students are going through changes, both physically and mentally, and for the main part have not reached the level of maturity of high school and beyond. This is not a Sullivan Middle School problem because I can mainly remember my middle school experience, and the maturity level there was the same as the level I saw at Sullivan. The problem this creates is that the students have a problem giving their full attention, which requires more class management than high school does. This creates a situation where the

teacher has to become stricter and put a lot of their attention on trying to make sure that the class is focused and listening.

A problem that adds to the behavior problem is the class size. The average class size is around 24 students, which is the about the maximum number the classroom can hold. After discussing this with several teachers the class size seemed to be one of the biggest problems with teaching at Sullivan. This became more obvious when students were absent. When around five students were absent, the class seemed to be more behaved and would get through a lecture with fewer problems.

Another problem at Sullivan Middle School was the attendance. For the main part, the majority of the class would show up; there was about at 90-95% attendance on a daily basis. However, the 5-10% seemed to be the same people though. To deal with this, I would hold the student that was absent after class for a minute to try to explain exactly what they had missed. One thing that was both a positive and a negative was the speed of the lecture, to make sure the students fully understood what was going on. Everything would be repeated the next day or would carry over with a worksheet, so as long as a student wasn't gone for over a two day span, catching up was an easily attainable goal.

The last problem was the special need students. This is not including students with vision or hearing problems, but the students who had lower reading skills or real behavioral issues. The lower reading skill students are scattered around in classes. This would have been more of a problem, but in most classes there is a specialist that helps to get those students to do work and to give them individual attention. The behavioral issues were more of a problem. There were two classes I observed, rather than taught, and these classes were where they sent the majority of the behavioral challenged students. The

better of the two classes was easier to handle, and just took more time and individual attention to get the students on task and working. The other class was a major problem. This class was supposed to be equipped with a specialist, but I never saw them, so getting the students to pay attention was difficult. One person could only have split their attention that many ways, so progress in this class was slow, leaving these students even further behind.

There are a few ways I found that seemed to work with dealing with the issues found in the classroom. One is to create a pace for the class that seems to work the best, which can be tricky. If the pace is too slow, the faster students will become bored and cause problems. If the pace is too fast, then some students will be lost, who then will cause problems. If you tailor the speed to each class, by taking the first couple of weeks to experiment, at some point you will reach an effective rate. Teaching at a middle school requires hands on and individual work. This allows the teacher to walk around the class and make sure that each student is on task and be able to answer individual questions that may come up. Also, lecturing the students too much is not very effective either. This will just cause the students to become restless, which will cause distractions. To be able to manage the classroom a teacher will have to know the class they are dealing with and be able to slightly change their style of teaching to fit the strengths and weaknesses of their class. Doing this will make them a more effective teacher and create more knowledgeable students.

Chapter 5; Assessment

The hardest and one of the most important parts of teaching is assessment. In a perfect world, once you taught something you would just count on the students to completely understand it and then just move on, but that's never going to happen. Assessment tells the student and teacher how they are doing in the class. This also gives teachers evidence of a students understanding and statistical grades in their class. If someone is doing poorly in your class and you don't have many graded items it may be hard for you to make a solid point, to your superiors or parents of the student, your reasoning on why the student is failing. Another reason to have enough assessments is; if a promising students slips on one assignment or test, and you only have four or five others, they would get a worse grade then they deserve. Also, assessment allows the teacher to reflect on how well or poorly they are getting through to their class. For example, if all of the students are doing well in the class, then it shows that you are getting through to the students, and are using an effective teaching method.

At most middle schools, or school in general, homework is a great way for assessment. This serves a dual purpose. First, it allows the teacher to hand out something to further the students learning, to help move along the lectures and progress of the class. Also it allows the students to strengthen the grasp of the concepts taught during class. This became a problem at Sullivan Middle School. The biggest reason it was a problem was the lack of books and resources. First, there wasn't enough to books to have a classroom set, let alone one book per every student. Sullivan Middle School is also an urban middle school, so not every student has the access to the same resources, so giving work for them to research is also hard. This limits a lot of the work to the classroom,

allowing them to have the resources of textbooks and the internet. The main problem with this is the more class work, the less lectures, so this requires that the majority of the class work teaches the students new material to allow the students to get through all of the information that they are required to learn in the school year. The textbooks being used in the schools come with computer software and useful handouts, which is quite effective class work, since the textbook they are using with definitely have the answer to the handout.

The other basic form of assessment is testing. The teachers I observed both used testing sparingly, only testing at the end of each section instead of splitting up and giving smaller tests. This method did work only because of the large amount of review used. Shorter intervals between testing could have also worked, but not seeing this method makes it harder to support. Having few tests per quarter made them worth less points towards the overall grade and made the class work worth more. The two teachers used quite different test styles. One teacher's tests were straight out of the book and actually used other work sheets from the text and made the test up that way. This seemed to work because the students had seen the exact questions or ones just like them, so they seem to fair alright, although not great on the tests. The other teacher was a little more technology savvy. He made his own tests, using the internet and tailored his test to exactly what he had taught because he didn't follow the book exactly. This kind of test seemed to fair better than the test made straight from the book. The test was made for his students and it showed. The students had been asked the exact questions and when it came to the test the majority of them were able to show that they had learned exactly what had been going on in class. Testing is an important part of teaching and when I

make my own test, even though both formats are effective, I would rather make my test for the students.

The most important test for the students is the MCAS. From the prior data, Sullivan Middle School does not have the best MCAS scores. The progress Sullivan has shown is that during their homeroom on Wednesdays a MCAS question is handed out and discussed. This gives the student an idea of what to expect and also covers more material. Both teachers used the question to plan that day's lecture and would try to expand on the question to give the students more knowledge. Also, the biggest factor to helping better the MCAS scores is following the MA Frameworks, because the frameworks do a great job pointing out the exact topics that will be covered on the MCAS. In theory if the teacher goes over all of the MA Frameworks, then the students would have heard all of the material covered on the MCAS. If the students remembered the majority of the information taught, then they would fair quite well on the MCAS. Using the framework as a guideline, the new curriculum that Joseph Buckley has been putting into effect helps to make a standardized curriculum for all the grades in the Worcester Public School Systems. This new curriculum is based on the main topics of the MCAS. Overall, Sullivan has started to better their scores over the years, so these ideas have made an impact in their student's MCAS scores.

Conclusion

Through observing at Sullivan Middle School, I learned the most about was class management. When I was observing at South High School, the students had a higher maturity level and getting them on topic was an easier task. One part of class

management I learned was to come across as the clear leader of the classroom. Both teachers I observed did an excellent job of this and were able to give instructions and have the students complete them. Also, the teachers were able to have a bond with their students, for example, after class both teachers had a good relationship with their students. The students respected them and seemed to think highly of them. I observed how the teachers could get students involved and actually excited to learn. The use of projects seemed to keep the students excited to learn. Also, the teachers were relaxed with their job and were able to joke around, trying to keep the students interested in the topic for the day. This observation gave me a greater understanding of classroom management.

While observing I realized the importance of communication. Most teachers have the small group of teachers they talk to, and at Sullivan Middle School this was no different. I didn't see to much communication between same subject teachers though. During the time I was there I seemed to be the link between different teachers. The teachers obviously did talk at some points, at meetings, but I didn't see any cross over of lesson plans or ideas between the teachers. Both teachers I worked with had great ideas and great projects, videos, and learning tools that would be great to share with each other. Obviously, teachers have their own style and don't need to change that, but the more thoughts and ideas you have access to, normally the better you can be.

This IQP gave me a greater sense of what teaching is. Through working with several great teachers and different settings I was able to see a wide array of teaching styles that will benefit my teaching abilities in the future. Through this observation I now

have a greater appreciation for teachers and the amount of work and time they put into their profession.

Appendix 1

SULLIVAN MIDDLE SCHOOL
LESSON PLANS

Teacher: Bruce M. McGuire Copies to: G. Munoz, N. Rivera, L. Vincent

Subject: Science, 7th Grade D Week: April 14, 2008

OBJECTIVES: Living Things and Their Environment including Energy and Living Things.

- Give examples of ways in which organisms interact and have different functions within an ecosystem that enable the ecosystem to survive.
- Study several symbiotic relationships such as oxpecker (bird) with rhinoceros (mammal).
- Identify specific benefits received by one or both partners.
- Explain the roles and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
- Explain how dead plants and animals are broken down by other living organisms and how this process contributes to the system as a whole.

Guiding Principals (From Frameworks)

- Guiding Principal III Science and technology/engineering are integrally related to mathematics found on page 10 of Science and Technology/Engineering Curriculum Framework May 2001
- Guiding Principal IV Science and technology/engineering states that an effective program in science and technology/engineering addresses students' prior knowledge and misconceptions found on page 11 of Science and Technology/Engineering Curriculum Framework May 2001
- Science Inquire 1 thru 7 as found on page 7 Science and Technology/Engineering Curriculum Framework May 2001.

APPLICATION TO S.I.P.: (Highlighted)

□ **Special Education Modifications: Rely on support from SPED/Inclusion Teacher**
□ **Bilingual Modifications**

□ S.I.P. / Bridge Code

METHODOLOGY: (Highlight) ASSESSMENT: (Highlighted)

□ Differentiated instruction □ Individual

□ Whole class Instruction **□ Group**

□ Small Group Instruction **□ Written**

□ Working in Pairs **□ Oral**

□ Independent Work

MATERIAL/ TECHNOLOGY NEEDED: Text – Inside Earth – Prentice Hall

- Handouts to be determined
- Metric ruler, balances, meter sticks, graduated cylinders, etc.
- Periodic Table found in student agenda.
- Mathematical Formulas found in student agenda.

Monday/ SESSION 1 (04.14.2008)

Objective: After today's lesson, students will understand the concept that energy and materials flow through ecosystems. Materials are recycled, and energy is lost.

Basic Science Skills: Vocabulary - Ecology, Ecosystem, Biotic, and Abiotic

Student Activity/Assessment: Describe the living and nonliving parts of an ecosystem, Describe the flow of materials and energy through an ecosystem, Compare the abiotic conditions in freshwater, ocean, and land ecosystems.

Homework: Written assignment - TBD

Tuesday/ SESSION I1 (04.15.2008)

Objective: After today's lesson, students will understand the concept that energy from the sun affects the plants and animals in an ecosystem.

Basic Science Skills: Students will learn that the ocean can be divided into three main areas: the near shore zone, the oceanic zone, and the deep zone. And, ecosystems are found in all three areas of the ocean.

Student Activity/Assessment: (1) Students will make a list of the biotic and abiotic parts of the ecosystem in which they live. (2) Students will describe how a large city ecosystem provides the food and energy tit needs for its living organisms.

Homework: Written assignment – Topic TBD

Wednesday/ SESSION II1 (04.16.2008)

Objective: After today's lesson, students will be able to distinguish between habitat and niche.

Concept: By completing the reading assignment, students will be able to describe and give examples of a community, and describe the roles of an organism's habitat and niche in a community.

Student Activity/Assessment: Students will be shown photos of different habitats. The students will name plants and animals that may live in each habitat.

Homework: Written assignment – Topic TBD

Thursday/SESSION 1V (04/17.2008)

Objective: After today's lesson, students will understand that symbiosis is a relationship in which two different organisms in a community live closely together.

Enrichment: Students will be instructed to compare symbiosis and predation.

Student Activity/Assessment: Compare and contrast how ecological communities and human communities coexist.
Homework: Written assignment – Topic TBD

Friday/SESSION V (04.18.2008)

Objective: Today we will assess our knowledge of ecosystems by mapping the community we live in.

On a piece of paper, draw a very general map of your community. Include major roads, public buildings, and natural features, such as rivers. 1. Do you live in an urban, suburban, or rural community? 2. Describe the nonliving parts of your community. 3. Which of these factors do you think have an effect on the people in the community? How? 4. How are the nonliving parts of your community different from those of other community types?

Work Citied

Massachusetts Department of Elementary and Secondary Education.
http://www.doe.mass.edu. 4/25/2008.

Worcester Public Schools. http://www.wpsweb.com/. 4/14/2008.