

Regular Physics I
Ms. Curtis
Textbook: Conceptual Physics, 2006

The Nature of Science

Chapter 1 & Throughout the course: About Science

- A. Sunshine State Standards: SC.912.N.1.1 – N.1.7; N.2.1 – N.2.5; N.3.1 – N.3.5; N.4.1 – N.4.2
- B. How do scientists make measurements? How precise do they have to be?
- C. Evaluation:
 - 1. Read pp. 1-8
 - 2. Exercises – pp 8
 - 3. Labs: Making Hypothesis
 - 4. Take Test

Cluster I. Motion and Forces

8 weeks

Chapter 2: Linear Motion

- A. Sunshine State Standards: SC.912.P.12..1 – 12.4; SC.912.P.10.10; SC.C.2.4.1
- B. What is the difference between speed & velocity?
- C. Evaluation:
 - 1. Read pp. 10 - 24
 - 2. Exercises-pp. 25 - 27
 - 3. Labs: Computer graphing labs for displacement & velocity
 - 4. Take Test

Chapter 3: Projectile Motion

- A. What are relative & projectile motions?
- B. Evaluation:
 - 1. Read pp. 28 - 39
 - 2. Exercises-pp. 40 - 42
 - 3. Labs: Projectile motion, Range of a projectile
 - 4. Take Test

Chapter 4: Newton's First Law of Motion - Inertia

- A. What are Newton's laws of motion? How do we apply them to our everyday lives?
- B. Evaluation;
 - 1. Read pp. 43 - 55
 - 2. Exercises-pp. 56 - 58
 - 3. Labs: Going Nuts!, Buckle Up!

Chapter 5: Newton's 2nd Law of Motion – Force & Acceleration

- A. Forces cause acceleration and Mass resists acceleration?
- B. Evaluation:
 - 1. Read pp. 59 - 70
 - 2. Exercises-71 - 73
 - 3. Lab: Getting Pushy, Constant Force & Changing Mass, Constant Mass & changing Force

Chapter 6: Newton's 3rd Law – Action & Reaction

- A. Do actions & reactions cancel? What's this horse & cart thing?
- B. Evaluation:
 - 1. Read pp. 74 - 82
 - 2. Exercises-pp. 83 – 85
 - 3. Lab: Balloon Rockets, Tension, Tug –of - War
 - 4. Take Test Ch. 4-6

Cluster II. Conservation of Energy & Momentum

8 weeks

Chapter 7: Momentum

- A. Sunshine State Standards: SC.912.P.10.1 – 10.2, 10.9; 12.5
- B. Can a truck and a skateboarder have the same momentum?
- C. Evaluation:
 - 1. Read pp. 86 - 99
 - 2. Exercises-pp. 100 - 102
 - 3. Lab: Go Cart, Tailgated by a Dart
 - 4. Take Test

Chapter 8: Energy

- A. Does a book on a shelf have energy?
- B. Evaluation:
 - 1. Read pp. 103 - 118
 - 2. Exercises-pp. 119 - 121
 - 3. Lab: Making the Grade, Muscle Up, On a Roll, Releasing your Potential

Cluster III. Waves

8 weeks

Chapter 25: Vibrations and Waves

- A. Sunshine State Standards: SC.912.P 10.18, 10.20, 10.21; 12.7
- B. What do a pendulum and a spring have in common?
- C. Evaluation:
 - 1. Read pp. 372 – 386
 - 2. Exercises pp. 388 – 389
 - 3. Lab:

Chapter 26: Sound

- A. How is sound different from light?
- B. Evaluation:
 - 1. Read pp. 390 – 400
 - 2. Exercises pp. 401-403
 - 3. Lab:

Chapter 27: Light

- A. What is the electromagnetic spectrum?
- B. Evaluation:
 - 1. Read pp. 404 – 418
 - 2. Exercises pp. 419 – 420
 - 3. Lab:

Chapter 29: Reflection and Refraction

- A. What makes a Rainbow?
- B. Evaluation:
 - 1. Read pp. 442 – 459
 - 2. Exercises pp. 460 – 462
 - 3. Lab:

Chapter 30: Lenses

- A. What happens to our eyes as we age?
- B. Evaluation:
 - 1. Read pp. 463 – 476
 - 2. Exercises pp. 477 – 479
 - 3. Labs:

Chapter 31: Diffractions and Interference

- A. What is a wave front?
- B. Evaluation:
 - 1. Read pp. 480 – 496
 - 2. Exercises pp. 497 – 498
 - 3. Labs:

Cluster IV. Electricity and Magnetism

8 weeks

Chapter 32: Electrostatics

- A. Sunshine State Standards: SC.912.P.10.13 – 10.15
- B. Don't touch that doorknob!
- C. Evaluation:
 - 1. Read pp. 500 – 514
 - 2. Exercises pp 515 – 516
 - 3. Lab:

Chapter 33: Electric Fields and Potential

- A. What does a capacitor do?
- B. Evaluation:
 - 1. Read pp. 517 -528
 - 2. Exercises pp. 829 -530
 - 3. Labs:

Chapter 34: Electric Current

- A. How does charge flow?
- B. Evaluation:
 - 1. Read pp. 531 – 544
 - 2. Exercises pp. 545 – 547
 - 3. Labs:

Chapter 35: Electric Circuits

- A. What's the difference between series & parallel circuits?
- B. Evaluation:
 - 1. Read pp. 548 – 558
 - 2. Exercises pp. 559 – 561
 - 3. Labs

Chapter 36: Magnetism

- A. Are we really all attracted?
- B. Evaluation:
 - 1. Read pp. 562 – 574
 - 2. Exercises pp. 575 – 576
 - 3. Labs:

Chapter 37: Electromagnetic Induction

- A. Exactly how do metal detectors work?
- B. Evaluation:
 - 1. Read pp. 577 – 591
 - 2. Exercises pp. 592 – 594
 - 3. Labs

Cluster IV. Heat and Thermodynamics

8 weeks

Chapter 21: Temperature, Heat, & Expansion

- A. Sunshine State Standards: SC.912.P.10.4, 10.5; 12.10, 10.11
- B. What is the difference between temperature & heat?
- C. Evaluation:
 - 1. Read pp 307 – 321
 - 2. Exercises pp. 322-324
 - 3. Lab: Specific Heat

Chapter 22: Heat Transfer

- A. How many ways can heat be transferred?
- B. Evaluation:
 - 1. Read pp 325 – 336
 - 2. Exercises pp. 337 – 338
 - 3. Lab:

Chapter 23: Change of Phase

- A. Why do pigs waddle in mud?
- B. Evaluation:
 - 1. Read pp. 339 – 350
 - 2. Exercises pp. 352 – 353

Chapter 24: Thermodynamics

- A. Laws of What?
- B. Evaluation:
 - 1. Read pp. 354 – 367
 - 2. Exercises pp. 368 - 369

Review for and take final exam