Standard 3. Knowledge of Content and Integrated Curriculum

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Wheelock College has seven Wheelock College Standards for Teachers. These standards were created by faculty and are taught to students in the education professional majors to help students develop their philosophy of education. As part of the Elementary Education capstone class, students need to reflect on these seven standards and how they use them in their teaching by including examples and artifacts. Standard three is quoted below along with one of my standard essays.

Standard 3. Knowledge of Content and Integrated Curriculum
3.1 Know, understand, and use the central concepts and tools of inquiry appropriate to the subject matter and age/grade levels they teach.
3.2 Create meaningful learning experiences that develop children’s understanding of subject matter and increase their skills.
3.3 Plan integrated units of curriculum, instruction, and assessment based upon their knowledge of subject matter, curriculum goals, and developmentally appropriate practices among the families, communities, and cultures from which their children come.

Knowing what to teach and being able to do so by integrating multiple subject areas is a skill that many teachers need time and practice to work on. Having students explore and discover on their own instead of always being told what is right allows them to form their own conclusions about the world and their place in it. Students are more likely to be influenced by experiences that are meaningful to them; they are less likely to remember “busy work.” By integrating subject areas, students can experience a topic in a multitude of ways and be able to apply it to the real world.

Working with first grade students during my full time practicum was a huge adjustment coming from my pre-practicum working with 4th and 5th graders. Not only was the curriculum different, but I also needed to re-teach myself what was developmentally appropriate at this age level. I turned to the Omnibus Guidelines (2001) for help. The Omnibus Guidelines has information about children’s skills,
knowledge, behavior, and accomplishments across curriculum areas, which helped me
better plan for my students. It is crucial for teachers to know what is developmentally
appropriate to teach their students; otherwise, their students may not be ready for
what the teacher wants them to learn.

The experts in the field that have influenced me to consider Standard 3 in my
teaching are Wynne Harlen, author of *Primary Science: Taking the Plunge* (2001), Betsey
Rupp Fulwiler, author of *Writing in Science: How to Scaffold Instruction to Support
Learning* (2007), Grant Wiggins and Jay McTighe, authors of *Understanding by Design*
(2005) and *Principles and Standards for School Mathematics* (2002) from the National
Council of Teachers of Mathematics (NCTM). These authors have made me think about
not only what I teach, but also how I teach it.

Harlen and Fulwiler both discuss the importance of inquiry and writing in
science. Harlen (2001) considers “providing materials for children to observe and
investigate, asking the right kinds of questions, and helping children to discuss, or more
widely, to communicate their thinking and developing ideas” (p.100) to be the three
most important aspects of a teacher’s role in primary science. When students
experiment and observe with facilitation from the teacher, it helps them develop critical
thinking strategies and enables them to form their own conclusions. Fulwiler (2007)
defines the purpose of writing in science “to focus student thinking and writing on
targeted components of scientific investigations and scientific thinking in order to
maximize the learning of scientific concepts, skills, thinking, and writing” (p. 26). By
putting their ideas in writing, students not only learn how to express themselves in a
multitude of ways, but they also have an easier time expressing their ideas to others in a concise written format.

When I had to choose a unit to teach my 1st grade students, I knew I wanted it to be a unit in science. My students attended a science special only once a week and I could see the excitement in their eyes after returning from their science class. Science was supposed to be followed up in the classroom; however, it was rarely gotten to because of the math and reading demands of the Reading Street and TERC Investigations curriculums. I decided to teach my students about animal habitats because of their strong interest in animals. I brought four hermit crabs for my students to observe in small groups using hand lenses and had them record their observations. By having the students observe live animals (instead of just looking at pictures or talking about animals), they became fully engaged with learning about hermit crabs. During our discussion after the lesson and after observing, writing, and talking in their groups, many of the students were able to come up with their own conclusions about why hermit crabs live in shells (Artifact 3.1 Hermit Crab Observation Lesson Plan and Sample of Student Work).

When planning my animal habitat unit, I recognized that I knew a lot about animals and where they lived, but I needed to learn a lot more. I also needed to think about the most effective way to teach my students about several animal habitats without the information becoming too overwhelming. I decided it would be best to teach through learning centers, and I created integrated centers, which included listening to a book about ocean habitats, computer games for students to work on
phonics while learning about animal homes, reading fiction and non-fiction books, writing about an animal home they were most interested in, and music for students to listen to about habitats (Artifact 3.3 Habitat Unit- Centers Lesson Plan). By integrating different aspects of reading, writing, and listening, the students became more engaged with learning about different habitats.

Wiggins and McTighe (2005) define the heart of intellectual engagement as “genuine application to meaningful, real-world problems; hands-on opportunities to ‘do’ the subject; getting helpful feedback along the way” (p. 196). The NCTM states that most mathematical concepts should “be introduced through problems that come from their worlds” (p. 52). Along with these ideas, I believe by relating problems to students’ own worlds, they are able to better understand the content, thereby making it more meaningful in their lives.

I also taught a unit in the TERC Investigations math curriculum called “Solving Story Problems.” My students were unable to relate to many of the story problems in their workbooks. For example, one of the problems was about taking out library books from the library. However, there is no library at their school and many of the students had never taken out a book before or even been to the library. Therefore, I created new story problems for my students to complete in order to make it meaningful for them instead of having them think about a scenario that did not make sense to them. As a class, we created story problems about members of our class and used their names as well (Artifact 3.2 Sample story problems).
Cowhey (2006) believes “teaching is more effective when the teacher is passionate about the topic” (p. 65). It is unrealistic to believe that a teacher is passionate about everything he or she teaches; however; teachers can encourage and support their students’ passions. When I begin to teach a unit, I dive into what I am going to teach and make sure it is going to be meaningful for my students; otherwise, they will not learn to their fullest capacities. I strongly believe that showing students what your passion as a teacher is helps them develop what they are passionate about.

In my future teaching I feel that I would like to integrate subject areas, especially mathematics. I feel that math is one of the hardest subjects for students to understand how it relates in the real world. By integrating math with other subject areas, I will be able to show my students how important math is in today’s society and how they can use what they are learning in the classroom in their own lives. I plan on reading Best Practice, Today’s Standards for Teaching and Learning in America’s Schools by Steven Zemelman in order to have a deeper understanding about how to engage, motivate, and inspire students about the curriculum they are learning.
References:


