

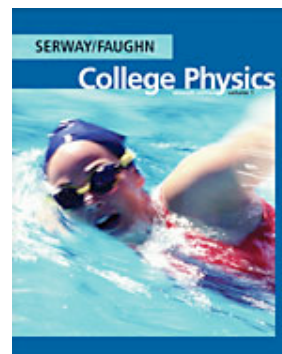
Chapter 1 Outline — Linear Motion

Text Readings (Serway/Faughn)

- Chapter 1 – pages 1–22 *Read it before, during, and after we study this unit in class!*
- **Skip section 1.8. We'll come back to it later**

Handouts

- | | |
|--|----------------------|
| ▪ A very brief history of science and the universe | • True or False? |
| ▪ Current science event articles | • Formula card |
| ▪ Algebra Review | • Galileo article |
| ▪ How to graph scientific data | • Significant digits |
| ▪ It's all in the slope | |



Unit objectives (This is what you have to know for the test.)

1. Explain what some of the different branches of physics study. These branches include (but are not limited to) mechanics, atomic & nuclear physics, cosmology, electricity & magnetism, astrophysics, optics, acoustics and metrology.
2. Explain the difference between science and technology. Give specific examples of each.
3. Be able to name a few physicists, dead or alive.
4. Recognize the fundamental units of time, distance and mass.
5. Distinguish between fundamental and derived units and how dimensional analysis is useful.
6. Know the basic metric prefixes (from μ to M) and how to perform metric conversions.
7. Know what parallax is and how to reduce or eliminate parallax error in measurement.
8. Be able to use significant digit (figure) rules to round answers to the correct number of significant digits.
9. Graph scientific data properly and identify the independent and dependent variables in an experiment. Know the point-slope equation for a line and use it properly.
10. Distinguish between accuracy and precision. Know how to take laboratory measurements with both accuracy and precision.
11. Be able to use scientific notation properly.
12. Manipulate multivariable algebraic equations to solve for any variable.

Pennsylvania Standards addressed in this unit:

Reading 1.1 – 1.3, 1.7

Mathematics 2.1 – 2.11

Science & Technology

- 3.1.12.C – Assess and apply patterns in science and technology.
- 3.1.12.B – Apply concepts of models as a method to predict and understand science and technology.
- 3.1.12.D – Analyze scale as a way of relating concepts and ideas to one another by some measure.
- 3.2.12.A – Evaluate the nature of scientific and technological knowledge.
- 3.2.12.B – Evaluate experimental information for appropriateness and adherence to relevant science processes.
- 3.7.12.B – Evaluate appropriate instruments and apparatus to accurately measure materials and processes.

Get help when you need it.

www.MrFlint.com

chemtchr@yahoo.com

AIM SN: ljflintstone

Mr. Flint arrives at school by 7:00am, stays after school until 3:00pm and can stay later if needed.

Get a pass from Mr. Flint in advance to come in to school early or to attend Activity Period.