

# ingridscience student workshop selections

	Topics	Activity selections (can be adapted to any grade)
<b>Biology</b>	<b>Adaptations, Biodiversity and Evolution</b>	Live worm or wood bug study   Adaptation activities: teeth, beaks, wings, fur, feathers   Sensing activities on hearing, touch or vision   Skeletal system lesson with real bones   Nervous system lesson with data collection   Model natural selection using lego or with a running game
	<b>Life cycles, Food webs and Sustainable food sources</b>	Plant activities on pollination, germination and growth, or seeds   Use a real deer skeleton to explore life cycles and food webs   At the beach or using pond water, discover living things and construct a local food web   Model sustainable Coast Salish food harvesting methods: fish traps and clam baskets
<b>Chemistry</b>	<b>Properties and molecular structure of materials</b>	Experiment with properties of materials: stickiness, buoyancy, elasticity, conductivity   Make popcorn and learn how water changing state makes it pop   Learn about Coast Salish use of materials for weaving or plant dyes   Investigate crystal structure through crystal activity stations
	<b>Mixtures, Solutions, Heterogenous mixtures, Physical and chemical changes</b>	Freely mix solids and liquids to discover physical changes and chemical reactions   Design and test glues using household materials   Make Epsom salt crystal paintings to study state changes or solutions   Set off a rocket or make Elephant's toothpaste and model the chemical reaction   Make a soda drink and model the chemical reaction   Separate a heterogeneous mixture   Make a colloid: butter or ooblek
<b>Physics</b>	<b>Motion, Forces, Simple machines and Newton's Laws</b>	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/paper airplanes/rockets
	<b>Energy forms, Energy transformation and conservation</b>	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
<b>Earth/Space</b>	<b>Weather, Landscapes and Natural cycles</b>	Recreate lightning, frost and rainbows   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
	<b>Sustainable practices</b>	Design a wind spinner and understand its key design elements   Work a wind turbine   Build a solar panel into a circuit   Use molecule models to understand CO <sub>2</sub> emissions   Model ocean acidification   Model an oil spill clean-up
	<b>Our place in the Universe</b>	Model the Moon phases and why we have Seasons (note: need a dark space)   Construct a scale model of either the Solar System or the Earth and Moon's orbits   Model Gravity assist guiding probes across the solar system (older students)

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

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