

Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Lesson Title	SOL	Objectives
11 is Enough	Science 6.1, 6.4	Recognize that 11 major elements make up the majority of living things
A Sweet Lesson	Science 6.1, LS.1, LS.12 English 6.6, 6.7, 7.7, 7.8, 7.9, 8.6, 8.7, 8.8 Civics CE.1, CE.11, CE.12	Develop an understanding of economic concepts as they apply to the interdependence and decision making of individuals, households, businesses, and governments
Accordion Book	English K.11, K.12, 1.12, 1.13, 2.11, 2.12, 2.13, 3.8, 3.9, 3.10, 4.7, 4.8, 4.9, 5.7, 5.8, 5.9, 6.6, 7.8, 8.7	Create an foldable book with the purpose of demonstrating understanding of a subject, write with the purpose of describing, informing, and explaining, organize their writing to convey an understanding of a central subject
All About Cycles	Science 6.3, 6.8, 6.9, LS.6, LS.7, LS.8, LS.11,LS.12	Develop an understanding that many different cycles operate in the environment and that cycles are continuous and repetitive
Biodegradable Plastics	Science 6.1, 6.6, 6.7, 6.9, LS.4, LS.12 Math 6.9	Provide examples of the states of matter and explain that corn may be used as a renewable resource
Bitter Water Blues	Science 6.1, 6.5, 6.7, 6.9, LS.1, LS.11, LS.12 English 6.1, 7.1 Social Studies USII.2	Observe how ground water transports pollutants, and simulate ground water testing to discover the source of contamination
Bread in a Bag	Science LS.1, LS.12, PS.2 English 6.1, 7.1 Social Studies CE.1	Learn how processing adds value to agricultural products by making bread in a bag



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Bread Winner	<p>Science 6.1, 6.9, LS.1, LS.12, LS.14</p> <p>English 6.1, 6.5, 6.6, 7.1,7.8</p> <p>Social Studies CE.1</p>	Conduct a scientific experiment in which the students will identify the steps of the scientific method and complete an experiment to prove a hypothesis
Career Explorer	<p>Social Studies CE.12</p> <p>English 6.1, 6.2, 6.5, 6.6, 6.7, 7.1, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.6, 8.7, 8.8</p>	To research information on two agricultural careers important to animals care and to write and answer interview questions relating to those careers
Clean it Up!	<p>Science 6.1, 6.5, 6.7, 6.9, LS.1, LS.7, LS.8, LS.12</p>	Explain reasons for water quality degradation, understand challenges in determining water quality standards, and provide examples of best management practices in water filtering
Dirty Water	<p>Science 6.5, 6.7</p> <p>English 6.6, 6.7, 7.8, 7.9</p>	Identify best management practices dealing with water quality, write a persuasive essay encouraging best management practices to protect the water supply
DNA Extraction	<p>Science LS.1, LS.2, LS.3, LS.13</p> <p>Math 6.9</p> <p>English 6.1, 6.5, 7.1</p>	Follow a process and extract DNA from living tissue using simple everyday items
DNA Strands	<p>Science LS.1, LS.2, LS.3, LS.13</p> <p>English 7.1, 7.6, 7.8</p>	Provide exposure to the components of DNA codes of common living items
Do I Eat That?	<p>Science LS.7</p>	Trace the energy flow in an ecosystem
Each One Teach One	<p>Science</p> <p>Math</p> <p>English</p> <p>Social Studies</p>	<p>Provide a means for students to learn basic facts</p> <p>*This is a Maranzano strategy and has been proven to yield success with multiple choice testing.</p>



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Earth's Water Distribution	Science 6.5	Describe the importance of protecting and maintaining earth's water resources
Explore an Almanac	Science 6.1, 6.8, 6.9, LS.1, LS.12 Social Studies USII.1, USII.3, USII.5, USII.8, CE.1 English 6.5, 6.6, 7.7	Explore the information available in <i>The Old Farmer's Almanac</i> , guided by a series of questions Collaboratively create their own class almanac
The Farmer's Web	Science LS.9	Learn that ecosystem means that all of life is interrelated in one way or another
Farming Through Time	Science 6.2	Analyze and describe how the United States farming energy use has changed over time
Fishing for Aquaculture on the Internet	Science 6.5, 6.7, 6.9, LS.12 English 6.3, 6.5, 6.6, 7.4, 7.6, 7.7, 7.8	Explore websites introducing aquaculture and answer questions relating to the information posted on the sites
Got Sun?	Science 6.2	Describe energy changes from one form to another recognizing that the sun can be traced to the origin of all things
Growing Sneakers	Science 6.1, 7.1, LS.12	Use the scientific method to gain an understanding of how seeds travel with the aide of ecosystem dynamics and population influences
Habitat Hula	Science LS.4, LS.5, LS.7,LS.8, LS.10, LS.14 English 6.1, 7.1	Identify living organisms within a given environment
Hexagon Hives	Science LS.8, LS.12 Math 6.9, 7.9	Explain the advantage of the use of hexagon celled hives by honeybees, develop polygon models which demonstrate the strength and structural advantages of hexagon hive cells



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

The High Rollers Game	<p>Science 6.2, 6.5, 6.9, LS.8, LS.12</p> <p>Math 6.4, 6.20, 7.14, 8.11</p> <p>Civics CE.9, CE.10, CE.11, CE.12</p>	<p>Demonstrate, on a limited basis, the risk and return on a given enterprise</p> <p>Learn about the basic principles of probability</p>
Home-Made Chiapets	<p>Science LS.4, LS.5, LS.6</p>	<p>Learn what a plant need to grow, distinguish between monocots and dicots, discuss energy that is transferred between sunlight and chlorophyll</p>
Human Traits	<p>Science LS.1, LS.13, LS.14</p> <p>Math 6.2, 6.4, 6.6, 6.18 7.1, 7.4, 7.17, 7.18</p> <p>English 6.1, 6.2, 6.6, 7.1, 7.8</p> <p>History CE.1</p>	<p>Attain a deeper understanding of genetic engineering is the newest form of agriculture</p> <p>Understand that genetic engineering is the perfect mix of biology and agriculture</p> <p>Demonstrate that when two plants, animals or humans cross they pass their traits onto new generations</p>
Inspecting Virginia Pines	<p>Science 6.1, LS.1, LS.4, LS.5, LS.11</p>	<p>Make observations of plants, trees, and leaves around the school, apply know of microscope use, make slides with Virginia pines using the wet mount method, observe leaf sample slides under a microscope</p>
Interactions Among Predators and Prey	<p>Science LS.1, LS.9</p>	<p>Interpret, analyze and evaluate data from an experiment on predator-prey interactions</p>
Is it a Test?	<p>Science 6.9</p>	<p>Prove that all soils are not the same</p>
Junior's Family Tree	<p>Science 4.5, 4.8, 5.5, LS.13</p> <p>English 4.1, 4.3, 4.6, 4.7, 4.8, 5.1, 5.2, 5.4, 5.7, 5.8, 5.9, 6.1, 6.4, 6.5, 6.6, 6.7, 7.6, 7.7, 7.8, 7.9</p> <p>Math 4.19, 5.17, 6.20, 7.14, 7.15, 7.17, 7.18</p>	<p>Show that traits are passed on from one generation to the next</p>



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Lean, Mean Fuel from a Bean	Science 6.2, 6.9, LS.12	Explore a simple website introducing soybean diesel and answer questions from this website
Making Plant Based Dye	Science 6.1, LS.1, PS.1, PS.5 Social Studies USI.4, USI.5	Conduct a scientific investigation to validate a hypothesis using controls, independent, and dependent variables, conduct an experiment identifying chemical and physical changes of the dependent variable, identify practices of colonial life in the Mid-Atlantic region
Making Waves	Science 6.1, 6.5, 6.7, LS.1, LS.7, LS.10, LS.12	Explain how a wetland helps to control shoreline erosion, reduced flood damage, and provides a place for aquatic life to reproduce
Mummifying Apples	Math 6.10, 6.18 Science 6.1, 6.5, PS.1, PS.2	Conduct a scientific investigation to validate a hypothesis using a control and variables
Nitrogen Cycle	Science 6.9, LS.7	Investigate how living and nonliving components are dependent upon one another during the nitrogen cycle
Photosynthesis Book	Science 4.4, LS.6 English 4.7, 5.7	Illustrate the process of photosynthesis, summarize the steps in the process of photosynthesis
Plant Secrets	Science 6.1, 6.2, 6.8, 6.9, LS.1, LS.3, LS.4, LS.6, LS.7, LS.9, PS.5	Set up an experiment to determine what factors are necessary for plant growth and measure and compare plant growth under different environmental conditions using the scientific method
Planting Scavenger Hunt	Science 3.1, 4.1, 5.1, 6.1, LS.1 English 3.1, 3.4, 3.6, 3.7, 4.1, 4.3, 4.4, 4.6, 5.1, 5.4, 5.6, 5.7, 6.1, 6.3, 6.5, 7.1, 7.4, 7.6, 7.7 Math 3.17, 4.10, 5.11	Conduct an experiment using the scientific method Participate in a reference book scavenger hunt Use basic computation skills to solve word problems Locate and analyze information from reference materials
Potato Race	Science LS.1, LS.4	Conduct scientific investigations, investigate basic plant needs to complete life processes
The Proof is in the Water	Science 6.5	Investigate which plant material contains the most water



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Reading Trees	<p>Science 5.1, 6.5, LS.4, LS.12, LS.14</p> <p>Math 6.4, 6.5, 6.7,6.9</p>	Demonstrate how the environmental conditions affect tree growth
Round and Round the Water Goes	<p>Science 6.1, 6.9, LS.4, LS.8, LS.9, LS.12, LS.14</p> <p>English 6.1, 6.2, 6.5, 7.1, 7.7,</p> <p>History USII.1, USII.2, USII.3, USII.5, USII.8, CE.1</p>	<p>Illustrate how multiple users of water resources can affect water quality and quantity</p> <p>Examine the complexities of providing water for all water users.</p>
Seed Probability	<p>Science 3.1, 4.1, 5.1, 6.1, LS.1</p> <p>Math 2.18, 3.18, 4.13, 5.14, 5.16, 6.19, 6.20</p>	<p>Use a variety of seeds to conduct a probability experiment</p> <p>Conduct investigation using the scientific method</p>
Striking A Balance	<p>Science 6.2, 6.7, LS.4, LS.6, LS.7, LS.9, LS.11, LS.12</p>	Understand that energy is lost through breathing, heating and moving and that energy is transferred when it passes from one organism to another
Super Seeds	<p>Science 1.1, 1.4, 2.1, 2.3, 3.1, 3.6, 4.1, LS.1, LS.4, LS.12</p>	Generate a hypothesis and record observations, identify moisture and warmth as conditions necessary for a seed to germinate
Testing Darwin	<p>Science LS.1, LS.8, LS.9, LS.11, LS.14</p>	Determine if adaptation to environment is correlated to survival
There's What in my Watershed	<p>Science 3.6, 3.9, 3.10, 4.5, 4.9, 6.5, 6.7, LS.12</p>	Define "watershed" and identify the effect of runoff on watershed, identify ways to prevent pollution
The Trading Game	<p>Social Studies K.7, 1.8, 2.8, 2.9, 3.8, 3.9, CE.9</p> <p>English 1.1, 2.1, 3.1</p>	<p>Barter to get desired goods</p> <p>Model and understand the concepts of scarcity, specialization, and interdependence</p> <p>Make economic choices</p>
US Agriculture and the World Market	<p>Math 6.1, 6.4, 6.7, 6.9, 6.18</p> <p>Science 6.1</p> <p>Social Studies CE.1, CE.11</p>	Analyze agricultural import and export data from tables and charts, determine percentages, convert values between measurement systems and graph tables, identify and extract information regarding US trade of goods



Virginia AITC Middle School Lessons: Objectives and SOL Correlations

Visualizing Chlorophyll	Science 6.1, LS.3, LS.4, LS.6	Understand plants contain many pigments necessary for photosynthesis
Water, Water Everywhere	Science 1.8, 3.9, 4.9, 6.5, 6.7, 6.9	Identify the major uses of water and understand the limited amount of water available, discuss the importance of water conservation
Watershed and EnviroSnacks	Science 1.8, 3.9, 4.9, 6.5, 6.7, 6.9	Identify natural resources Create a model of the water cycle as well as model Virginia's natural resources Describe watersheds and surrounding environments while making a tasty treat
What Do Farmers Do?	Science 6.9 English 6.1, 7.1	Learn how seasons affect what farmer's do
What's Really in the Bowl?	Science 6.1 Health 6.2, 7.2	Identify critical information on food labels, correlate suggested serving sizes to nutritional information, collect and analyze data of food products
What's the Rule	Science 6.1, LS.5 Math 8.2, 8.14	Generate many ways to categorize the produce and to justify the characteristics used to create those groupings
What's Wind Got To Do With It?	Science 6.9	Learn that wind causes soil erosion Learn what farmers do to manage soil erosion
Why Buy Dirt	Science LS.1, LS.7, LS.12	Create and test hypothesis, test soil pH, diagnose nitrogen, phosphorus, and potash levels, analyze data and make recommendations to amend soil levels
Will It Last?	Science 6.2, 6.9, LS.9, LS.11, LS.12, LS.12 English 6.1, 6.2, 6.5, 7.1 Social Studies USII.1e, USII.2b, CE.1, CE.9	Identify ways to conserve our natural resources Identify the difference between renewable and nonrenewable resources Explain consumption, and state the importance of their role in conserving natural resources

