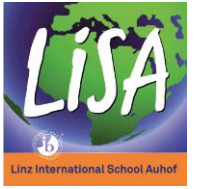




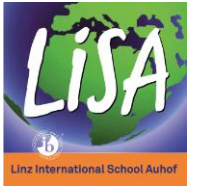
Subject Physics

General comments about the subject

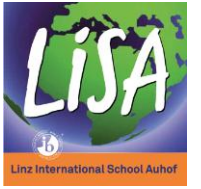
Year 1



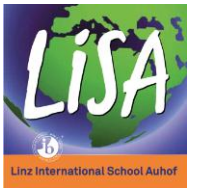
Year 2



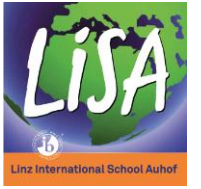
Year 3



Year 4



Year 5



Year 6

Physics and physical measurements

The realm of physics

Measurement and uncertainties

Vectors and scalars

Mechanics

Kinematics

Forces and dynamics

Work, energy and power

Uniform circular motion

Oscillations

Kinematics of simple harmonic motion

Energy changes during simple harmonic motion

Forced oscillations and resonance

Experiments

Density of a stone

Traffic in front of school

Free Fall

Projectile Motion

Circular motion

Year 7

CL course: Electricity and magnetism

Electrostatics

Electric force and field

Electric currents

Electric potential difference, current and resistance

Electric circuits

Magnetism

Magnetic force and field

Moving charges in magnetic fields

Experiments

Oscilloscope

I/V characteristics of resistor, bulb and diode

Internal resistance of a battery

Specific resistivity of a material

e/m ratio of electrons

SL course additional material:

Waves

Wave characteristics

Wave properties

Standing waves

The Doppler Effect

Diffraction

Resolution

Polarization

Fields and forces

Gravitational force and field

Thermal physics

Thermal concepts

Thermal properties of matter

Gas equation

Experiments

Refractive index of water

Test the lens equation

Specific heat of water

Latent heat of melting of ice

How to keep the coffee worm?

Year 8

CL course:

Atomic and nuclear physics

The atom

Radioactive decay

Nuclear reactions, fission and fusion

Energy, power and climate change

Energy degradation and power generation

World energy sources

Fossil fuel and non-fossil fuel power production

Greenhouse effect and global warming

Experiments

Simulation of radioactive decay

Geiger Müller tube experiments

Simulation of greenhouse effect

SL course additional material

Electromagnetic waves

The nature of electromagnetic waves and light sources

Two source interference of waves

Diffraction grating

Lenses and image formation

Optical instruments

Aberration

Experiments

Telescope and microscope

Diffraction on a CD

Polarization of light by polymers