

## CHAPTER OVERVIEW

### 1: Foundations and Review

The study of any discipline requires some grounding in fundamentals. Without this common experience, there is little hope of communicating any complex concepts. For example, in order to make use of a textbook, one must be comfortable with reading. In a mathematically intensive discipline such as physical chemistry, one's comfort level must extend to following discussions that incorporate mathematics and mathematical equations and relationships. As an example, consider the proof of conservation of energy as a means to frame a discussion of this concept.

[1.1: Some Newtonian Physics](#)

[1.2: Some Vectors and Dot Products](#)

[1.3: Classical Description of a Wave on a String](#)

[1.4: Failures of Classical Physics](#)

[1.5: On Superposition and the Weirdness of Quantum Mechanics](#)

[1.6: References](#)

[1.7: Vocabulary and Concepts](#)

[1.8: Problems](#)

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