

SCO INTERNATIONAL OLYMPIAD

SCO IPHO EXAM SCHEDULE

Grade 8 to Grade 12 | Physics

Official three-cycle exam calendar, online date slots, and class-wise syllabus guide for schools, teachers, parents, and students.

Designed for global participation in SCO International Physics Olympiad with guided preparation, practice, reporting, and future-ready physics pedagogy.

- three-cycle calendar: Spring, Summer, and Winter participation windows
- multiple online exam date slots across the year for Grade 8 to Grade 12
- syllabus pathway aligned with global Physics Olympiad expectations and school-level progression
- focus on concepts, reasoning, measurement, SI units, data interpretation, and experimental thinking

Physics	Mechanics	Electricity	Optics	Modern Physics
Measurement	Problem Solving	Waves	Online Exam	Experiment Skills

SCO IPhO Exam Schedule & Syllabus

This document presents the official visitor-facing schedule structure and class-wise syllabus for the SCO International Physics Olympiad (SCO IPhO) for Grade 8 to Grade 12. It is designed for students, parents, schools and teachers who need a clear online exam calendar, multiple date options and a structured preparation pathway.

Global Physics Olympiad Alignment

The SCO IPhO schedule and syllabus are written to support strong physics pedagogy: conceptual reasoning, mathematical modeling, SI-unit discipline, measurement thinking, experimental-data interpretation and problem-solving. The official International Physics Olympiad model includes both theoretical and experimental components; SCO IPhO uses the online format to build comparable readiness through reasoning-rich questions, data-based problems and school-friendly preparation resources.

1. Exam Calendar Model: Three Cycles Every Year

SCO IPhO is organized under three active cycles each year so that international schools and students can choose suitable participation windows across different academic calendars. Each cycle supports multiple online exam date slots, preparation access and result publication governance.

Cycle	Exam Window	Result / Publish Date	Status
2026 SPRING	01 Jan 2026 to 31 Mar 2026	30 Apr 2026	Active
2026 SUMMER	01 Apr 2026 to 31 Jul 2026	31 Aug 2026	Active
2026 WINTER	01 Aug 2026 to 31 Dec 2026	28 Feb 2027	Active
2027 SPRING	01 Jan 2027 to 31 Mar 2027	30 Apr 2027	Active
2027 SUMMER	01 Apr 2027 to 31 Jul 2027	31 Aug 2027	Active
2027 WINTER	01 Aug 2027 to 31 Dec 2027	29 Feb 2028	Active

2. SCO IPhO Official Online Exam Dates

The date format used throughout this schedule is DD MMM YYYY, for example 03 Jan 2026. The attached current plan data shows the same official SCO IPhO online date slots for Grade 8, Grade 9, Grade 10, Grade 11 and Grade 12. Final login timing, proctoring instructions and school-specific batches should be confirmed through the SCO student/school portal before the exam.

Public Schedule Cycle	Applicable Grades	Official Online Date Slots
2026 SPRING	Grade 8, 9, 10, 11, 12	03 Jan 2026; 11 Jan 2026; 24 Jan 2026; 07 Feb 2026; 08 Feb 2026; 28 Feb 2026; 07 Mar 2026; 08 Mar 2026; 28 Mar 2026
2026 SUMMER	Grade 8, 9, 10, 11, 12	04 Apr 2026; 12 Apr 2026; 25 Apr 2026; 02 May 2026; 10 May 2026; 23 May 2026; 06 Jun 2026; 14 Jun 2026; 27 Jun 2026; 04 Jul 2026; 12 Jul 2026; 25 Jul 2026
2026-27 WINTER	Grade 8, 9, 10, 11, 12	04 Sep 2026; 12 Sep 2026; 20 Sep 2026; 02 Oct 2026; 10 Oct 2026; 18 Oct 2026; 06 Nov 2026; 14 Nov 2026; 15 Nov 2026; 04 Dec 2026; 12 Dec 2026; 20 Dec 2026
2027 SPRING	Grade 8, 9, 10, 11, 12	Cycle window active: 01 Jan 2027 to 31 Mar 2027. Detailed date slots to be published in SCO portal.
2027 SUMMER	Grade 8, 9, 10, 11, 12	Cycle window active: 01 Apr 2027 to 31 Jul 2027. Detailed date slots to be published in SCO portal.
2027-28 WINTER	Grade 8, 9, 10, 11, 12	Cycle window active: 01 Aug 2027 to 31 Dec 2027. Detailed date slots to be published in SCO portal.

Publication Note for Website Visitors

The public schedule focuses on current and upcoming official slots and cycle windows. Schools may receive approved custom date, batch timing or special examination instructions separately through the SCO communication channel.

3. Exam Format & Online Guidance

Area	SCO IPhO Guidance
Eligibility	Students of Grade 8 to Grade 12 from schools, learning centres or recognized home-school pathways.
Mode	Online exam through SCO student/school portal with identity, timing and integrity controls as applicable.
Cycles	Spring, Summer and Winter cycles every year with multiple date options.
Question Approach	Conceptual, numerical, reasoning-based, graph/data interpretation and experimental-thinking questions.
Global Benchmarking	Built toward global Physics Olympiad expectations: mechanics, waves, thermodynamics, electromagnetism, optics and modern physics.
Units & Calculations	Students should use SI units, correct dimensions, significant figures and physically meaningful reasoning.
Preparation Support	SCO learning materials, practice assignments, mock practice and result analytics may be mapped according to student registration and plan.

4. Pedagogical Focus for SCO IPhO

- Concept before formula: students are expected to understand the physical meaning of equations, not only memorize them.
- Modeling and estimation: students should translate real situations into diagrams, variables, assumptions and equations.
- Experimental thinking: even in an online exam, students should be able to read measurements, interpret graphs, identify uncertainty and reason from data.
- Mathematical fluency: vectors, graphs, proportional reasoning, basic calculus ideas and algebraic manipulation are introduced progressively.
- Global readiness: senior grades should gradually move toward multi-concept problems similar in spirit to international olympiad preparation.

5. Class-wise SCO IPhO Syllabus: Grade 8 to Grade 12

Grade 8 Physics Syllabus

Chapter No.	Chapter Title	Key Learning Outcomes
1	Force and Pressure	Definitions, SI units, pressure in fluids, real-life applications and problem solving.
2	Friction	Static, sliding and rolling friction, effects on motion, advantages, limitations and reduction methods.
3	Sound	Wave nature of sound, pitch, loudness, reverberation, applications and interpretation of wave behavior.
4	Chemical Effects of Electric Current	Electrolysis, electroplating and applications of electric current in daily-life technologies.
5	Some Natural Phenomena	Lightning, earthquakes, auroras, causes, safety methods and scientific explanation of natural events.
6	Light	Rectilinear propagation, shadows, reflection basics and introductory optics applications.

Chapter No.	Chapter Title	Key Learning Outcomes
7	Stars and the Solar System	Constellations, planets, planetary motion, basic astronomy and observational science.

Grade 9 Physics Syllabus

Chapter No.	Chapter Title	Key Learning Outcomes
1	Motion	Distance, displacement, speed, velocity, acceleration and interpretation of graphs.
2	Force and Laws of Motion	Newton's laws, inertia, momentum and application to everyday physical systems.
3	Gravitation	Universal gravitation, acceleration due to gravity, mass, weight and orbital motion.
4	Work, Energy and Power	Work done, kinetic energy, potential energy, conservation of energy and power calculations.
5	Sound	Wave properties, sound propagation, frequency, amplitude, applications and introductory Doppler idea.

Grade 10 Physics Syllabus

Chapter No.	Chapter Title	Key Learning Outcomes
1	Reflection of Light	Laws of reflection, plane mirrors, spherical mirrors and image formation using ray diagrams.
2	The Human Eye and the Colourful World	Human eye, defects of vision, corrective lenses, dispersion, scattering and atmospheric optics.
3	Electricity	Ohm's law, resistance, series-parallel circuits, heating effect and electrical power.
4	Magnetic Effects of Electric Current	Magnetic field, force on current-carrying conductors, induction and applications.
5	Sources of Energy	Conventional and renewable energy sources, basic generation principles and energy choices.
6	Refraction of Light	Snell's law, refraction through prisms and lenses, lens formula and total internal reflection.

Grade 11 Physics Syllabus

Chapter No.	Chapter Title	Key Learning Outcomes
1	Mathematics in Physics	Vector algebra, graphical reasoning and calculus ideas used in physics modeling.
2	Physical World and Measurement	Units, dimensions, error analysis, significant figures and measurement standards.
3	Motion in a Straight Line	Kinematics equations, graphs, relative motion and one-dimensional modeling.
4	Motion in a Plane	Vector components, projectile motion, uniform circular motion and two-dimensional analysis.
5	Laws of Motion	Newtonian dynamics, friction, connected systems and force-based problem solving.
6	Work, Energy and Power	Work-energy theorem, conservative forces, energy conservation and power in mechanical systems.

Chapter No.	Chapter Title	Key Learning Outcomes
7	System of Particles and Rotational Motion	Centre of mass, torque, moment of inertia, angular momentum and rotational equilibrium.
8	Gravitation	Gravitational field, potential, satellite motion and planetary dynamics.
9	Mechanical Properties of Solids	Stress, strain, elastic constants and application of elasticity in materials.
10	Mechanical Properties of Fluids	Pressure, buoyancy, viscosity, Bernoulli's theorem and fluid applications.
11	Thermal Properties of Matter	Heat, temperature, thermal expansion, calorimetry and heat transfer.
12	Thermodynamics	Laws of thermodynamics, heat engines, internal energy and entropy concept.
13	Kinetic Theory of Gases	Molecular interpretation, ideal gas behavior and statistical interpretation of pressure and temperature.
14	Oscillations	Simple harmonic motion, pendulum, energy in oscillations and damping idea.
15	Waves	Wave types, superposition, standing waves, sound and wave-based reasoning.

Grade 12 Physics Syllabus

Chapter No.	Chapter Title	Key Learning Outcomes
1	Electrostatics	Coulomb's law, electric field, potential, Gauss's law and charge distributions.
2	Current Electricity	Drift velocity, resistance, Kirchhoff's laws, electrical measurement and circuit analysis.
3	Moving Charges and Magnetism	Magnetic force, motion in magnetic fields, cyclotron and current-field interactions.
4	Magnetism and Matter	Magnetic materials, Earth's magnetism, hysteresis and applications.
5	Electromagnetic Induction	Faraday's law, Lenz's law, eddy currents, generators and transformers.
6	Alternating Current	AC generation, RMS values, impedance, power factor and LC circuits.
7	Electromagnetic Waves	EM spectrum, properties, communication uses and wave propagation.
8	Ray Optics and Optical Instruments	Lens formula, magnification, microscopes, telescopes and optical instruments.
9	Wave Optics	Interference, diffraction, polarization and wave-based optical reasoning.
10	Dual Nature of Radiation and Matter	Photoelectric effect, de Broglie hypothesis and matter waves.
11	Atoms	Atomic models, spectra, energy levels and quantum transition ideas.
12	Nuclei	Radioactivity, nuclear reactions, binding energy and nuclear stability.
13	Semiconductor Electronics	PN junctions, diodes, transistors, logic gates and simple circuits.
14	Communication Systems	Modulation, bandwidth, analog-digital signals and satellite communication basics.

6. Grade-wise Preparation Roadmap

Grade Band	Preparation Focus	Expected Student Growth
Grade 8	Observation-based physics, force, pressure, friction, sound, light and astronomy foundations.	Develops curiosity, basic scientific vocabulary and first-level reasoning from everyday phenomena.
Grade 9	Motion, laws of motion, gravitation, energy and wave ideas with graph interpretation.	Builds transition from descriptive science to quantitative physics.
Grade 10	Optics, electricity, magnetism, energy and applied physics.	Strengthens numerical problem-solving, circuit logic and ray-diagram reasoning.
Grade 11	Full mechanics, measurement, thermodynamics, fluids, oscillations and waves.	Develops mathematical modeling and deep conceptual reasoning required for advanced physics.
Grade 12	Electrostatics, current electricity, magnetism, induction, optics, modern physics, nuclei and semiconductors.	Prepares students for advanced olympiad-style physics, engineering/physics pathways and global STEM readiness.

7. What Schools, Teachers and Parents Should Do

For Schools

- Choose the cycle and date window that best fits the school calendar and student readiness.
- Use SCO IPhO as a structured online physics benchmarking opportunity for Grade 8 to Grade 12 learners.
- Plan practice sessions around the syllabus and encourage graph, measurement and numerical reasoning practice.

For Teachers

- Map chapters to weekly preparation blocks and include problem-solving, diagrams and data-based interpretation.
- Encourage students to show units, assumptions and diagrams in rough work even when answering objective questions.
- Use post-exam analytics to identify weak areas in mechanics, electricity, optics, waves and modern physics.

For Parents and Students

- Select an exam date after checking school schedule, preparation progress and internet/device readiness.
- Revise concepts by solving mixed problems, not only chapter-wise exercises.
- For senior grades, practise multi-step numerical and reasoning questions with SI units and graph interpretation.

8. Academic Benchmark References

This document is benchmarked against global Physics Olympiad expectations, especially the official International Physics Olympiad statutes and syllabus, which emphasize theory, experimental skills, correct units and SI-based numerical presentation. It is also adapted to SCO's online three-cycle participation model for global schools.

Reference	How it was used
Official IPhO Statutes & Syllabus	Used to align the guide with theoretical scope, experimental-thinking expectations, SI-unit discipline and olympiad-level physics pedagogy.
SCO IPhO Plan Data	Used to prepare the official three-cycle schedule and available online date-slot presentation.
SCO Grade 8-12 Syllabus Input	Used to prepare class-wise chapter pathways and learning outcomes.