My Bachelor of Arts in Biology afforded me a broad survey of the field, including research opportunities. With the addition of work experience and a planned additional course, I believe I am well-prepared to teach Biology at a secondary school.

My checklist demonstrates my broad education in Biology. I should note that my Special Topics class specifically studied human physiology and neurology. In addition, classes in chemistry, organic chemistry and physics helped me build a strong foundation in general science. I did substantial lab work, with highlights including studying camas pollinator diversity and working to create a phylogenetic tree for the Pacific madrone. The classes I value most in retrospect were those that taught me how to decipher challenging contemporary scientific papers, such as my microbiology and colloquium classes. Those and other classes conferred on me the skills and the confidence to continue to expand my understanding of biology as the field continually grows and changes.

Beyond classes and lab work, the opportunities I had to participate in hands-on research were invaluable. Participating in the processes of science taught me how modern research is done and how to design investigations. I worked with a professor on his research of Joshua Tree-pollinator co-evolution, both in the field and in the lab. I also spent nearly a hundred hours on my senior thesis research, which investigated the affect of light pollution on aquatic macroinvertebrate populations and rates of behavioral drift. My research experience is particularly valuable to me because I hope to teach my future students through hands-on techniques that empower them to do science and be scientists.

Through my research experience I have done some statistical work; however, I have not taken a statistics class, as my university allowed multi-variable calculus as a substitute. Instead, use of statistics was integrated into my laboratories through data analysis with Systat and other programs. I analyzed my own data for my thesis, and learned how to perform principal component analysis (more technically, NMS) to reveal population differences among my study sites. I also did a number of regression analyses for my thesis. My classes also taught statistical techniques through interpreting the results of complex scientific papers.

I took only introductory courses in ecology and genetics. However, ecology has become one of my strongest areas of knowledge, because I've worked in ecological and environmental education for the last seven years. Across several organizations and ecosystems, I've taught about species interactions, energy flow and biogeochemical cycling, niches, ecosystems services and much more. I have particular knowledge of local, PNW ecosystem types and am still learning more daily from my co-workers and local resources. I have much less experience with genetics, and am registered to take a class through the American Natural History Museum this fall in order to dive deeper into the topic. I look forward to learning more about genetics and how geneticists tackle ethical issues.