College of the Canyons

- Physci 101 Lab: Physical Science Laboratory Investigations (Ciardi)

This text introduces the non-science major to a survey of chemistry, and physics. Includes mechanics, heat, light, sound, motion, magnetism, electricity, atomic structure, chemical bonding, chemical reaction rates and their practical applications. Topics are developed with a minimum of mathematical presentation.

- Front Matter
- 1: The Scientific Method
- 2: Investigation 1 - Making a Hypothesis
- 3: Investigation 2 - Precision and Accuracy
- 4: Investigation 3 - The Best Paper Towel
- 5: Investigation 4 - Measuring a Wood Block
- 6: Investigation 5 - Walking at a Constant Speed
- 7: Investigation 6 - Falling Objects
- 8: Investigation 7 - Traveling in a Circle
9: Investigation 8 - Firing at a Distant Target
- 10: Investigation 9 - Balanced and Unbalanced Forces
- 11: Investigation 10 - Weight of Mass
- 12: Investigation 11 - High Flying Bottle Rocket
- 13: Investigation 12 - The Pressure on Your Feet
- 14: Investigation 13 - Mass vs Volume vs Density
- 15: Investigation 14 - Sinking and Floating
- 16: Investigation 15 - Two Wood Rafts
- 17: Investigation 16 - Magic Coins and Paperclips
- 18: Investigation 17 - Weight Lifting
- 19: Investigation 18 - Rolling Down a Hill
- 20: Investigation 19 - The Swing
- 21: Investigation 20 - Balancing a See-Saw
- 22: Investigation 21 – The Temperature of a Molecule
- 23: Investigation 22 - Heat Energy Transfer
- 24: Investigation 23 - Rates of Heat Conduction
- 25: Investigation 24 - Phase Change of Water vs Salt Water
- 26: Investigation 25 - Magically Moving Objects
- 27: Investigation 26 - Holiday Lights
- 28: Investigation 27 - Magnetic Field Patterns and Interactions
- 29: Investigation 28 – The Electromagnetic Connection
- 30: Investigation 29 - Energy of Sound and Speed of Light
- 31: Investigation 30 - Waves on a Very Long Spring
- 32: Investigation 31 - Bouncing Light
- 33: Investigation 32 - Bending Light
- 34: Investigation 33 - The Atomic Spectra of Neon Lights
- 35: Investigation 34 - Modeling Radioactive Half-Life
- 36: Investigation 35 - Identifying Chemical Changes
- 37: Investigation 36 - Mixing Solids and Liquids
- 38: Investigation 37 - Pattern in the Periodic Table
- 39: Investigation 38 - Building Models of Molecules
- 40: Investigation 39 - Melting Wax and Cooking Sugar
- 41: Investigation 40 - Dozens and Moles
- 42: Investigation 41 - Rates of Reactions
- 43: Investigation 42 - Magic Colors
- 44: Investigation 43 - Acids and Bases around the House