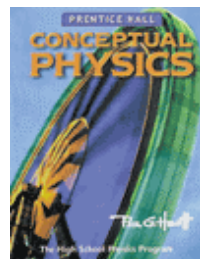


Chapters 9 & 11 – *Circular Motion and Rotational Mechanics*

Text Readings (Conceptual Physics – Prentice Hall ©2002)

- Chapters 9 & 11 *Read before, during and after this unit.*



Handout Resources

- Concept Development 9–1

Objectives (This is exactly what will be on the test)

- ❑ Distinguish between rotation and revolution. Know how to locate the axis of a rotating object.
- ❑ Differentiate between linear speed, tangential speed and rotational speed. Know some common units used for each type of speed.
- ❑ Understand the difference between the real centripetal force and the “fictitious” centrifugal force.
- ❑ Explain what a gyroscope is and describe a few practical uses they have.
- ❑ Describe why a tapered wheel permits self-correcting motion. Explain at least one practical use for a tapered wheel.
- ❑ Explain why a bicycle or motorcycle is easy to balance while in motion but is difficult to balance while at rest. Explain how bicycles and motorcycles are steered.
- ❑ Defend the notion that training wheels make it **more difficult** for a beginning bicyclist to learn to ride a bike than if training wheels are not used.
- ❑ Describe how “artificial gravity” can be created with a spinning spaceship. Explain the challenges faced by building and operating such a spacecraft.

Pennsylvania Standards addressed in this unit:

Reading & Writing 1.1–1.8

Mathematics 2.1–2.9

Science:

- 3.1.12.B – Apply concepts of models as a method to predict and understand science and technology.
- 3.1.12.C – Assess and apply patterns in science and technology.
- 3.1.12.D – Analyze scale as a way of relating concepts and ideas to one another by some measure.
- 3.1.12.E – Evaluate change in nature, physical systems and man made systems.
- 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.
- 3.2.12.D – Analyze and use the technological design process to solve problems.
- 3.4.12.C – Apply the principles of motion and force.
- 3.8.12.C – Evaluate the consequences and impacts of scientific and technological solutions.

Get help if you need it!

www.MrFlint.com chemtchr@yahoo.com IM screen name: ljflintstone

I arrive at school by 7:00AM and can stay after school most any day with one day of prior notice.

Feel free to come to ELO any day you need help.