Jay Shenoy A.P. Physics – Mrs. Estrella

9/14/15 Period 8

**Reflection on “The Making of a Scientist” and “God’s Secret Weapon”**

Richard Feynman’s essay “The Making of a Scientist,” while decidedly terse, echoes my concerns regarding the modern educational system. In much the same way Feynman’s friends find value in simply memorizing the names of bird species, our secondary schools place too much emphasis on memorizing definitions, theories, and specific problem-solving techniques without addressing the underlying concepts that are fundamental to the subject at hand. As a concrete example, I recall that while studying AP Calculus last year, several students only worked on a specific subset of practice questions and only committed a few concepts to memory, thereby failing to understand many key concepts (e.g., how is the first derivative related to the second derivative? How does the Riemann sum relate to the definite integral?). While this benefited the students to a certain degree, they were unable to solve problems that they had not encountered before. Understanding key concepts and possessing a set of mathematical tools in one’s “arsenal” are more valuable than memorizing a litany of ostensibly non-related facts. The former allows one to solve problems of a wide variety, as was the case with AP Calculus.

I can also connect this to the passage “God’s Secret Weapon,” which describes how God prepares humans to perform his will on Earth through their experiences. Like Feynman’s father, who taught his son through experience (by observing the birds, making hypotheses, and drawing conclusions), God teaches humans through their experiences. During this year in AP Physics, it will be important for us to gain experience by practicing a variety of problems, while at the same time comprehending the fundamental concepts of physics. In some sense, we will become “weapons” that can adapt to any situation (problem) that we encounter.