

**Middlesex County Public Schools Curriculum Map**

**Schedule Type:** 180 Day      **Subject:** 5th Grade Science      **School Year:** 2011-2012

Time Frame	Unit/SOLs	SOL #	Strand
<b>QTR 1</b>  <b>10 days</b> (Introduce, however, this is an ongoing SOL objective that will be covered throughout the year.)	<b>Scientific Investigations, reasoning and logic</b> Plan and conduct investigations in which: -rocks, minerals and organisms are identified using a classification key; -estimation of length, mass and volume are made; -appropriate instruments are selected and used for making quantitative observations of length, mass, volume and elapsed time; -accurate measurement are made using basic tools (thermometer, meter stick, balance, graduated cylinder); -predictions are made using patterns and simple graphical data extrapolated; -manipulated and responding variables are identified; and -understanding of the nature of science is developed and reinforced	<b>5.1</b> <b>4.1</b>	<b>Scientific Investigation Reasoning and Logic</b>
<b>28 days</b>	<b>.Interrelationships in Earth/Space Systems: Oceans</b> Investigate and understand characteristics of the ocean environment. Key concepts include: -geological characteristics (continental shelf, slope, rise) -physical characteristics (depth, salinity, major currents) -biological characteristics (ecosystems)  <b>Review:</b> -watersheds (SOL 4.8) -weather and clouds (SOL 4.6)	<b>5.6</b> <b>(4.6,4.8)</b>	<b>Interrelationships in Earth/Space Systems</b>

<p><b>QTR 2</b>  <b>29 days</b></p>	<p><b>Earth Patterns, Cycles &amp; Change</b> Investigate and understand how the earth's surface is constantly changing. Key concepts include: -the rock cycle including identification of rock types; -Earth history and fossil evidence; -the basic structure of the Earth's interior; -plate tectonics (earthquakes and volcanoes) -weathering and erosion -human impact</p> <p><b>Review:</b> -VA minerals, rocks, ores and soils (SOL 4.8) -Earth's seasons and solar systems (SOL 4.7)</p>	<p><b>5.7</b> <b>(4.8,4.7)</b></p>	<p><b>Earth Patterns, Cycles &amp; Change</b></p>
<p><b>13 days</b></p>	<p><b>Living Systems</b> Key Concepts Include: -adaptations, food webs, habitats, plant anatomy, pollination, photosynthesis, human impact</p>	<p><b>4.4, 4.5</b></p>	<p><b>Life Processes and Living Systems</b></p>
<p><b>QTR 3</b>  <b>20 days</b></p>	<p><b>Living Systems</b> Investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include: -basic cell structure and functions -kingdoms of living things -vascular and nonvascular plants -vertebrates and invertebrates</p>	<p><b>5.5</b></p>	<p>Living Systems</p>

	<p><b>Review:</b> -VA animals and plants (SOL 4.8)</p>		
22 days	<p><b>Matter</b> Investigate and understand that matter is anything that has mass, takes up space and occurs as a solid, liquid or gas. Key concepts include: -atoms, elements, molecules and compounds -mixtures including solutions; and -the effect of heat on the states of matter</p>	5.4	Matter
QTR 4 25 days	<p><b>Force, Motion &amp; Energy</b> Investigate and understand how <i>sound</i> is transmitted and is used as a means of communication. Key concepts include: -frequency, waves, wavelength, vibrations; -the ability of different media (solids, liquids, gases) to transmit sound; and -uses and applications (voice, sonar, animal sounds and musical instruments). Investigate and understand basic characteristics of <i>visible light</i> and how it behaves. Key concepts include: -the visible spectrum and light waves; -refraction of light through water and prisms; -reflection of light from reflective surfaces (mirrors); -opaque, transparent and translucent; and -historical contributions in understanding light</p> <p><b>Review:</b> -moving object (SOL 4.2) -Electricity, circuits, and magnets (SOL 5.3)</p>	5.2,5.3 (4.2,4.3)	Force, Motion & Energy

<b>33 days</b>	<b>Review all SOLs 4<sup>th</sup> &amp; 5<sup>th</sup> grades</b> These review days allow for: - 4 review days for QTR 1 -3 review days for QTR 2 -3 review days for QTR 3 -All remaining review for Spring SOL testing		