

Grade 7 Science

Month	Topics
September	<p data-bbox="738 273 1258 346"><b>Lab Safety, Lab Equipment, Scientific Method, Graphing, Measurement</b></p> <p data-bbox="738 378 1031 409"><b>Measurement includes:</b></p> <ul data-bbox="779 409 1258 661" style="list-style-type: none"> <li>• units and prefixes (meter, liter, gram, kilo, centi, milli)</li> <li>• Meniscus and graduated cylinder</li> <li>• Ruler (cm) (mm)</li> <li>• Triple Beam Balance (g)</li> <li>• Volume <math>l \times w \times h</math> and irregular objects (<math>cm^3</math>, ml)</li> </ul> <p data-bbox="738 661 812 693"><b>Skills</b></p> <ul data-bbox="779 693 1209 840" style="list-style-type: none"> <li>• Measuring mass</li> <li>• Measuring length</li> <li>• Measuring volume</li> <li>• Measuring and calculating density</li> </ul> <p data-bbox="738 871 925 903"><b>Lab Equipment</b></p> <ul data-bbox="779 903 1047 1260" style="list-style-type: none"> <li>• Beaker</li> <li>• Triple beam balance</li> <li>• Pipette</li> <li>• Flask</li> <li>• Tongs</li> <li>• Test Tube</li> <li>• Petri dish</li> <li>• Funnel</li> <li>• Graduated cylinder</li> <li>• well-plate</li> </ul> <p data-bbox="738 1291 950 1323"><b>Scientific Method</b></p> <ul data-bbox="779 1323 1047 1438" style="list-style-type: none"> <li>• Order of basic steps</li> <li>• Scientific theory</li> <li>• Scientific law</li> </ul> <p data-bbox="738 1501 844 1533"><b>Graphing</b></p> <ul data-bbox="779 1533 1250 1648" style="list-style-type: none"> <li>• Analyzing data from a graph</li> <li>• Plotting coordinates from a data table</li> <li>• Parts of a line graph</li> </ul>

	<ul style="list-style-type: none"> <li>• Title and units of independent, dependent variable and title of the graph</li> <li>• Stating relationships</li> <li>• Locating a coordinate when one coordinate is unknown (extrapolation)</li> </ul>
<b>October</b>	<p><b>Chemistry:</b> Atoms, Periodic Table, Physical/Chemical Properties, Gases, Liquids and Solids</p> <ul style="list-style-type: none"> <li>• definitions of atom, element and compound</li> <li>• parts of the atom, charges, location (Atomic Chart and Model of an Atom)</li> <li>• Periodic Table (location of metals, nonmetals, semimetals, noble gases)</li> <li>• Identify/locate basic elements by symbol, atomic number, atomic mass, properties</li> <li>• Mixtures, Solutions and Physical and Chemical Changes</li> <li>• pH</li> <li>• Separation mixture lab</li> <li>• Physical and chemical changes, rip, tearing, grinding reacting</li> <li>• Properties of mixtures and solutions</li> <li>• Types of matter (solid, liquid, gases)</li> <li>• Homogeneous vs Heterogeneous</li> </ul>
<b>November</b>	<p><b>Geology:</b> Earth, Rocks, Fossils and Plate Tectonics</p> <ul style="list-style-type: none"> <li>• Parts of the Earth Lithosphere Hydrosphere Atmosphere Core, Mantle, crust</li> <li>• Minerals rocks and fossils</li> </ul>

	<p>Formation and identification: Sedimentary metamorphic and igneous</p> <p>Identification of minerals</p> <p>Rock cycle</p> <ul style="list-style-type: none"> <li>• Plate tectonics</li> <li>Continental drift</li> <li>Divergent, convergent, subduction, fault</li> <li>Subduction zones</li> <li>Pangea</li> <li>Fossils: Evidence of past life</li> </ul> <ul style="list-style-type: none"> <li>• Weathering and Erosion</li> </ul>
<b>December</b>	<p><b>Meteorology: Atmosphere, Climate, Weather</b></p> <ul style="list-style-type: none"> <li>• Atmosphere</li> <li>• Troposphere</li> <li>• Air pressure</li> <li>• Climate and weather</li> <li>• Low and High pressure air masses</li> <li>• Fronts</li> <li>• Severe Weather</li> <li>• Water Cycle</li> </ul>
<b>January</b>	<p><b>Astronomy: Sun, Planets, Earth and Moon</b></p> <ul style="list-style-type: none"> <li>• Review Physical Science</li>   <li>• Life Functions/Processes <ul style="list-style-type: none"> <li>-human systems overview</li> <li>-abiotic/biotic</li> </ul> </li> </ul>
<b>February</b>	<p><b>Cell Theory and Structure of cells</b></p> <p>Cell Structure and Function</p> <ul style="list-style-type: none"> <li>-Organelles</li> <li>- Plant/ Animal</li> <li>-Levels of Organization</li> <li>-Microscope Labs</li> </ul>

<b>March</b>	<ul style="list-style-type: none"> <li>• Traits, Adaptations, Sources of Variation Competition &amp; Selection, Evidence of Evolution</li> <li>• Reproduction: Mitosis, Meiosis</li> <li>• Development of Plants and Animals</li> </ul>
<b>April</b>	<p><b>Human Systems: Respiratory, Circulatory, Endocrine, Immune, Nervous System</b></p> <ul style="list-style-type: none"> <li>• Vacation</li> <li>• Digestive and Excretory</li> <li>• Reproductive</li> </ul> <p><b>Asexual: Animals and Plants</b>  <b>Sexual: Animals -gametes- fertilization-zygote</b></p> <ul style="list-style-type: none"> <li>• Internal Fertilization/External Fertilization</li> <li>• Plants- flower- pollen- pollination- seed- germination</li> </ul>
<b>May</b>	<p><b>Genes and Heredity</b></p> <ul style="list-style-type: none"> <li>• Chromosome- Gene- DNA</li> <li>• Traits-Punnett Squares</li> <li>• Pedigree Charts</li> </ul> <p><b>Evidence of Evolution-Natural Selection, Competition, Adaptations</b></p> <p><b>Ecology: Ecosystems, Biotic, Abiotic, Habitats, Niches, Biomes</b></p>

	<b>Feeding Relationships, Food Chains, Food Webs, Symbiotic Relationships</b>
<b>June</b>	<b>Material Cycles, Ecological Succession, Competition, Human Impact on Environment</b> <b>Review</b>