

## Alaska K-12 Science Curricular Initiative (AKSCI) Curriculum Map

Year	Physical Science	Earth Science	Life Science	
Grades K-2	1	<b>Properties of Matter</b> <ol style="list-style-type: none"> <li>1. Shape, Color and Size</li> <li>2. What Can You Do with Shoes, Cereal and Money?</li> <li>3. Sorting Snowflakes</li> <li>4. Sorting Hats</li> <li>5. Mystery Containers</li> <li>6. Disappearing Acts: Which Substances Dissolve in Water?</li> <li>7. Sink or Float?</li> <li>8. What is Happening Here?</li> <li>9. Air Matters</li> <li>10. Investigating Matter: Cool Balloons</li> <li>11. Just Cool It!</li> </ol>	<b>Water Cycle, Rock Cycle, Weather</b> <ol style="list-style-type: none"> <li>1. Sorting Rocks</li> <li>2. Water Goes Some Place Else</li> <li>3. Rain, Rain, Go Away!</li> <li>4. Dan the Drip</li> <li>5. Mini Water Cycle</li> <li>6. Clouds</li> <li>7. Cloud Forecast</li> <li>8. Make a Snowflake</li> <li>9. Elders Predict Snow</li> <li>10. Seasons</li> <li>11. Oral History</li> <li>12. Sink, Tilt, or Stand?</li> <li>13. Fancy Rocks</li> <li>14. Rock Cookie</li> <li>15. Conglomerates: More Than Just a Pretty Rock</li> </ol>	<b>Biodiversity</b> <ol style="list-style-type: none"> <li>1. Backyard Water Discovery</li> <li>2. Living and Nonliving Things in the Water</li> <li>3. Mystical Magical Soil</li> <li>4. What Plants Need to Grow</li> <li>5. Notice the Plants and Animals</li> <li>6. Meet a Plant</li> <li>7. Wetland Plants</li> <li>8. Plants and Animal Characteristics</li> <li>9. Plant and Animal Experts</li> <li>10. Habitats</li> <li>11. Musical Habitats</li> <li>12. Investigating Birds</li> <li>13. Insect and Amphibian Life Cycles</li> </ol>
	2	<b>Motions and Forces</b> <ol style="list-style-type: none"> <li>1. Creepy Mover</li> <li>2. Push Me, Pull You</li> <li>3. Magnetic Exploration</li> <li>4. Moving Magnets</li> <li>5. Toys in Motion</li> <li>6. Sound Around You</li> </ol>	<b>Forces that Shape the Earth</b> <ol style="list-style-type: none"> <li>1. Growth of a River</li> <li>2. Identifying and Locating Lakes and Rivers</li> <li>3. Mountains and Valleys</li> <li>4. Islands</li> <li>5. Weighing Rocks</li> <li>6. Sifting Sand</li> <li>7. Are Your Rocks Attractive?</li> <li>8. Rockhounds Rock!</li> <li>9. Rocky Bits</li> <li>10. Rockin' on the Inside</li> <li>11. Shake, Rattle and Roll</li> <li>12. Slip Slidin' Away</li> </ol>	<b>Interdependence in Ecosystems</b> <ol style="list-style-type: none"> <li>1. Simple Food Chain</li> <li>2. What's for Dinner?</li> <li>3. Survival Links</li> <li>4. Can Do!</li> <li>5. Home is a Tree</li> <li>6. Wood in Our Lives</li> <li>7. Taking Care of the Earth</li> </ol>
	3	<b>Energy Transfer and Transformation</b> <ol style="list-style-type: none"> <li>1. S'mores</li> <li>2. Property Changes in Melting Snow</li> <li>3. Keep Those Hands Warm</li> <li>4. My Coat is Warmer Than Your Coat</li> <li>5. Animal Body Coverings</li> <li>6. Personal Observations</li> </ol>	<b>Solar System and Universe</b> <ol style="list-style-type: none"> <li>1. Close Up and Far Away</li> <li>2. Zoom Out</li> <li>3. Day and Night</li> <li>4. Why the Moon Looks Different</li> <li>5. Stars in the Sky</li> </ol>	<b>Adaptations and Changes Over Time</b> <ol style="list-style-type: none"> <li>1. Flower Flip Book</li> <li>2. Are You Me?</li> <li>3. How do You Hide?</li> <li>4. Hardworking Beaks</li> <li>5. You and Your Parents</li> <li>6. Distant Thunder</li> <li>7. Animals and Plants in the Past</li> </ol>

# Grades 3-5

Year	Physical Science	Earth Science	Life Science
1	<b>Properties of Matter</b> <ol style="list-style-type: none"> <li>1. Touch and Discover</li> <li>2. Wild Bunches</li> <li>3. Am I Big and Blue or Small and Yellow?</li> <li>4. Classy Soil</li> <li>5. It's Matter, It Matters</li> <li>6. You're in Hot Water!</li> <li>7. Soapy Solids</li> <li>8. Oobleck</li> </ol>	<b>Water Cycle, Rock Cycle, Weather</b> <ol style="list-style-type: none"> <li>1. Weather Observation Journal</li> <li>2. Weather Proverbs</li> <li>3. Build a Thermometer</li> <li>4. Measuring Temperature</li> <li>5. Build an Anemometer</li> <li>6. Measuring Wind Speed</li> <li>7. Snowfall</li> <li>8. Clouds as Art: Torn Paper Landscape</li> <li>9. Where Does My Water Come From?</li> <li>10. Where Does Our Water Go?</li> <li>11. Rocking on the River</li> <li>12. My Rocks Rock</li> <li>13. Waving Goodbye to Rocks</li> <li>14. Soil Shake Up</li> </ol>	<b>Biodiversity</b> <ol style="list-style-type: none"> <li>1. It's Alive! Or is it?</li> <li>2. Worming Your Way Through the Soil</li> <li>3. Sorting Alaska's Animals and Plants</li> <li>4. Five Kingdoms but No King</li> <li>5. What Makes an Ecosystem?</li> <li>6. Plan Your Tundra Plant</li> <li>7. Draw Your Tundra Animal</li> <li>8. Life in the Tundra Soil</li> <li>9. Investigating Monerans and Protists</li> <li>10. Investigating Fungi</li> <li>11. Di's Story</li> <li>12. A Salmon's Life Journey</li> <li>13. Fish Finders</li> <li>14. Make Your Own Watershed</li> <li>15. Cells are Building Blocks</li> <li>16. "Egg"-stra Special Protection</li> </ol>
2	<b>Motions and Forces</b> <ol style="list-style-type: none"> <li>1. A-mazing Motion</li> <li>2. Catapulting Cotton</li> <li>3. Crash Dummies</li> <li>4. Dropping the Ball</li> <li>5. Magic Movers</li> <li>6. Magnetic Force</li> <li>7. Invisible Force</li> </ol>	<b>Forces that Shape the Earth</b> <ol style="list-style-type: none"> <li>1. Vanishing Coast, Erosion</li> <li>2. Rills and Thrills: Erosion Affects Me</li> <li>3. Identifying and Locating Glaciers</li> <li>4. Fluvial Erosion</li> <li>5. River System</li> <li>6. Where is Our Land Going?</li> <li>7. Cave Formation</li> <li>8. What's on Your Plate?</li> <li>9. Born of Fire</li> <li>10. An Island Story</li> <li>11. Island Mobile</li> <li>12. Look Out, Lahars!</li> <li>13. Volcanoes and Tsunamis</li> <li>14. Earthquakes and Tsunamis</li> <li>15. Landslide!</li> <li>16. Water, Water Everywhere</li> </ol>	<b>Interdependence in Ecosystems</b> <ol style="list-style-type: none"> <li>1. Spinning a Yarn About Ecosystems</li> <li>2. Who Eats Whom?</li> <li>3. Ghost Forest</li> <li>4. The Missing Sea Otters</li> <li>5. How do Scientists Learn About Ecosystems?</li> <li>6. Interconnections</li> <li>7. Our Nearby Ecosystem</li> </ol>
3	<b>Energy Transfer and Transformation</b> <ol style="list-style-type: none"> <li>1. Permafrost, Permanently Frozen Ground</li> <li>2. Frost Depth</li> <li>3. Snow Blanket</li> <li>4. Keep it Warm</li> <li>5. The Great Race</li> <li>6. Melt Away</li> <li>7. Drinkable Snow</li> <li>8. Evaporation</li> <li>9. Physical or Chemical?</li> <li>10. Making Electricity</li> </ol>	<b>Solar System and Universe</b> <ol style="list-style-type: none"> <li>1. Keeping Time With Earth's Motion</li> <li>2. Investigating Heat Energy</li> <li>3. Seasons and Day Length</li> <li>4. Sun in the Watercycle</li> <li>5. How Oceans Affect Climate</li> <li>6. Using Your Senses</li> <li>7. The Amazing Moon and its Phases</li> <li>8. A Sun/Earth Comparison</li> <li>9. Stars and the Sun</li> <li>10. Planet Properties</li> </ol>	<b>Adaptations and Changes Over Time</b> <ol style="list-style-type: none"> <li>1. Eye of the Beholder</li> <li>2. Investigating Plants</li> <li>3. Investigating Animals in the Soil</li> <li>4. Investigating Mammals</li> <li>5. Blubber Mitts</li> <li>6. Heredity or Not?</li> <li>7. Fossils</li> </ol>

# Grades 6-8

Year	Physical Science	Earth Science	Life Science
1	<b>Properties of Matter</b> <ol style="list-style-type: none"> <li>Gumdrop Molecules</li> <li>Matter in Four Acts</li> <li>Gases and Their Properties</li> <li>Plasma: It Matters</li> <li>Spectral Fingerprints</li> <li>How Dense Can They Be?</li> <li>Density Separation of Local Sediments</li> <li>Melt Down</li> <li>Permafrost</li> <li>The Great Heat Escape</li> </ol>	<b>Water Cycle, Rock Cycle, Weather</b> <ol style="list-style-type: none"> <li>Understanding Igneous, Metamorphic and Sedimentary Rocks</li> <li>Rocks and the Rock Cycle Pocket Guide</li> <li>Erosion, Transport and Deposition of Different Sediments Changing Earth's Surface</li> <li>Polygons, Pingos and Thermokarst, Oh My!</li> <li>Keep it Active</li> <li>Soil Permeability</li> <li>Native Language Ties</li> <li>The Beaufort Scale: A Local Model</li> <li>How Fast is the Wind?</li> <li>Hydrologic Scavenger Hunt</li> <li>Cloud Types</li> <li>Convection Connection</li> <li>Local Hydrologic Cycle</li> </ol>	<b>Biodiversity</b> <ol style="list-style-type: none"> <li>Mnemonic Memory Taxonomy</li> <li>Vertebrate Matching Game</li> <li>Dichotomous Keys</li> <li>Tree Identification</li> <li>Make a Tasty Leaf</li> <li>Cells Build Tissues, Organs and Body Systems</li> <li>A Study of Organs</li> <li>Living Systems</li> <li>Migration Cycles</li> </ol>
2	<b>Motions and Forces</b> <ol style="list-style-type: none"> <li>Magnetic Mapping</li> <li>Interactions Between Charges</li> <li>Complete the Circuit</li> <li>Slinky Tsunami</li> <li>Snow Cover and Satellites</li> <li>Tephra Catapults</li> <li>Circular Motion</li> </ol>	<b>Forces that Shape the Earth</b> <ol style="list-style-type: none"> <li>Convection Current</li> <li>Scale Drawing of Earth</li> <li>Sliding Plates</li> <li>Layers as Clues</li> <li>Layering the Soil</li> <li>Locating the Epicenter</li> <li>Finding Fairweather Fault</li> <li>Interpreting Topographic Maps</li> <li>Why Should I Care About Soil Erosion?</li> </ol>	<b>Interdependence in Ecosystems</b> <ol style="list-style-type: none"> <li>Follow the Food Chain</li> <li>Tundra Food Chain Puzzles</li> <li>Tundra Food Chain Relay</li> <li>Energy Flow in an Alaska Wetland</li> <li>Take a Deep Breath</li> <li>Collecting Compost</li> <li>Ecosystem Scavenger Hunt</li> </ol>
3	<b>Energy Transfer and Transformation</b> <ol style="list-style-type: none"> <li>Snow Pennies</li> <li>Aurora Misconceptions: Rainbows and Aurora</li> <li>Changing Forms of Energy</li> <li>Colors Here and There</li> <li>Water: Endless Energy Source</li> <li>Community Energy Use</li> <li>Melting Ice: Energy Transfer</li> <li>Changing Speeds, Changing States</li> </ol>	<b>Solar System and Universe</b> <ol style="list-style-type: none"> <li>The Reason for Seasons</li> <li>Seasons and Ecliptic Simulator</li> <li>Modeling the Solar System</li> <li>Planet "Geo"pardy</li> <li>What's All the Buzz About Light Years?</li> <li>How Far is That Star?</li> <li>Viewing Sunspots</li> <li>Star Light Star Bright, Really Big Star I See Tonight</li> <li>Reflecting Light</li> <li>Aurora Recipe</li> </ol>	<b>Adaptations and Changes Over Time</b> <ol style="list-style-type: none"> <li>Sexual and Asexual Reproduction</li> <li>Tundra Adaptations</li> <li>Why do They do That?</li> <li>What Happens to Genes During Sexual Reproduction?</li> <li>Mad Mutation</li> </ol>

# Grades 9-12

Year	Physical Science	Earth Science	Life Science
1	<b>Properties of Matter</b> <ol style="list-style-type: none"> <li>1. Introduction to the Periodic Table</li> <li>2. Recreate the Periodic Table</li> <li>3. Determining Metals and Nonmetals From the Periodic Table</li> <li>4. What's Up With Atoms?</li> <li>5. Structure of the Atom</li> <li>6. Atomic Structure</li> <li>7. Chemical Reaction in a Baggy</li> <li>8. Atom Interactions</li> <li>9. Catch Some Rays</li> </ol>	<b>Water Cycle, Rock Cycle, Weather</b> <ol style="list-style-type: none"> <li>1. Rocks Rock!</li> <li>2. Create a Rock Cycle</li> <li>3. Every Rock has a Story</li> <li>4. Visualizing Plate Movement</li> <li>5. Interpreting Rock Layers</li> <li>6. The Shaping of the Arctic</li> <li>7. Acid Rain</li> <li>8. Swept Away: My Gain, Your Loss</li> <li>9. Traveling Carbon Cycle</li> <li>10. Elder Insights</li> <li>11. Older Than Blue Babe</li> <li>12. Global Climate Change</li> <li>13. Graphing Climate Change</li> <li>14. Who Left Carbon Footprints in my Greenhouse?</li> </ol>	<b>Biodiversity</b> <ol style="list-style-type: none"> <li>1. All Systems Go</li> <li>2. Breathe Deep</li> <li>3. Tour of the Immune System</li> <li>4. Learning and Living</li> </ol>
2	<b>Motions and Forces</b> <ol style="list-style-type: none"> <li>1. Understanding the Gravity of the Situation</li> <li>2. Washer Launcher</li> <li>3. Balloon Rockets</li> <li>4. Make an Electromagnet</li> <li>5. Moving Charges, Making Magnets</li> <li>6. Light Reflection</li> <li>7. Electromagnetic Waves and Climate</li> <li>8. Making Predictions About Invisible Forces</li> <li>9. Wave Behavior</li> <li>10. Interactions of Waves</li> </ol>	<b>Forces that Shape the Earth</b> <ol style="list-style-type: none"> <li>1. Always Frozen</li> <li>2. In a Slump</li> <li>3. Ice Water: Rivers and Permafrost</li> <li>4. Meander Curve</li> <li>5. The Case of the Disappearing Lakes</li> <li>6. Plate Tectonics Scavenger Hunt</li> <li>7. Surface Features &amp; Plate Tectonics</li> <li>8. Plate Tectonics and Ecological Connections</li> </ol>	<b>Interdependence in Ecosystems</b> <ol style="list-style-type: none"> <li>1. Mineral Cycling Through the Ecosystem</li> <li>2. Introduction to the Carbon Cycle</li> <li>3. Methane: The Other Greenhouse Gas</li> <li>4. Population Explosion</li> <li>5. Graphic Populations</li> <li>6. Impacts of Climate Change on Caribou</li> <li>7. Ecology Puzzlers</li> <li>8. Ecosystem Partners</li> <li>9. Fire and Frost: Interactions of Wildfire and Permafrost</li> <li>10. Carbon Footprint</li> <li>11. Mitigation and Adaptation</li> </ol>
3	<b>Energy Transfer and Transformation</b> <ol style="list-style-type: none"> <li>1. Introduction to Energy Transfer</li> <li>2. Trees as a Vehicle for Energy Transfer</li> <li>3. Fish Camp Packaging</li> <li>4. A Blanket of Snow</li> <li>5. Pinniped Beach Resort</li> <li>6. Albedo</li> <li>7. Architecture on Ice</li> <li>8. Endothermic and Exothermic Chemical Reactions</li> <li>9. Waste to Watts</li> <li>10. Application of Nuclear Reaction</li> <li>11. Light Me Up</li> </ol>	<b>Solar System and Universe</b> <ol style="list-style-type: none"> <li>1. Ocean Tides</li> <li>2. Tide Gauge Sleuths</li> <li>3. Native Aurora Vocabulary</li> <li>4. Magnificent Magnetospheres</li> <li>5. Aurora Ovals</li> <li>6. Speed of the Solar Wind</li> <li>7. Cause and Effect</li> <li>8. Crashing Particles Scavenger Hunt</li> <li>9. A Star is Born</li> <li>10. Explosion of a Universe</li> <li>11. Observing the Universe</li> <li>12. The Spectrum of a Star</li> </ol>	<b>Adaptations and Changes Over Time</b> <ol style="list-style-type: none"> <li>1. DNA Extraction</li> <li>2. Investigating DNA</li> <li>3. Probability of Traits</li> <li>4. Variation and Selection</li> <li>5. Researching Natural Selection</li> <li>6. Fossil Hunt</li> <li>7. Issues in Genetics</li> </ol>