



R.I.L.E.
 Robotic. Interactive.
 Learning. Environment

Planned Physics Curriculum And Schedule

Phase Availability

Phase 1: July 2014

Phase 2: January 2015

Phase 3: July 2015

CBSE Curriculum Topics: 6th - 10th Grade

6th Grade Topics (12 Periods)

Phase 1: Distance Measurement
 Length
 Speed
 Rotation

Phase 2: What is a Circuit?
 Conductors / Insulators

Phase 3: Introduction to Magnetism

7th Grade Topics (28 Periods)

Phase 1: Time
 Velocity
 Quantitative Measurements
 Plotting Distance Vs. Time
 Uniform Motion

Phase 2: Circuit Diagrams
 Fuses
 Light
 Reflection/Refraction
 Concave/Convex Lenses and Mirrors
 Newton's Disk

Phase 3: Electro-Magnets

8th Grade Topics (34 Periods)

Phase 1: Acceleration
Newtonian Forces
Friction (Static, Rolling, Sliding)
Gravity

Phase 2: Sounds
Laws of Reflection
Mirrors

Phase 3: Pressure

9th Grade Topics (60 Periods)

Phase 1: Distance/Displacement
Velocity
Acceleration
Distance Vs. Time / Velocity Vs. Acceleration
Graphical Analysis
Uniform Circular Motion
Newton's Laws
Force and Motion
Gravity
Free Fall
Work
Energy
Power
Conservation of Energy
Kinetic/Potential Energy

Phase 2: Sound
Ultrasonics
Speed of Sound

10th Grade Topics (55 Periods)

Phase 2: Current
 Potential Difference
 Ohm's Law
 Series/Parallel Resistors
 Electricity Formulas and Relations
 Optics
 Refraction
 Magnification
 Lenses

Phase 3: Magnetic Fields
 Induced Currents
 Coils / Solenoids
 Fleming's Left Hand Rule
 EM Induction
 AC / DC

11th Grade Topics

Phase 1: Measurements and Dimensional Analysis
 Quantitative Kinematics
 Position / Displacement
 Mathematics of Physics
 Vector Analysis
 Velocity
 Acceleration
 Forces and Motion
 Newton's Laws
 Friction
 Momentum
 Work
 Energy
 Power
 Gravity

12th Grade Topics

Phase 2: Electricity
Coulomb's Law
Electric Forces
Potential Difference
Resistance / Resistivity
Batteries / EMF
Kirchoff's Laws
Light / Optics
Mirrors / Lenses
Reflection / Refraction
Prisms

Phase 3: Expanded Electricity Experiments
Magnetic Fields
Magnetism
Bio-Savart Law
Magnetism and Kinematics
Electromagnetic Induction
AC / DC Currents
Electrical Devices

