



Topic Overview

Week ***Subjects Covered***

- 1 What is physical science?, scientific inquiry, technology and science, laboratory safety
- 2 Basic chemistry terminology, units of measurement, chemical change and physical change
- 3 Forms of energy, states of matter, changes of state
- 4 Gas behavior, volume, temperature, pressure, gas laws, introduction to atoms
- 5 Periodic table, metals, non-metals, metalloids
- 6 Radioactivity, introduction to bonding in atoms
- 7 Ionic bonding, covalent bonding
- 8 Metallic bonding, physical properties versus chemical properties, observing chemical change
- 9 Describing chemical reactions, controlling chemical reactions, fire and fire safety
- 10 Understanding solutions, concentration, solubility
- 11 Acids, bases, and solutions
- 12 Carbon chemistry, properties of carbon, carbon compounds
- 13 Polymers, composites, soaps
- 14 Motion, speed, velocity, acceleration
- 15 Forces, friction, gravity
- 16 Newton's first, second, and third laws, rockets and satellites
- 17 Pressure, buoyancy, Archimedes' Principle
- 18 Pascal's Principle, Bernoulli's Principle
- 19 Work, simple machines
- 20 What is energy, forms of energy, energy transformation and conservation
- 21 Energy and fossil fuels, temperature, thermal energy and heat, heat transfer
- 22 Thermal energy and states of matter, uses of heat, bridges
- 23 Waves, properties and interactions of waves
- 24 Seismic waves, nature and properties of sound
- 25 Music, hearing, uses of sound
- 26 Electromagnetic waves, electromagnetic spectrum, visible light
- 27 Wireless communication, visible light, color
- 28 Reflection and refraction
- 29 Vision, uses of light
- 30 Magnets, magnetism, earth as a magnet
- 31 Electric charge, static electricity, electric current
- 32 Batteries, electrical circuits, electrical safety
- 33 Electricity, magnetism, electromagnetism, and motion
- 34 Electronic signals and semiconductors, computers, computer programming
- 35 Flex week, see instructor notes
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