

RYSI Award 2018 – Phase I Topic List

While the award does not intend to restrict the exploration of the children to specific areas of science, the programme needs to focus on selected topics so as to have a theme as well as common evaluation parameters for judging entries.

While the topics are fixed, the sub-topics are indicative only. The basis of the topic selection assumption is the common topics covered by different Indian school boards.

An attempt has been made to create an exhaustive list of sub-topics, but if a child thinks that some sub-topics have been missed out, please write on our forum “Sub-topics” <<https://forum.tactivity.in/t/rysi-sub-topics/21>>. In case submissions are in sub-topics that are not listed, the submission may be rejected and the decision of the judges in this regard will be final.

The topics selected for Phase I are provided below.

Junior (Grade 3 & 4)		
1	Motion & Measurement	a. Friction, Speed, Rotation, Simple Machines b. Measurement of Length, Measurement of Area & Volume, Measurement of Mass & Force, Measurement of Temperature
2	Matter	a. States of Matter, Change of State (Evaporation/Condensation/Sublimation), Melting-Boiling-Freezing Points b. Solubility, Water as Universal Solvent, Mixtures & Mixture Separation
3	Food & Clothing	a. Photosynthesis, Herbivore-Carnivore-Omnivore, Food Chain, Food Components b. Fibres, Weaving, Thread Production, Properties of Different Fibres

Mid (Grade 5, 6 & 7)		
1	Fluids & Thermodynamics	a. Density, Buoyancy, Archimedes Principle, Fluid Pressure, Aerodynamics b. Thermal Conductivity, Thermal Expansion, Thermal Insulation c. Combustion, Gas Laws, melting-boiling-freezing points, anomalous behaviour of water
2	Acids, Bases & Salts	a. pH Tests, Neutralisation, Acids & Bases in Daily Life b. Ionisation, Electrochemistry, Metals & Non-Metals, Metal-Acid Reaction

Mid (Grade 5, 6 & 7)

3	Biodiversity & Ecosystem	a. Habitats & Adaptations, Evolution, Biodiversity, Symbiosis b. Animal & Plant Kingdoms, Animal Organ Systems, Plant Organ Systems
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Senior (Grade 8, 9 & 10)

1	Vibrations & Waves	a. Frequency, Interference, Resonance b. Longitudinal & Transverse Waves, Sound & Vibrating Medium c. Diffraction, Refraction, Reflection, Lenses & Mirrors, Colours
2	Atoms, Molecules & Chemical Reactions	a. Molar Mass, Isotopes b. Chemical Bonds & Molecular Structures, Kinetic Molecular Theory c. Chemical Reactivity, Endothermic & Exothermic Reactions, Chemical Reactions in Daily Life
3	Micro Living world	a. Cells & Tissues, Microscopes, Fungi, Bacteria & Viruses b. Communicable & Non-Communicable Diseases, Health & Hygiene c. Reproduction - Mitosis, Meiosis, Pollens