

Science

What your child learns in science, Kindergarten through Grade 12

	EARTH & SPACE	LIFE SCIENCE	PHYSICAL SCIENCE	ENGINEERING & DESIGN
KINDERGARTEN	Plant and animal homes ♦ Weather patterns	Plant and animal needs	Sunlight and warmth ♦ Pushes and pulls ♦ Testing designs	—
GRADE 1	Sun, moon and stars ♦ Changing daylight	Parents and offspring ♦ Copying nature	Sound and vibrations ♦ Light and seeing ♦ Blocking light	—
GRADE 2	Sun, moon and star cycles ♦ Land and water shapes	Living things nearby ♦ Plant growth	Sorting materials ♦ Best material for a job ♦ Taking things apart	Spotting problems ♦ Shape and function ♦ Comparing designs
GRADE 3	Weather charts ♦ World climates ♦ Fixing environmental problems	Animal groups ♦ Inherited traits ♦ Life cycles ♦ Fossils ♦ Survival differences ♦ Changing habitats	Balanced and unbalanced forces ♦ Predicting motion ♦ Magnets and static	Defining a problem ♦ Comparing solutions ♦ Fair tests
GRADE 4	Energy and resources ♦ Natural hazards ♦ Rock layers ♦ Sun, moon and star paths	Body parts and survival ♦ Senses and the brain	Speed and energy ♦ Energy transfer ♦ Collisions ♦ Waves	—
GRADE 5	Star brightness ♦ Shadows and sky patterns ♦ Protecting Earth's resources	Matter cycles ♦ How plants grow	Tiny particles of matter ♦ Dissolving rates ♦ Identify materials ♦ Gravity pulls down	—
GRADE 6	Water on Earth ♦ Earth-sun-moon system ♦ Causes of seasons	Cells ♦ Body systems ♦ Ecosystem interactions ♦ Energy and matter flow ♦ Biodiversity	Thermal energy transfer ♦ Forces and motion ♦ Waves and signals	Define design problems ♦ Compare solutions ♦ Test and improve designs
GRADE 7	Earth-sun-moon system ♦ Solar system scale	Cell function ♦ Photosynthesis and respiration ♦ Body systems	Chemical reactions ♦ Synthetic materials ♦ Electromagnetism	—
GRADE 8	Earth-sun-moon system ♦ Gravity in space ♦ Changing Earth's surface	Fossil record ♦ Cell theory ♦ Growth factors	Kinetic energy ♦ Energy transfer ♦ Electromagnetism	—
GRADE 9	—	Natural selection ♦ Ecosystem cycles ♦ Body organization ♦ DNA and heredity	—	—
GRADE 10	—	—	Chemical reactions ♦ Periodic table patterns ♦ Electric forces ♦ Nuclear changes	—
GRADE 11	—	—	Energy conversion ♦ Newton's laws and gravity ♦ Nuclear processes ♦ Electromagnetic waves	Global challenge criteria ♦ Design complex solutions ♦ Evaluate trade-offs ♦ Computer simulation
GRADE 12	Climate and carbon ♦ Human impact ♦ Plate tectonics ♦ Stars and orbits ♦ Earth systems and weather	—	—	—