Angela Sonntag
CEP 818
Swiss Cheese Quandry

The very beginning of *Chapter 1: Rethinking Thinking* immediately struck a correspondence with me due to my lack of culinary skills. The comparison of a master chef to a person's way of thinking revealed a great deal in the way I approach my own cooking and teaching.

I am not a very skilled chef in the kitchen despite my relentless attempts at recipe after recipe. Whether I am attempting to cook something from an average cookbook or a traditional favorite of my family, I can never get it to taste just right. *Sparks of Genius* made me realize that, "It's not that what they do in the kitchen is any different from what we do, they just do it better," (pg. 1). Without delay, the image of my mother sprang into my head, with her lack of measure cups and detailed instructions in the kitchen. She rarely uses a recipe and has difficulty passing them on to me over the phone. The master chef in her replies, "I don't know how I did it, I just know what and how much to add to it." She may not have won a Nobel Prize like Barbara McClintock, but I do like to think that they have something in common there.

The whole idea that great minds and intellectual masters, first do not know how to explain their thinking, but after meticulous thought are able to break it down step by step, brings to mind my 3rd grade students. When working on a particularly difficult word problem where students had to find the value of an unknown variable, a few students raised their hands immediately. I was startled to see such a quick reaction after reading the problem and I was actually envisioning the long and slow process of breaking it down one sentence at a time. The students who raised their hands were able to tell me the correct answer to the problem within the time it took most students to completely read the problem. So you can imagine my confusion when they told me they didn't know how they got it, but swear they know it's correct. Eventually with time given to their thoughts, they are able to explain their intricate series of steps taken to solve the equation. By reading this book, I have made connections between many of the world's most creative people and the thought process of some of my most academically gifted students. They too have that gut feeling, sense of knowing, and eureka like thinking that allows them to explore multiple disciplines at once.

Most of my students can make connections between the different disciplines, but this experience is not always easy for them to make consistently. Just recently, my class was creating a model of a human leg to display the different muscles we use to move. While reading the directions, one student raised his hand and mentioned that this reminded him of the poetry we had just read a few hours ago. When I asked him to clarify, he explained that the wording of the instructions was a bit unclear and that he wasn't able to quite understand it until he had completely read them, just like in the poem by Jack Prelutsky we read. I applauded his amazing connection from science to literacy and suddenly hands began popping up with connections of their own. The students had used this boy's skills of integrating curriculum to begin their own inquiry and began to find other connections. Another student found three lines of instructions in the text that had the same 5-7-5 syllable pattern as a haiku, while a different student shouted, "That's just like math, because 5 + 7 + 5 = 17!" I was amazed at the sudden flow of connections and used this rare schedule defying opportunity to discuss how all discipline is connected.

These infrequent opportunities are due to an education system that has historically broken down the creative process by taking the curriculum at all ages and, "divided into

disciplines defined by products rather than processes," (p. 12). This divided discipline has created abrupt and awkward transitions between our class activities and doesn't allow the school day to flow smoothly. It's difficult to create such interconnectedness with all of the subject areas when we are told to have distinct schedules designated to curriculum objectives, but also connect the disciplines as much as possible. These contradicting instructions end up creating teaching methods that leave out "huge chunks of the creative process," (p. 12). My coworkers and I refer to this as the "Swiss Cheese Quandary" and we realize that you can not teach just mathematics and science or just the arts, use of emotions and imagination. Either way your students are left with large holes in their education when you can not integrate discipline consistently.

Through Module 1 I have began to create a better understanding of what it takes to be creative and to promote creativity in my classroom. I have realized that I need to let go of my exhaustive directions and create more opportunities for the students to have an honest chance at creativity. I can not guide them in the ways of creativity, but merely discuss and teach the proper tools they need. I hope to spark more creativity in my classroom and generate more student led and student driven activities. Hopefully while working on these skills as a teacher, my students will have more moments of discovery and creativity. The feeling of "eureka" made by McClintock is something that I hope students experience, but also something that we can learn together. Being a product of the educational system that only half understood the nature of thinking, I too hope to be able to synthesize my learning and thinking.