

ingridscience student workshop selections

	Topics	Activity selections (can be adapted to any grade)
Biology	Adaptations, Biodiversity, Organ systems and Evolution	Live worm or wood bug study Adaptations: beaks, wings, fur/feathers or Hibernation Sensing activities on hearing, vision Camouflage challenge (optionally outdoors) using clay colours Skeletal system study with real bones Nervous system lesson with data collection Model natural selection with lego creatures or a running game
	Life cycles, Food webs and Sustainable food sources	Plant activities on pollination, growth and seeds Model a food web and the resilience of biodiversity Use a real deer skeleton to explore life cycles or food webs At the beach/woods, or with pond water, discover living things and build a local food web Model sustainable Coast Salish food harvesting methods: fish traps and clam baskets
Chemistry	Properties and molecular structure of materials	Experiment with properties of materials: stickiness, buoyancy, elasticity, conductivity Make popcorn and learn how water molecules changing state makes it pop Learn about Coast Salish use of materials for weaving or plant dyes Crystal structure stations
	Mixtures, Solutions, Heterogenous mixtures, Physical and chemical changes	Freely mix solids and liquids to discover physical changes and chemical reactions Design and test glues using household materials Show chemical reactions with Elephant's toothpaste or rockets Make a soda drink and model the chemical reaction Separate heterogeneous mixtures Make a colloid: butter or ooblek Make Epsom salt crystal paintings to study state change or formation and separation of solutions Separate a solution with chromatography Study pH with red cabbage dye
Physics	Motion, Forces, Simple machines and Newton's Laws	Make jumping or balancing toys to explore types of forces Build and test bridges to explore the balance of forces in their structure Focus on specific forces: friction, magnetic force, air or water resistance Feel the trade of force over distance with levers Free play to build pulley devices Newton's Laws with catapults/rockets/paper airplanes
	Energy forms, Energy transformation and conservation	Build a noise maker and model how sound travels Free-play light stations Explore heat radiation and conduction with heat sensitive sheets Make beautiful candle heat convection spinners Build catapults or jumping toys to understand chains of forces or transfer of energy Design roller coasters for marbles and discuss energy transformations Freely experiment with wires, lights and batteries to make electric circuits Build an electromagnet Use motors to make fans, spin art and buzz saws
Earth/Space	Weather, Landscapes and Natural cycles	Recreate lightning, frost, rainbows Model why we have seasons Measure temperature and wind speed Design a rain gauge mechanism (older students) Set up a small-scale water cycle Watch a sand-and-water erosion demonstration Build play dough mountain shapes from contour maps Model sedimentary rock formation and uplifting
	Sustainable practices	Design wind spinners and understand design elements of wind turbines Build solar panels/wind turbines into circuits to show renewable electricity Use molecule models to understand CO ₂ emissions Model ocean acidification Model an oil spill clean-up
	Our place in the Universe	Model the Moon phases and the appearance of the Moon Construct a scale model of either the Solar System or the Earth and Moon's orbits Model Gravity assist guiding space probes across the solar system or a spacecraft to the Moon

or request any K-7 topic
or activity ideas for your student group

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