

Syllabus for Intermediate Science Bee

Source for Syllabus - <http://www.harcourtschool.com/> , <http://coreknowledge.org/CK/about/3-5glance.htm>

<u>Subject</u>	<u>Topic</u>	<u>Sub-topic</u>	<u>Detail / Expectation / Science Vocabulary</u>
Earth & Space	Geology	Landforms	Bay; Cape; Cliff; Lagoon; Atoll; Canyon; Fjord; Plain; Mountain; Valley; Sinkhole; Butte; Mesa; Plateau; Oasis; Marsh; Reef; Savanna; Swamp;
Earth & Space	Geology	Earthquakes & Volcanos	Layers of Earth; Core; Mantle; Crust; Bedrock; Seismograph; Richter scale; Formation; Fault; Fracture; San Andreas Fault; Strike Slip Fault; Epicenter; Lava; Magma; Crater; Shield Volcano; Cinder cone; Composite; Lava flow; Examples; Secondary Succession;
Earth & Space	Geology	Rocks, Fossils and Minerals	Igneous; Sedimentary; Metamorphic; Weathering; Erosion; Petrified Wood; Heat & Pressure; Shale; Slate; Schist; Gneiss; Fossil Fuels; Renewable Energy; Coal; Peat; Lignite; Bituminous Coal; Anthracite; Petroleum; Fossils Formation; Fossil Record; Index Fossil; Examples of Fossils;
Earth & Space	Oceans	Ocean	Continental Shelf; Continental Slope; Continental Rise; Abyssal Plain; Trench; Seafloor Spreading; Mid-ocean Ridges; Life forms; Low Tide; High Tide; Spring Tide; Neap Tide;
Earth & Space	Meteorology	Weather	Air mass; Cold Front; Warm Front; Land Breeze; Hurricanes & Tornados; Eye; Eye-wall; Tsunami; Landslide; Avalanche; Blizzards; Sleet; Sandstorm; Waterspout; Water Cycle; Evaporation; Condensation; Precipitation; Weather vs Climate; Runoff; Groundwater; Transpiration; Cirrus; Stratus; Cumulus; Tropical; Temperate; Polar; Latitude vs Climate;
Earth & Space	Meteorology	Weather Measurement	Thermometer; Barometer; Atmospheric pressure; Humidity; Hygrometer; Wind Vane; Anemometer; Storm prediction;
Earth & Space	Environment	Ecology	Ecosystems; Change in Ecosystems; Non-living Factors; Soil; Topsoil; Humus; Pollution; Food Chain; Food Web; Animals & Plants in Biomes; Hot & Cold Deserts; Tundra; Taiga; Rainforests; Grassland; Wetlands; Oceans; Biotic; Abiotic; Producer; Consumers; Decomposer; Herbivore; Carnivore; Omnivore; Food Pyramid vs Energy Pyramid;
Earth & Space	Environment	Pollution	Groundwater Pollution; Silt; Litter; Fertilizers; Chemicals; Oils; Acid Rain; Global warming; Ozone;
Earth & Space	Environment	Conservation	Solid Waste Management; Landfills; Recycling; Reuse; Reduce;
Earth & Space	Astronomy	Solar System	Main Features of Planets; Earth's Tilt & Seasons; Rotation & Revolution; Comets; Halley's Comet; Asteroids; Meteoroids & Meteors; Axis; Apparent Motion; Orbit; Seasons; Lunar Phases -New Moon; Waning Crescent; Third Quarter; Waning Gibbous; Full Moon; Waxing Gibbous; First Quarter; Waxing Crescent; Lunar Eclipse; Solar Eclipse;
Earth & Space	Astronomy	Space Exploration	Milky Way; Galaxies; Constellations; Ursa Major; Canis Major; Orion; Pegasus; Space Exploration; Telescope; Satellites; Probes; Hubble Space; Light Year; Protostar; Halo;
Life Science	Life's Diversity	Classification	Kingdoms; Vertebrates; Invertebrates; Major Classes; Exoskeleton; Endoskeleton; Cold-blooded; Warm-blooded; Examples;
Life Science	Life's Diversity	Animals	Metamorphosis - Complete; Incomplete; Egg; Larva; Pupa; Nymph; Tadpole; Young; Adult; Insect Body Parts; Thorax; Abdomen; Head; Antennae; Wings; Form & Function; Microorganism; Microscope; Mold; Fungi; Protists; Bacteria; Unicellular; Multicellular; Budding; Regeneration; Clone; Trait;
Life Science	Life's Diversity	Adaptation & Behavior	Learned Behavior; Reflex Action; Stimulus & Response; Camouflage; Mimicry; Animal migration; Monarch Butterfly; Artic Terns; Grey Whales; Hibernation; Adaptions to Desert; Adaptations to Extreme Cold; Innate Behavior; Instinct;
Life Science	Life's Diversity	Plants	Vascular Plants; Flowering Plants; Phloem; Xylem; Transporting in Vessels; Transpiration; Photosynthesis; CO2; Oxygen; Water; Sugar; Stoma; Sepals; Petals; Stigma; Style; Anther; Pollen; Ovary; Ovule; Pollination; Fertilization; Germination; Fruits; Seeds; Fern Life Cycle; Sporophytes; Gametophytes; Spores; Stimulus; Tropism; Tap Root; Fibrous Root;
Life Science	Cell Life	Cell Structure & Function	Plant versus Animal Cells; Cell Wall & Membrane; Cytoplasm; Nucleus; Mitochondria; Ribosomes; Chloroplasts; Vacuole; Mitosis; Chromosomes; Spindle;
Life Science	Human Body	Major Systems	Blood components; Circulatory System; Heart; Artery; Vein; Blood flow; Blood Clotting; Respiratory System; Brain; Nerves; Parts of Eye; Parts of Ear; Taste Buds; Skeletal System; Digestive System; Adolescence and Puberty; Reproductive Sytem; Endocrine System; Glands; Food Pyramid; Proteins; Carbohydrates; Fats; Vitamins; Minerals; Common Human Diseases;
Life Science	Ecology	Biomes	Features of Biomes; Tundra; Taiga; Temperate Deciduous Forest; Grasslands; Tropical Rain Forest; Desert; Freshwater Ecosystem; Wetlands; Habitat; Competition; Population; Community; Ecosystem; Predator; Prey; Endangered Species; Extinct Species;

Physical Science	Matter	Physical & Chemical Properties	Physical vs Chemical Properties; Metals; Non-metals; Carbon; Graphite vs Diamond; Hardness scale; Conductivity; Luster; Streak; Combustibility; Density; Bouyancy; Weight
Physical Science	Matter	States and Change	Solid; Liquid; Gas; Molecular changes; Melting; Boiling; Freezing; Condensation; Sublimation; Temperature & Phase; Density of Molecules;
Physical Science	Matter	Chemical composition	Atoms; Proton; Neutron; Electron; Orbit; Shell; Periodic Table; Compounds; Mixtures; Solutions; Suspensions; Colloids;
Physical Science	Energy	Energy Conversions	Heat and Water Cycle; Heat & Phase change; Molecules in Motion; Thermal to Kinetic; Freezing of Water; Ice Wedging; Conservation of Energy; Kinetic vs Potential; Steam Engine; Hybrid Car; Solar energy; Geothermal energy; Hydroelectric Power;
Physical Science	Energy	Electricity & Magnetism	Closed circuits; Open Circuits; Short circuit; Static electricity; Switch; Electrons; Current; Electromagnet; Battery; Series; Parallel; Direct Current; Electromagnets; Discharge; Voltage; Resistance; Pole; Repel; Magnetic Attraction; Magnetic Field; Aurora; Applications of Electromagnet;
Physical Science	Energy	Light Energy	Basic Characteristics; Speed; Measurement Units; Reflection; Refraction; Diffraction; Interference; Kaleidoscope; Mirror; Prism; Camera; Microscope; Telescope; Laser; Opaque; Transparent; Translucent; Magnification; Concave Lens; Convex Lens; Absorption;
Physical Science	Energy	Sound Energy	Vibration; Sound conductivity; Medium; Pitch; Loudness; Frequency; Amplitude;
Physical Science	Force & Motion	Simple Machines	Applications; Lever; Gears; Wheel & Axle; Inclined Plane; Effort & Load; Fulcrum; Screw; Mechanical Advantage;
Physical Science	Force & Motion	Motion	Force; Acceleration; Mass; Velocity; Distance; Time; Rate of Change; Friction; Inertia; Position;
Science Inquiry	Science Biographies	Physical Sciences	Isaac Newton; Thomas Edison; James Watt; Michael Faraday; Graham Bell; Wright brothers; Henry Ford; Guglielmo Marconi; Enrico Fermi; Charles Babbage
Science Inquiry	Science Biographies	Life Sciences	Charles Darwin; Louis Pasteur; Anton Leeuwenhoek; Jane Goodall; Jonas Salk; George Washington Carver; Barbara McClintock; Albert Einstein; Neils Bohr; C. V. Raman; S. Chandrashekar;
Science Inquiry	Scientific Method	Scientific Method	Dependent Variable; Independent variable; Control variable; Hypothesis; Observation; Gathering Data; Reaching Conclusions; Inference;
Science Inquiry	Measurement	Measurement	Measuring; Estimating; Organize data; Mass; Length; Temperature; Volume; SI System; Weight; Force; Rate; Line Graph; Bar Graph; Circle Graph; Pictograph;
Science Inquiry	Measurement	Measurement Units	Distance; Mass; Weight; Volume; Force; Temperature; Voltage; MKS System (SI System - Meter, Kilogram, Second); CGS System (Centimeter, Gram, Second) ; FPS System (Foot, Pound, Second);
