

P9, Chapter 1, Section 1: Review

1. The major areas of physics are *mechanics, thermodynamics, vibrations and wave phenomena, optics, electromagnetism, relativity, and quantum mechanics*.
2. Relevant areas of physics:
 - a) *Mechanics* would be most relevant to a high school football game, as this field deals with motion and the interaction between objects, such as football players.
 - b) *Thermodynamics* would be most relevant to preparing food, as this field deals with heat and temperature, such as that used to prepare food.
 - c) *Vibrations and wave phenomena* is most relevant to playing in a school band, as this field deals with sounds, such as that generated by instruments.
 - d) Electromagnetism would be most relevant to lightning in a thunderstorm, as this field deals with electricity, such as that which composes lightning.
 - e) Optics would be most relevant to wearing sunglasses outside in the sun, as this field deals with light and lenses, such as the lenses of sunglasses and how they block sunlight.
3. The activities involved in the scientific method are to 1) make observations and collect relevant data, 2) formulate a hypothesis and test it, 3) interpret the results of these tests and revise the hypothesis, and 4) draw conclusions from the tests that can be used by others.
4. Physicists model real world phenomena such as the effects of wind on the course of an airplane or how sunlight passes through the ozone layer.
5. a) *mechanics*; b) *thermodynamics*; c) *electromagnetism*