4e Coversheets, 2010-2011

Chapter 1: Introduction and the Scientific Method

- 1. Getting to Know Your Conceptual Physics Textbook
- 2. Lab: "Amassing a Penny's Worth"
- 3. Graph from lab

Chapters 2: Equilibrium of Forces

- 1. Worksheet 2-1
- 2. Worksheet 2-2
- 3. Chapter 2 Think and Explains #25-35 (answered in complete sentences)
- 4. Chapter 2 Think and Solves #36-48 (4-step method)
- 5. Lab: "Smart Ropes"
- 6. Double graph from "Smart Ropes" lab
- 7. Lab: "24-Hour Towing Service"
- 8. Force as a Vector (vector diagrams neatly done on graph paper)
- 9. Chapter 2 Reading/Class Notes

Please utilize the four-step procedure for all "Think and Solves".

Four Step Method:

- 1) Make and sketch and label the givens (and free-body diagram)
- 2) Identify what your are solving for $(d = __?_, v = __?_, a$

= ____?___ etc.)

3) Write down the relevant equations.

4) Solve the equation(s) then either box your answer or highlight your answer.

Chapter 3: Inertia

- 1. Lab: "Going Nuts"
- 2. Worksheet 3-1
- 3. Worksheet 3-2
- 4. Chapter 3: "Think and Explains" (in complete sentences) #28-42
- 5. Chapter 3: "Think and Explains" (in complete sentences) #43-50
- 6. Chapter 3: "Think and Solves" #51-55 (4-step method)
- 7. Inertia Demonstration—"Ball & String Demo" (from WebAssign)
- 8. Chapter 3 Reading Class/Notes

Chapter 4: Linear Motion

- 1. Lab#3 "The Domino Effect" + graph of data (hand drawn graph)
- 2. Worksheet 4-1
- 3. Worksheet 4-1b
- 4. Worksheet 4-2 (with your own calculations on back)5. "Reaction Time" Activity
- 6. Chapter 4 "Think and Solves" using 4-step method
- 7. Chapter 4: Reading/Class Notes

Chapter 5a: Projectile Motion

1. Worksheet 5-1, carefully done with a ruler

2. "Rock Off a Cliff" at 45° with 5 Questions & Answers

3. "Rock Off a Cliff" at 38° with 5 Questions & Answers

4. Chapter 5, page 83#18-32 (show your work and complete sentence answers!)

5. Chapter 5, page 83#33-43 (show your work and complete sentence answers!)

6. Chapter 5, page 83#44-50 (show your work and complete sentence answers!)

Chapter 5b: Baseball as a Projectile

- 1. Anatomy of a Pitch (with 2-page graph)
- 2. Anatomy of a Homer—with calculations clearly shown
- 3. Velocity as a Vector Problems—First Draft
- 4. Velocity as a Vector Problems—Final Draft
- 5. Lab: "Bull's Eye"
- 6. History and Physics of Balls
- 7. Velocity as a Vector and Projectile Motion Test and Corrections (must have both)
- 8. Physics of Baseball Notes

Chapter 6: Newton's 2nd Law

- 1. Lab: "What a Drag" with graph of height vs. # filters
- 2. Worksheet 6-1
- 3. Worksheet 6-2
- 4. Worksheet 6-3
- 5. Lab #19 or #20 with graph drawn by hand and with Excel
- 6. Top Gun Problems (4-step method including FBD)
- 7. Chapter 6 Reading/Class Notes
- 8. Worksheet 7-2
- 9. Chapter 7 Reading Notes
- 10. Worksheet 8-1
- 11. Chapter 8 Reading Notes

Chapters 9-14 Packet

- 1. Worksheet 9-2
- 2. Worksheet 9-3
- 3. Lab #23 "Egg Toss"
- 4. Chapter 8 #54-65
- 5. Class Activity/Video: "Head-on Physics"
- 6. Chapter 9, #38-48, 50-54
- 7. Chapter 9 Reading/Class Notes
- 8. "Frames of Reference" Study Guide
- 9. Worksheet 10-1
- 10. Worksheet 10-2a
- 11. Worksheet 10-2b
- 12. Chapter 10, #33-43
- 13. Chapter 10 Reading/Class Notes
- 14. WebAssign 10a
- 15. Lab #34 "Going in Circles"
- 16. Lab #35 "The Flying Pig"
- 17. Chapter 11 Reading/Class Notes
- 18. Chapter 12 Reading/Class Notes
- 19. Chapter 13 Reading/Class Notes
- 20. Chapter 14 Reading/Class Notes

Chapters 10 & 14 Packet

1. Video Notes: "Understanding Car Crashes: It's Just Basic Physics/Where Physics Meets Biology"

2. "What Holds Satellites Up?"

- 3. Worksheet 14-1 (with carefully drawn vectors on the back)
- 4. Chapter 14#24-39 (answers in complete sentences!)
- 5. Chapter 14#40-50 (must show work!)
- 6. Lab#46 "Trial and Error with both graphs
- 7. Lab#44 "Getting Eccentric"

8. Escaping the Gravity of the Earth—Gravitational Sling-Shots (notes from PPT)