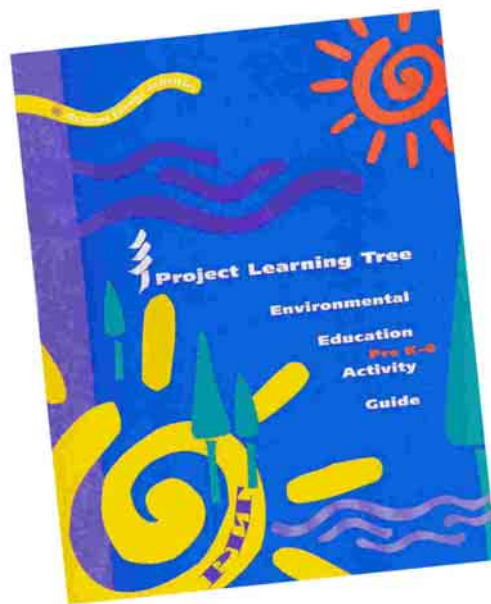


# ***Project Learning Tree PreK-8 Environmental Education Activity Guide***



## **Correlation to the Virginia Standards of Learning**



Funding for this correlation was provided by the Virginia Forestry Educational Foundation.

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**Note:** The SOLs referred to in this document are the 2001 SOLs for math and history/social science, the 2002 SOLs for English, and the 2003 SOLs for science.

### Abbreviations and Symbol Key:

CE	=	Civics and Economics
ES	=	Earth Science
HSS	=	History and Social Science
LS	=	Life Science
PS	=	Physical Science
USI	=	United States History to 1877
USII	=	United States History: 1877 to the Present
VS	=	Virginia Studies
WHI	=	World History and Geography to 1500 A.D.

- Teaches the concept; main focus of the activity
- ⊙ Includes some teaching of the concept; reinforces the concept; concept is part of the focus of the activity
- Reinforces, supports, or addresses the concept; connects concept to an environmental issue

# MATHEMATICS STANDARDS OF LEARNING

**Math K.8** The student will identify the instruments used to measure length (ruler), weight (scale), time (clock: digital and analog, calendar: day, month, and season), and temperature (thermometer).

●	⊙	○
	#21 Adopt a Tree	

**Math K.10** The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block, etc.

●	⊙	○
	#21 Adopt a Tree #41 How Plants Grow #43 Have Seeds Will Travel	#51 Make Your Own Paper

**Math K.11** The student will identify, describe, and draw two-dimensional (plane) geometric figures (circle, triangle, square, and rectangle).

●	⊙	○
#1 The Shape of Things #2 Get In Touch With Trees		

**Math K.12** The student will identify representations of plane geometric figures (circle, triangle, square, and rectangle), regardless of their position and orientation in space.

●	⊙	○
#1 The Shape of Things		

**Math K.14** The student will gather data relating to familiar experiences by counting and tallying.

●	⊙	○
	#4 Sounds Around	

**Math K.15** The student will display objects and information, using object graphs, pictorial graphs and tables.

●	⊙	○
	#22 Trees As Habitats #25 Birds and Worms #27 Every Tree for Itself #41 How Plants Grow #43 Have Seeds Will Travel	#6 Picture This #12 Tree Treasures

**Math K.17** The student will sort and classify objects according to similar attributes (size, shape, and color).

●	⊙	○
#6 Picture This #12 Tree Treasures #36 Pollution Search #43 Have Seeds Will Travel	#1 The Shape of Things #2 Get In Touch With Trees	#51 Make Your Own Paper

**Math 1.1** The student will count objects in a given set containing between 1 and 100 objects and write the corresponding numeral.

●	◎	○
	#22 Trees As Habitats #76 Tree Cookies	

**Math 1.5** The student will identify the ordinal positions first through tenth, using an ordered set of objects.

●	◎	○
#3 Peppermint Beetle		#4 Sounds Around

**Math 1.12** The student will use nonstandard units to measure length and weight.

●	◎	○
#67 How Big Is Your Tree?	#21 Adopt a Tree #41 How Plants Grow #77 Trees In Trouble	

**Math 1.16** The student will draw, describe and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, corners, and square corners.

●	◎	○
#1 The Shape of Things		

**Math 1.17** The student will identify and describe objects in his/her environment that depict plane geometric figures (triangle, rectangle, square, and circle).

●	◎	○
#1 The Shape of Things		

**Math 1.19** The student will interpret information displayed in a picture or object graph, using the vocabulary *more, less, fewer, greater than, less than, and equal to*.

●	◎	○
	#22 Trees As Habitats #25 Birds and Worms #27 Every Tree for Itself #41 How Plants Grow	

**Math 1.20** The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.

●	◎	○
#6 Picture This #12 Tree Treasures #36 Pollution Search #43 Have Seeds Will Travel	#1 The Shape of Things #2 Get In Touch With Trees	#51 Make Your Own Paper

**Math 2.11** The student will a) count and compare a collection of pennies, nickels, dimes and quarters whose total value is \$2.00 or less; and b) identify the correct usage of the cent symbol, dollar symbol, and decimal point.

●	◎	○
		#31 Plant a Tree

**Math 2.12** The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including measuring the distance around a polygon in order to determine perimeter.

●	⊙	○
#67 How Big Is Your Tree?	#21 Adopt a Tree #41 How Plants Grow #77 Trees In Trouble	

**Math 2.17** The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of *more*, *less*, and *equivalent*.

●	⊙	○
		#51 Make Your Own Paper

**Math 2.22** The student will compare and contrast plane and solid geometric shapes (circle/sphere, square/cube, and rectangle/rectangular solid).

●	⊙	○
		#1 The Shape of Things #2 Get In Touch With Trees

**Math 2.23** The student will read, construct, and interpret a simple picture and bar graph.

●	⊙	○
	#22 Trees As Habitats #25 Birds and Worms #36 Pollution Search #37 Talking Trash, Not! #41 How Plants Grow #77 Trees In Trouble	

**Math 3.3** The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than*, *less than*, or *equal to*).

●	⊙	○
#67 How Big Is Your Tree?		

**Math 3.8** The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

●	⊙	○
#67 How Big Is Your Tree?		

**Math 3.13** The student will determine by counting the value of a collection of bills and coins whose total value is \$5.00 or less, compare the value of the coins or bills, and make change.

●	⊙	○
		#31 Plant a Tree

**Math 3.14** The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure length, liquid volume, and weight/mass.

●	⊙	○
	#21 Adopt a Tree #41 How Plants Grow #67 How Big Is Your Tree? #70 Soil Stories #76 Tree Cookies #77 Trees In Trouble	#51 Make Your Own Paper #80 Nothing Succeeds Like Succession

**Math 3.16** The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.

●	⊙	○
		#80 Nothing Succeeds Like Succession

**Math 3.21** The student, given grid paper, will a) collect and organize data on a given topic of his/her choice, using observations, measurements, surveys, or experiments; and b) construct a line plot, a picture graph, or a bar graph to represent the results. Each graph will include an appropriate title and key.

●	⊙	○
#67 How Big Is Your Tree?	#9 Planet of Plenty #22 Trees As Habitats #25 Birds and Worms #37 Talking Trash, Not! #41 How Plants Grow #77 Trees In Trouble	#1 The Shape of Things #6 Picture This #12 Tree Treasures #14 Renewable or Not? #88 Life on the Edge

**Math 3.22** The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

●	⊙	○
	#22 Trees As Habitats #25 Birds and Worms #36 Pollution Search #41 How Plants Grow #77 Trees In Trouble	#67 How Big Is Your Tree? #88 Life on the Edge

**Math 3.24** The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, table, and pictures).

●	⊙	○
		#80 Nothing Succeeds Like Succession

**Math 4.1** The student will a) identify (orally and in writing) the place value for each digit in a whole number expressed through millions; b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree?		

**Math 4.5** The student will estimate whole-number sums and differences and describe the method of estimation. Students will refine estimates, using terms such as *closer to*, *between*, and *a little more than*.

●	⊙	○
	#38 Every Drop Counts	#53 On the Move

**Math 4.6** The student will add and subtract whole numbers written in vertical and horizontal form, choosing appropriately between paper and pencil methods and calculators.

●	⊙	○
	#73 Waste Watchers	#53 On the Move

**Math 4.7** The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.

●	⊙	○
	#73 Waste Watchers	#53 On the Move

**Math 4.10** The student will a) estimate and measure weight/mass using actual measuring devices and describe the results in U.S. Customary/metric units as appropriate, including ounces, pounds, grams, and kilograms; b) identify equivalent measurements between units within the U.S. Customary system (ounces and pounds) and between units within the metric system (grams and kilograms); and c) estimate the conversion of ounces and grams and pounds and kilograms, using approximate comparisons. *The intent of this standard is for students to make “ballpark” comparisons and not to memorize conversion factors between U.S. and metric units.*

●	⊙	○
#66 Germinating Giants	#76 Tree Cookies	

**Math 4.11** The student will a) estimate and measure length, using actual measuring devices, and describe the results in both metric and U.S. Customary units; b) identify equivalent measurements between units within the U.S. Customary system and between units in the metric system; and c) estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons. *The intent of this standard is for students to make “ballpark” comparisons and not to memorize conversion factors between U.S. and metric units.*

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree?	#21 Adopt a Tree #41 How Plants Grow #47 Are Vacant Lots Vacant? #77 Trees In Trouble #80 Nothing Succeeds Like Succession	#9 Planet of Plenty

**Math 4.12** The student will a) estimate and measure liquid volume, using actual measuring devices and using metric and U.S. Customary units; b) identify equivalent measurements between units within the U.S. Customary system and between units within the metric system; and c) estimate the conversion of quarts and liters, using approximate comparisons. *The intent of this standard is for students to make “ballpark” comparisons and not to memorize conversion factors between U.S. and metric units.*

●	⊙	○
	#16 Pass the Plants, Please #38 Every Drop Counts	#51 Make Your Own Paper

**Math 4.13** The student will a) identify and describe situations representing the use of perimeter and area; and b) use measuring devices to find perimeter in both standard and nonstandard units of measure.

●	⊙	○
#66 Germinating Giants	#28 Air Plants #47 Are Vacant Lots Vacant?	

**Math 4.14** The student will investigate and describe the relationships between and among points, lines, line segments, and rays.

●	⊙	○
		#67 How Big Is Your Tree?

**Math 4.15** The student will a) identify and draw representations of points, lines, line segments, rays, and angles, using a straightedge or ruler; and b) describe the path of shortest distance between two points on a flat surface.

●	⊙	○
		#67 How Big Is Your Tree?

**Math 4.20** The student will collect, organize, and display data in line and bar graphs with scale increments of one or greater than one and use the display to interpret the results, draw conclusions, and make predictions.

●	⊙	○
#16 Pass the Plants, Please #67 How Big Is Your Tree?	#9 Planet of Plenty #22 Trees As Habitats #25 Birds and Worms #37 Talking Trash, Not! #41 How Plants Grow #45 Web of Life #66 Germinating Giants #77 Trees In Trouble #80 Nothing Succeeds Like Succession	#1 The Shape of Things #6 Picture This #12 Tree Treasures #14 Renewable or Not? #88 Life on the Edge

**Math 5.1** The student will a) read, write, and identify the place values of decimals through thousandths; b) round decimal numbers to the nearest tenth or hundredth; and c) compare the values of two decimals through thousandths, using the symbols  $>$ ,  $<$ , or  $=$ .

●	⊙	○
	#70 Soil Stories	#73 Waste Watchers

**Math 5.3** The student will create and solve problems involving addition, subtraction, multiplication, and division of whole numbers, using paper and pencil, estimation, mental computation, and calculators.

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree? #70 Soil Stories	#38 Every Drop Counts #73 Waste Watchers #85 In the Driver's Seat	#31 Plant a Tree #52 A Look at Aluminum #53 On the Move

**Math 5.4** The student will find the sum, difference, and product of two numbers expressed as decimals through thousandths, using an appropriate method of calculation, including paper and pencil, estimation, mental computation, and calculators.

●	⊙	○
		#73 Waste Watchers

**Math 5.5** The student, given a dividend of four digits or fewer and a divisor of two digits or fewer, will find the quotient and remainder.

●	⊙	○
	#85 In the Driver's Seat	

**Math 5.8** The student will describe and determine the perimeter of a polygon and the area of a square, rectangle, and right triangle, given the appropriate measures.

●	⊙	○
	#28 Air Plants #47 Are Vacant Lots Vacant?	

**Math 5.9** The student will identify and describe the diameter, radius, chord, and circumference of a circle.

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree?	#21 Adopt a Tree #76 Tree Cookies	

**Math 5.10** The student will differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

●	⊙	○
	#47 Are Vacant Lots Vacant?	

**Math 5.11** The student will choose an appropriate measuring device and unit of measure to solve problems involving measurement of a) length, b) weight/mass, c) liquid volume, d) area, and e) temperature. Problems also will include estimating the conversion of Celsius and Fahrenheit units relative to familiar situations.

●	⊙	○
	#21 Adopt a Tree #38 Every Drop Counts #41 How Plants Grow #48 Field, Forest, and Stream #67 How Big Is Your Tree? #70 Soil Stories #77 Trees In Trouble #80 Nothing Succeeds Like Succession #85 In the Driver's Seat	#51 Make Your Own Paper #66 Germinating Giants

**Math 5.18** The student will, given a problem situation, collect, organize, and display a set of numerical data in a variety of forms, using bar graphs, stem-and-leaf plots, and line graphs, to draw conclusions and make predictions.

●	⊙	○
#67 How Big Is Your Tree? #70 Soil Stories	#22 Trees As Habitats #25 Birds and Worms #37 Talking Trash, Not! #41 How Plants Grow #45 Web of Life #47 Are Vacant Lots Vacant? #66 Germinating Giants #77 Trees In Trouble #80 Nothing Succeeds Like Succession	#88 Life on the Edge

**Math 6.1** The student will identify representations of a given percent and describe orally and in writing the equivalence relationship between fractions, decimals, and percents.

●	⊙	○
		#66 Germinating Giants

**Math 6.2** The student will describe and compare two sets of data, using ratios, and will use appropriate notations, such as  $a/b$ ,  $a$  to  $b$ , and  $a:b$ .

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree? #70 Soil Stories		

**Math 6.4** The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.

●	⊙	○
#66 Germinating Giants #70 Soil Stories	#73 Waste Watchers	

**Math 6.6** The student will a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less and express their answers in simplest form; and b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.

●	⊙	○
#66 Germinating Giants	#21 Adopt a Tree #38 Every Drop Counts	#52 A Look at Aluminum #73 Waste Watchers

**Math 6.7** The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).

●	⊙	○
#73 Waste Watchers	#38 Every Drop Counts #70 Soil Stories #83 Reduce, Reuse, Recycle #85 In the Driver's Seat	#52 A Look at Aluminum #53 On the Move

**Math 6.8** The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.

●	⊙	○
	#85 In the Driver's Seat	#67 How Big Is Your Tree? #31 Plant a Tree

**Math 6.9** The student will compare and convert units of measure for length, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system. *The intent of this standard is for students to make “ballpark” comparisons and not to memorize conversion factors between U.S. and metric units.*

●	⊙	○
	#38 Every Drop Counts #41 How Plants Grow #67 How Big Is Your Tree? #76 Tree Cookies #80 Nothing Succeeds Like Succession	#29 Rain Reasons #66 Germinating Giants

**Math 6.10** The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure.

●	⊙	○
#66 Germinating Giants	#41 How Plants Grow #67 How Big Is Your Tree? #70 Soil Stories	#51 Make Your Own Paper

**Math 6.11** The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula.

●	⊙	○
	#28 Air Plants #47 Are Vacant Lots Vacant?	

**Math 6.12** The student will a) solve problems by finding the circumference and/or area of a circle when given the diameter or radius; and b) derive approximations for pi from measurements for circumference and diameter, using concrete materials or computer models.

●	⊙	○
#66 Germinating Giants #67 How Big Is Your Tree?	#21 Adopt a Tree #27 Every Tree for Itself	

**Math 6.18** The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including a) line, bar, and circle graphs; b) stem-and-leaf plots; and c) box-and-whisker plots. Circle graphs will be limited to halves, fourths, and eighths.

●	⊙	○
#67 How Big Is Your Tree?	#22 Trees As Habitats #25 Birds and Worms #35 Loving It Too Much #41 How Plants Grow #45 Web of Life #47 Are Vacant Lots Vacant? #50 400-Acre Wood #66 Germinating Giants #70 Soil Stories #77 Trees In Trouble #80 Nothing Succeeds Like Succession	#37 Talking Trash, Not! #69 Forest for the Trees #73 Waste Watchers #88 Life on the Edge

**Math 6.19** The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.

●	⊙	○
		#85 In the Driver's Seat

**Math 7.2** The student will simplify expressions that contain rational numbers (whole numbers, fractions, and decimals) and positive exponents, using order of operations, mental mathematics, and appropriate tools.

●	⊙	○
	#50 400-Acre Wood	

**Math 7.3** The student will identify and apply the following properties of operations with real numbers...

●	⊙	○
	#50 400-Acre Wood	

**Math 7.4** The student will a) solve practical problems using rational numbers (whole numbers, fractions, decimals) and percents; and b) solve consumer-application problems involving tips, discounts, sales tax, and simple interest.

●	⊙	○
	#38 Every Drop Counts #70 Soil Stories #73 Waste Watchers #85 In the Driver's Seat	#31 Plant a Tree #52 A Look at Aluminum #53 On the Move

**Math 7.6** The student will use proportions to solve practical problems, which may include scale drawings, that contain rational numbers (whole numbers, fractions, and decimals), and percents.

●	⊙	○
#67 How Big Is Your Tree? #70 Soil Stories	#83 Reduce, Reuse, Recycle	#53 On the Move #69 Forest for the Trees

**Math 7.16** The student will create and solve problems involving the measures of central tendency (mean, median, mode) and the range of a set of data.

●	⊙	○
		#85 In the Driver's Seat

**Math 7.17** The student, given a problem situation, will collect, analyze, display, and interpret data, using a variety of graphical methods, including a) frequency distributions; b) line plots; c) histograms; d) stem-and-leaf plots, e) box-and-whisker plots; and f) scattergrams.

●	⊙	○
	#41 How Plants Grow	#35 Loving It Too Much

**Math 7.18** The student will make inferences, conjectures, and predictions based on the analysis of a set of data.

●	⊙	○
	#41 How Plants Grow #50 400-Acre Wood	#85 In the Driver's Seat

**Math 7.20** The student will write verbal expressions as algebraic expressions and sentences as equations.

●	⊙	○
	#50 400-Acre Wood	

**Math 8.3** The student will solve practical problems involving rational numbers, percents, ratios, and proportions. Problems will be of varying complexities, involving real-life data, such as finding a discount and discount prices and balancing a checkbook.

●	⊙	○
#67 How Big Is Your Tree? #70 Soil Stories	#38 Every Drop Counts #50 400-Acre Wood #73 Waste Watchers #83 Reduce, Reuse, Recycle #85 In the Driver's Seat	#31 Plant a Tree #53 On the Move #69 Forest for the Trees

**Math 8.4** The student will apply the order of operations to evaluate algebraic expressions for given replacement values of the variables. Problems will be limited to positive exponents.

●	⊙	○
	#50 400-Acre Wood	

**Math 8.12** The student will make comparisons, predictions, and inferences, using information displayed in frequency distributions; box-and-whisker plots; scattergrams; line, bar, circle, and picture graphs; and histograms.

●	⊙	○
	#35 Loving It Too Much #41 How Plants Grow #50 400-Acre Wood #77 Trees In Trouble	#73 Waste Watchers #88 Life on the Edge

**Math 8.14** The student will a) describe and represent relations and functions, using tables, graphs, and rules; and b) relate and compare tables, graphs, and rules as different forms of representation for relationships

●	⊙	○
#67 How Big Is Your Tree?	#22 Trees As Habitats #25 Birds and Worms #50 400-Acre Wood	

**Math 8.15** The student will solve two-step equations and inequalities in one variable, using concrete materials, pictorial representations, and paper and pencil.

●	⊙	○
	#50 400-Acre Wood	

**Math 8.17** The student will create and solve problems using proportions, formulas, and functions.

●	⊙	○
#67 How Big Is Your Tree? #70 Soil Stories	#50 400-Acre Wood	

# SCIENCE STANDARDS OF LEARNING

**Science K.1** The student will conduct investigations.

●	⊙	○
#22 Trees As Habitats #24 Nature's Recyclers #25 Birds and Worms #41 How Plants Grow #46 School Yard Safari #47 Are Vacant Lots Vacant? #65 Bursting Buds	#1 The Shape of Things #2 Get In Touch With Trees #3 Peppermint Beetle #21 Adopt a Tree #27 Every Tree for Itself #43 Have Seeds Will Travel #64 Looking At Leaves #78 Signs of Fall	

**Science K.2** The student will investigate and understand that humans have senses that allow one to seek, find, take in and react or respond to information in order to learn about one's surroundings.

●	⊙	○
#21 Adopt a Tree #46 School Yard Safari #47 Are Vacant Lots Vacant?	#1 The Shape of Things #2 Get In Touch With Trees #3 Peppermint Beetle #4 Sounds Around #6 Picture This! #43 Have Seeds Will Travel	#16 Pass the Plants, Please #51 Make Your Own Paper

**Science K.4** The student will investigate and understand that the position, motion, and physical properties of an object can be described.

●	⊙	○
#1 The Shape of Things #2 Get In Touch With Trees #48 Field, Forest, and Stream #64 Looking At Leaves #65 Bursting Buds	#51 Make Your Own Paper #78 Signs of Fall	#4 Sounds Around

**Science K.5** The student will investigate and understand that water flows and has properties that can be observed and tested.

●	⊙	○
		#51 Make Your Own Paper

**Science K.6** The student will investigate and understand basic needs and life processes of plants and animals.

●	⊙	○
#21 Adopt a Tree #24 Nature's Recyclers #27 Every Tree for Itself #41 How Plants Grow #79 Tree Lifecycle	#16 Pass the Plants, Please #22 Trees as Habitats #62 To Be a Tree #78 Signs of Fall	#8 The Forest of S. T. Shrew #25 Birds and Worms #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #61 The Closer You Look #95 Did You Notice?

**Science K.8** The student will investigate and understand simple patterns in his/her daily life.

●	⊙	○
#1 The Shape of Things #61 The Closer You Look #64 Looking At Leaves	#78 Signs of Fall #79 Tree Lifecycle	#41 How Plants Grow #46 School Yard Safari #47 Are Vacant Lots Vacant? #49 Tropical Treehouse

**Science K.9** The student will investigate and understand that change occurs over time, and rates may be fast or slow.

●	⊙	○
#21 Adopt a Tree #65 Bursting Buds #78 Signs of Fall	#18 Tale of the Sun #24 Nature's Recyclers	#41 How Plants Grow #46 School Yard Safari #47 Are Vacant Lots Vacant?

**Science K.10** The student will investigate and understand that materials can be reused, recycled, and conserved.

●	⊙	○
#12 Tree Treasures #51 Make Your Own Paper	#36 Pollution Search #87 Earth Manners	#20 Environmental Exchange Box

**Science 1.1** The student will conduct investigations.

●	⊙	○
#22 Trees As Habitats #24 Nature's Recyclers #25 Birds and Worms #37 Talking Trash, Not! #41 How Plants Grow #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #76 Tree Cookies #77 Trees In Trouble	#1 The Shape of Things #2 Get In Touch With Trees #3 Peppermint Beetle #21 Adopt a Tree #27 Every Tree for Itself #43 Have Seeds Will Travel #46 School Yard Safari #64 Looking At Leaves #65 Bursting Buds #78 Signs of Fall	

**Science 1.4** The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics.

●	⊙	○
#21 Adopt a Tree #31 Plant a Tree #43 Have Seeds Will Travel #62 To Be a Tree #64 Looking At Leaves #78 Signs of Fall	#2 Get In Touch With Trees #6 Picture This #16 Pass the Plants, Please #27 Every Tree for Itself #41 How Plants Grow #61 The Closer You Look #63 Tree Factory #65 Bursting Buds #76 Tree Cookies #77 Trees In Trouble #79 Tree Lifecycle	#22 Trees As Habitats #42 Sunlight and Shades of Green #67 How Big Is Your Tree? #87 Earth Manners

**Science 1.5** The student will investigate and understand that animals, including people, have life needs and specific physical characteristics and can be classified according to certain characteristics.

●	⊙	○
#8 The Forest of S. T. Shrew #20 Environmental Exchange Box #24 Nature's Recyclers #46 School Yard Safari #47 Are Vacant Lots Vacant? #87 Earth Manners	#6 Picture This! #25 Birds and Worms #74 People, Places, Things	#3 Peppermint Beetle #76 Tree Cookies

**Science 1.6** The student will investigate and understand the basic relationships between the sun and the Earth.

●	⊙	○
#18 Tale of the Sun		

**Science 1.7** The student will investigate and understand the relationship of seasonal change and weather to the activities and life processes of plants and animals.

●	⊙	○
#21 Adopt a Tree #65 Bursting Buds #76 Tree Cookies #78 Signs of Fall	#3 Peppermint Beetle #20 Environmental Exchange Box #77 Trees In Trouble	#6 Picture This! #18 Tale of the Sun #41 How Plants Grow #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #61 The Closer You Look #79 Tree Lifecycle

**Science 1.8** The student will investigate and understand that natural resources are limited.

●	⊙	○
#12 Tree Treasures #89 Trees for Many Reasons	#21 Adopt a Tree #22 Trees As Habitats #30 Three Cheers for Trees #32 A Forest of Many Uses #36 Pollution Search #51 Make Your Own Paper #54 I'd Like to Visit a Place Where... #74 People, Places, Things #87 Earth Manners	#20 Environmental Exchange Box #37 Talking Trash, Not! #77 Trees In Trouble

**Science 2.1** The student will conduct investigations.

●	⊙	○
#22 Trees As Habitats #24 Nature's Recyclers #25 Birds and Worms #41 How Plants Grow #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #76 Tree Cookies #77 Trees In Trouble	#27 Every Tree for Itself #43 Have Seeds Will Travel #46 School Yard Safari #65 Bursting Buds #78 Signs of Fall	#3 Peppermint Beetle #21 Adopt a Tree #42 Sunlight and Shades of Green

**Science 2.3** The student will investigate and understand basic properties of solids, liquids, and gases.

●	⊙	○
	#51 Make Your Own Paper	

**Science 2.4** The student will investigate and understand that plants and animals undergo a series of orderly changes in their life cycles.

●	⊙	○
#21 Adopt a Tree #24 Nature's Recyclers #43 Have Seeds Will Travel #61 The Closer You Look #79 Tree Lifecycle	#65 Bursting Buds #68 Name That Tree #76 Tree Cookies #77 Trees In Trouble #78 Signs of Fall	#46 School Yard Safari #47 Are Vacant Lots Vacant?

**Science 2.5** The student will investigate and understand that living things are part of a system.

●	⊙	○
#18 Tale of the Sun #22 Trees As Habitats #24 Nature's Recyclers #31 Plant a Tree #41 How Plants Grow #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #89 Trees for Many Reasons	#10 Charting Diversity #27 Every Tree for Itself #30 Three Cheers for Trees #36 Pollution Search #43 Have Seeds Will Travel #74 People, Places, Things #76 Tree Cookies #77 Trees In Trouble	#3 Peppermint Beetle #49 Tropical Treehouse #79 Tree Lifecycle

**Science 2.7** The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings.

●	⊙	○
#21 Adopt a Tree #76 Tree Cookies #78 Signs of Fall	#3 Peppermint Beetle #23 The Fallen Log #25 Birds and Worms #77 Trees In Trouble	#24 Nature's Recyclers #27 Every Tree for Itself #41 How Plants Grow #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #49 Tropical Treehouse #61 The Closer You Look #68 Name That Tree

**Science 2.8** The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature.

●	⊙	○
#12 Tree Treasures #31 Plant a Tree #32 A Forest of Many Uses #42 Sunlight and Shades of Green	#16 Pass the Plants, Please #20 Environmental Exchange Box #30 Three Cheers for Trees #41 How Plants Grow #51 Make Your Own Paper #87 Earth Manners #89 Trees for Many Reasons	#5 Poet-Tree #18 Tale of the Sun #43 Have Seeds Will Travel #61 The Closer You Look #68 Name That Tree #76 Tree Cookies #77 Trees In Trouble

**Science 3.1** The student will plan and conduct investigations.

●	⊙	○
#22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms #41 How Plants Grow #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #77 Trees In Trouble	#27 Every Tree for Itself #37 Talking Trash, Not! #43 Have Seeds Will Travel #46 School Yard Safari #65 Bursting Buds #67 How Big Is Your Tree? #78 Signs of Fall	#3 Peppermint Beetle #16 Pass the Plants, Please #21 Adopt a Tree #42 Sunlight and Shades of Green #44 Water Wonders

**Science 3.3** The student will investigate and understand that objects are made of materials that can be described by their physical properties.

●	⊙	○
#51 Make Your Own Paper		

**Science 3.4** The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs.

●	⊙	○
#10 Charting Diversity #11 Can It Be Real? #25 Birds and Worms #46 School Yard Safari #47 Are Vacant Lots Vacant?	#21 Adopt a Tree #88 Life on the Edge	#3 Peppermint Beetle #4 Sounds Around #20 Environmental Exchange Box #48 Field, Forest, and Stream

**Science 3.5** The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains.

●	⊙	○
#22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms	#63 Tree Factory #79 Tree Lifecycle	#49 Tropical Treehouse #62 To Be a Tree #76 Tree Cookies

**Science 3.6** The student will investigate and understand that environments support a diversity of plants and animals that share limited resources.

●	⊙	○
#7 Habitat Pen Pals #9 Planet of Plenty #10 Charting Diversity #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #88 Life on the Edge	#8 The Forest of S. T. Shrew #31 Plant a Tree #32 A Forest of Many Uses #49 Tropical Treehouse #65 Bursting Buds	#22 Trees As Habitats #36 Pollution Search #37 Talking Trash, Not! #67 How Big Is Your Tree? #77 Trees In Trouble #80 Nothing Succeeds Like Succession #87 Earth Manners

**Science 3.7** The student will investigate and understand the major components of soil, its origin, and importance to plants and animals including humans.

●	⊙	○
#24 Nature's Recyclers #48 Field, Forest, and Stream #70 Soil Stories	#23 The Fallen Log #27 Every Tree for Itself #41 How Plants Grow #63 Tree Factory	#20 Environmental Exchange Box #46 School Yard Safari #47 Are Vacant Lots Vacant? #62 To Be a Tree #79 Tree Lifecycle

**Science 3.8** The student will investigate and understand basic patterns and cycles occurring in nature.

●	⊙	○
#65 Bursting Buds #79 Tree Lifecycle	#44 Water Wonders #63 Tree Factory #78 Signs of Fall #80 Nothing Succeeds Like Succession	#41 How Plants Grow #43 Have Seeds Will Travel #48 Field, Forest, and Stream #68 Name That Tree

**Science 3.9** The student will investigate and understand the water cycle and its relationship to life on Earth.

●	⊙	○
#44 Water Wonders	#20 Environmental Exchange Box #27 Every Tree for Itself #28 Air Plants #41 How Plants Grow #42 Sunlight and Shades of Green #62 To Be a Tree #63 Tree Factory	#77 Trees in Trouble

**Science 3.10** The student will investigate and understand that natural events and human influences can affect the survival of species.

●	⊙	○
#81 Living With Fire #88 Life on the Edge #89 Trees for Many Reasons	#30 Three Cheers for Trees #31 Plant a Tree #32 A Forest of Many Uses #36 Pollution Search #37 Talking Trash, Not! #49 Tropical Treehouse #76 Tree Cookies #87 Earth Manners	#34 Who Works in This Forest? #41 How Plants Grow #44 Water Wonders #46 School Yard Safari #47 Are Vacant Lots Vacant? #51 Make Your Own Paper #74 People, Places, Things #80 Nothing Succeeds Like Succession #82 Resource-Go-Round #95 Did You Notice?

**Science 3.11** The student will investigate and understand different sources of energy.

●	⊙	○
#14 Renewable or Not? #39 Energy Sleuths #82 Resource-Go-Round	#12 Tree Treasures #13 We All Need Trees #15 A Few of My Favorite Things #42 Sunlight and Shades of Green	#16 Pass the Plants, Please #18 Tale of the Sun #20 Environmental Exchange Box #44 Water Wonders #89 Trees for Many Reasons

**Science 4.1** The student will plan and conduct investigations.

●	⊙	○
#9 Planet of Plenty #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms #41 How Plants Grow #48 Field, Forest, and Stream #77 Trees In Trouble	#27 Every Tree for Itself #37 Talking Trash, Not! #38 Every Drop Counts #43 Have Seeds Will Travel #47 Are Vacant Lots Vacant? #65 Bursting Buds #66 Germinating Giants #67 How Big Is Your Tree? #78 Signs of Fall #80 Nothing Succeeds Like Succession #81 Living With Fire	#16 Pass the Plants, Please #28 Air Plants #42 Sunlight and Shades of Green #44 Water Wonders #46 School Yard Safari

**Science 4.4** The student will investigate and understand basic plant anatomy and life processes.

●	⊙	○
#21 Adopt a Tree #28 Air Plants #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #61 The Closer You Look #62 To Be a Tree #63 Tree Factory #68 Name That Tree #76 Tree Cookies #78 Signs of Fall	#16 Pass the Plants, Please #27 Every Tree for Itself #64 Looking At Leaves #65 Bursting Buds #66 Germinating Giants #77 Trees In Trouble #79 Tree Lifecycle	#22 Trees As Habitats #49 Tropical Treehouse

**Science 4.5** The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment.

●	◎	○
#6 Picture This #7 Habitat Pen Pals #8 The Forest of S. T. Shrew #9 Planet of Plenty #11 Can It Be Real? #21 Adopt a Tree #22 Trees As Habitats #45 Web of Life #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #88 Life on the Edge	#17 People of the Forest #18 Tale of the Sun #20 Environmental Exchange Box #23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms #26 Dynamic Duos #28 Air Plants #36 Pollution Search #38 Every Drop Counts #40 Then and Now #41 How Plants Grow #43 Have Seeds Will Travel #49 Tropical Treehouse #56 We Can Work It Out #62 To Be a Tree #63 Tree Factory #65 Bursting Buds #69 Forest for the Trees #75 Tipi Talk #81 Living With Fire #90 The Native Way	#37 Talking Trash, Not! #54 I'd Like to Visit a Place Where... #64 Looking At Leaves #67 How Big Is Your Tree? #76 Tree Cookies #77 Trees In Trouble #79 Tree Lifecycle #80 Nothing Succeeds Like Succession #95 Did You Notice?

**Science 4.6** The student will investigate and understand how weather conditions and phenomena occur and can be predicted.

●	◎	○
		#81 Living With Fire

**Science 4.7** The student will investigate and understand the relationships among the Earth, moon, and sun. (causes for the Earth's seasons...unique properties of the Earth...)

●	◎	○
		#18 Tale of the Sun

**Science 4.8** The student will investigate and understand important Virginia natural resources.

●	◎	○
#12 Tree Treasures #13 We All Need Trees #14 Renewable or Not? #20 Environmental Exchange Box #51 Make Your Own Paper #69 Forest for the Trees #88 Life on the Edge	#21 Adopt a Tree #22 Trees As Habitats #30 Three Cheers for Trees #32 A Forest of Many Uses #38 Every Drop Counts #56 We Can Work It Out #68 Name That Tree #73 Waste Watchers #89 Trees For Many Reasons	#5 Poet-Tree #15 A Few of My Favorite Things #17 People of the Forest #31 Plant a Tree #34 Who Works in This Forest? #35 Loving It Too Much #44 Water Wonders #46 School Yard Safari #54 I'd Like to Visit a Place Where... #76 Tree Cookies #77 Trees In Trouble #80 Nothing Succeeds Like Succession #82 Resource-Go-Round #83 Reduce, Reuse, Recycle #87 Earth Manners #90 The Native Way #91 In the Good Old Days #93 Paper Civilizations #94 Where Are the Cedars of Lebanon? #95 Did You Notice?

**Science 5.1** The student will plan and conduct investigations.

●	◎	○
#9 Planet of Plenty #23 The Fallen Log #24 Nature's Recyclers	#37 Talking Trash, Not! #38 Every Drop Counts #65 Bursting Buds #80 Nothing Succeeds Like Succession	#28 Air Plants

**Science 5.2** The student will investigate and understand how sound is transmitted and is used as a means of communication.

●	◎	○
		#4 Sounds Around

**Science 5.5** The student will investigate and understand that organisms are made of cells and have distinguishing characteristics.

●	◎	○
	#9 Planet of Plenty #23 The Fallen Log #24 Nature's Recyclers #28 Air Plants #63 Tree Factory #65 Bursting Buds #68 Name That Tree	#61 The Closer You Look #80 Nothing Succeeds Like Succession

**Science 5.6** The student will investigate and understand characteristics of the ocean environment.

●	⊙	○
	#7 Habitat Pen Pals #88 Life on the Edge	#20 Environmental Exchange Box #45 Web of Life #86 Our Changing World

**Science 5.7** The student will investigate and understand how the Earth's surface is constantly changing.

●	⊙	○
	#70 Soil Stories	#37 Talking Trash, Not! #52 A Look at Aluminum

**Science 6.1** The student will plan and conduct investigations.

●	⊙	○
#70 Soil Stories #71 Watch on Wetlands #72 Air We Breathe #77 Trees In Trouble #85 In the Driver's Seat	#37 Talking Trash, Not! #38 Every Drop Counts #41 How Plants Grow #48 Field, Forest, and Stream #73 Waste Watchers	#28 Air Plants #42 Sunlight and Shades of Green #44 Water Wonders

**Science 6.2** The student will investigate and understand basic sources of energy, their origins, transformations and uses.

●	⊙	○
#14 Renewable or Not? #73 Waste Watchers #82 Resource-Go-Round #85 In the Driver's Seat	#28 Air Plants #39 Energy Sleuths #53 On the Move	#51 Make Your Own Paper #52 A Look at Aluminum

**Science 6.3** The student will investigate and understand the role of solar energy in driving most natural processes within the atmosphere, the hydrosphere, and on the Earth's surface.

●	⊙	○
	#28 Air Plants #41 How Plants Grow #42 Sunlight and Shades of Green #73 Waste Watchers	

**Science 6.5** The student will investigate and understand the unique properties and characteristics of water and its roles in the natural and human-made environment.

●	⊙	○
#44 Water Wonders	#38 Every Drop Counts #70 Soil Stories #71 Watch on Wetlands	

**Science 6.6** The student will investigate and understand the properties of air and the structure and dynamics of the Earth's atmosphere.

●	⊙	○
#73 Waste Watchers	#31 Plant a Tree #72 Air We Breathe #86 Our Changing World	#28 Air Plants #85 In the Driver's Seat

**Science 6.7** The student will investigate and understand the natural processes and human interactions that affect watershed systems.

●	⊙	○
#38 Every Drop Counts #44 Water Wonders #48 Field, Forest, & Stream #71 Watch on Wetlands	#70 Soil Stories	

**Science 6.8** The student will investigate and understand the organization of the solar system and the relationships among the various bodies that comprise it.

●	⊙	○
	#86 Our Changing World	#18 Tale of the Sun

**Science 6.9** The student will investigate and understand public policy decisions relating to the environment.

●	⊙	○
#19 Values on the Line #32 A Forest of Many Uses #49 Tropical Treehouse #50 400-Acre Wood #56 We Can Work It Out #69 Forest for the Trees	#14 Renewable or Not? #33 Forest Consequences #35 Loving It Too Much #37 Talking Trash, Not! #38 Every Drop Counts #52 A Look at Aluminum #57 Democracy in Action #59 Power of Print #60 Publicize It! #71 Watch on Wetlands #73 Waste Watchers #83 Reduce, Reuse, Recycle #88 Life on the Edge #89 Trees for Many Reasons #91 In the Good Old Days #92 A Look at Lifestyles #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#5 Poet-Tree #12 Tree Treasures #13 We All Need Trees #15 A Few of My Favorite Things #17 People of the Forest #20 Environmental Exchange Box #30 Three Cheers for Trees #34 Who Works in This Forest? #36 Pollution Search #39 Energy Sleuths #40 Then and Now #51 Make Your Own Paper #58 There Ought To Be a Law #70 Soil Stories #72 Air We Breathe #75 Tipi Talk #77 Trees In Trouble #82 Resource-Go-Round #86 Our Changing World #90 The Native Way #95 Did You Notice?

**Life Science LS.1** The student will plan and conduct investigations.

●	⊙	○
#9 Planet of Plenty #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms #29 Rain Reasons #41 How Plants Grow #70 Soil Stories #71 Watch on Wetlands #77 Trees In Trouble	#27 Every Tree for Itself #48 Field, Forest, and Stream #50 400-Acre Wood #67 How Big Is Your Tree? #78 Signs of Fall #80 Nothing Succeeds Like Succession #81 Living With Fire	#28 Air Plants #38 Every Drop Counts #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #44 Water Wonders #47 Are Vacant Lots Vacant? #65 Bursting Buds #73 Waste Watchers

**Life Science LS.3** The student will investigate and understand that living things show patterns of cellular organization.

●	◎	○
#76 Tree Cookies		#61 The Closer You Look

**Life Science LS.4** The student will investigate and understand that the basic needs of organisms must be met in order to carry out life processes.

●	◎	○
#27 Every Tree for Itself #28 Air Plants #41 How Plants Grow #42 Sunlight and Shades of Green #63 Tree Factory #70 Soil Stories #76 Tree Cookies #77 Trees In Trouble #88 Life on the Edge	#21 Adopt a Tree #23 The Fallen Log #24 Nature's Recyclers #29 Rain Reasons #31 Plant a Tree #45 Web of Life #48 Field, Forest, and Stream #65 Bursting Buds #71 Watch on Wetlands #75 Tipi Talk #86 Our Changing World	#43 Have Seeds Will Travel #49 Tropical Treehouse #55 Planning the Ideal Community #67 How Big Is Your Tree? #78 Signs of Fall #80 Nothing Succeeds Like Succession

**Life Science LS.5** The student will investigate and understand classification of organisms.

●	◎	○
#11 Can It Be Real? #64 Looking At Leaves #68 Name That Tree	#2 Get In Touch With Trees #21 Adopt a Tree #43 Have Seeds Will Travel #61 The Closer You Look #65 Bursting Buds #67 How Big Is Your Tree? #71 Watch on Wetlands #78 Signs of Fall	

**Life Science LS.6** The student will investigate and understand the basic physical and chemical processes of photosynthesis and its importance to plant and animal life.

●	◎	○
#28 Air Plants #42 Sunlight and Shades of Green	#21 Adopt a Tree #27 Every Tree for Itself #41 How Plants Grow	#49 Tropical Treehouse #70 Soil Stories #78 Signs of Fall

**Life Science LS.7** The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment.

●	◎	○
#22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #29 Rain Reasons #44 Water Wonders #45 Web of Life #48 Field, Forest, and Stream	#31 Plant a Tree #41 How Plants Grow #43 Have Seeds Will Travel #49 Tropical Treehouse #71 Watch on Wetlands #86 Our Changing World	#67 How Big Is Your Tree? #70 Soil Stories #80 Nothing Succeeds Like Succession

**Life Science LS.8** The student will investigate and understand that interactions exist among members of a population.

●	⊙	○
#26 Dynamic Duos #27 Every Tree for Itself	#49 Tropical Treehouse #71 Watch on Wetlands #76 Tree Cookies #77 Trees in Trouble	#67 How Big Is Your Tree? #69 Forest for the Trees #80 Nothing Succeeds Like Succession #90 The Native Way

**Life Science LS.9** The student will investigate and understand interactions among populations in a biological community.

●	⊙	○
#8 The Forest of S. T. Shrew #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #26 Dynamic Duos #45 Web of Life #50 400-Acre Wood #88 Life on the Edge	#9 Planet of Plenty #25 Birds and Worms #27 Every Tree for Itself #33 Forest Consequences #47 Are Vacant Lots Vacant? #49 Tropical Treehouse #67 How Big Is Your Tree? #69 Forest for the Trees #86 Our Changing World	#7 Habitat Pen Pals #48 Field, Forest, and Stream #61 The Closer You Look #71 Watch on Wetlands #76 Tree Cookies

**Life Science LS.10** The student will investigate and understand how organisms adapt to biotic and abiotic factors in a biome.

●	⊙	○
#7 Habitat Pen Pals #10 Charting Diversity #71 Watch on Wetlands	#8 The Forest of S. T. Shrew #9 Planet of Plenty #22 Trees As Habitats #25 Birds and Worms #26 Dynamic Duos #29 Rain Reasons #48 Field, Forest, and Stream #49 Tropical Treehouse	#69 Forest for the Trees #70 Soil Stories #86 Our Changing World

**Life Science LS.11** The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic and change over time (daily, seasonal, and long term).

●	⊙	○
#50 400-Acre Wood #71 Watch on Wetlands #86 Our Changing World	#23 The Fallen Log #24 Nature's Recyclers #25 Birds and Worms #49 Tropical Treehouse #69 Forest for the Trees #76 Tree Cookies #80 Nothing Succeeds Like Succession #81 Living With Fire #88 Life on the Edge	#67 How Big Is Your Tree? #77 Trees In Trouble #78 Signs of Fall

**Life Science LS.12** The student will investigate and understand the relationships between ecosystem dynamics and human activity.

●	◎	○
#14 Renewable or Not? #19 Values on the Line #49 Tropical Treehouse #50 400-Acre Wood #69 Forest for the Trees #71 Watch on Wetlands #73 Waste Watchers #86 Our Changing World #88 Life on the Edge	#12 Tree Treasures #13 We All Need Trees #15 A Few of My Favorite Things #16 Pass the Plants, Please #29 Rain Reasons #31 Plant a Tree #32 A Forest of Many Uses #33 Forest Consequences #35 Loving It Too Much #36 Pollution Search #38 Every Drop Counts #40 Then and Now #52 A Look at Aluminum #54 I'd Like to Visit a Place Where... #80 Nothing Succeeds Like Succession #81 Living With Fire #84 A Peek at Packaging #89 Trees for Many Reasons #90 The Native Way #91 In the Good Old Days #92 A Look at Lifestyles #94 Where Are the Cedars of Lebanon?	#5 Poet-Tree #21 Adopt a Tree #22 Trees As Habitats #30 Three Cheers for Trees #55 Planning the Ideal Community #57 Democracy in Action #58 There Ought To Be a Law #70 Soil Stories #75 Tipi Talk #77 Trees in Trouble #85 In the Driver's Seat #95 Did You Notice? #96 Improve Your Place

**Life Science LS.14** The student will investigate and understand that organisms change over time.

●	◎	○
#11 Can It Be Real?	#20 Environmental Exchange Box #49 Tropical Treehouse #86 Our Changing World #88 Life on the Edge	#50 400-Acre Wood

**Physical Science PS.1** The student will plan and conduct investigations.

●	◎	○
		#28 Air Plants #42 Sunlight and Shades of Green #85 In the Driver's Seat

**Physical Science PS.5** The student will investigate and understand changes in matter and the relationship of these changes to the law of Conservation of Matter and Energy.

●	◎	○
		#28 Air Plants #42 Sunlight and Shades of Green #85 In the Driver's Seat

**Physical Science PS.10** The student will investigate and understand scientific principles and technological applications of work, force, and motion.

●	⊙	○
		#85 In the Driver's Seat

**Earth Science ES.1** The student will plan and conduct investigations.

●	⊙	○
	#85 In the Driver's Seat	#50 400-Acre Wood

**Earth Science ES.3** The student will investigate and understand how to read and interpret maps, globes, charts, and imagery.

●	⊙	○
	#29 Rain Reasons #50 400-Acre Wood #55 Planning the Ideal Community	

**Earth Science ES.7** The student will investigate and understand the differences between renewable and nonrenewable resources.

●	⊙	○
#14 Renewable or Not? #15 A Few of My Favorite Things #52 A Look at Aluminum #73 Waste Watchers #85 In the Driver's Seat	#39 Energy Sleuths #50 400-Acre Wood #51 Make Your Own Paper #82 Resource-Go-Round #83 Reduce, Reuse, Recycle #84 A Peek at Packaging	#38 Every Drop Counts

**Earth Science ES.9** The student will investigate and understand how freshwater resources are influenced by geological processes and the activities of humans.

●	⊙	○
	#44 Water Wonders #50 400-Acre Wood #70 Soil Stories	#38 Every Drop Counts

**Earth Science ES.11** The student will investigate and understand that oceans are complex, interactive physical, chemical, and biological systems and are subject to long- and short-term variations.

●	⊙	○
	#44 Water Wonders #45 Web of Life	#86 Our Changing World

**Earth Science ES.12** The student will investigate and understand the origin and evolution of the atmosphere and the interrelationship of geological processes, biological processes, and human activities on its composition and dynamics.

●	⊙	○
	#31 Plant a Tree #73 Waste Watchers #85 In the Driver's Seat #86 Our Changing World	

**Earth Science ES.13** The student will investigate and understand that energy transfer between the sun, Earth, and the Earth's atmosphere drives weather and climate on Earth.

●	⊙	○
	#29 Rain Reasons	

# ENGLISH STANDARDS OF LEARNING

**English K.1** The student will demonstrate growth in the use of oral language.

●	◎	○
	#4 Sounds Around #8 The Forest of S. T. Shrew #18 Tale of the Sun #22 Trees As Habitats #24 Nature's Recyclers #36 Pollution Search #78 Signs of Fall #87 Earth Manners #95 Did You Notice?	#2 Get In Touch With Trees #12 Tree Treasures #54 I'd Like to Visit a Place Where...

**English K.2** The student will use listening and speaking vocabularies.

●	◎	○
#1 The Shape of Things	#18 Tale of the Sun #22 Trees As Habitats #24 Nature's Recyclers #41 How Plants Grow #51 Make Your Own Paper #78 Signs of Fall #87 Earth Manners #95 Did You Notice?	#8 The Forest of S. T. Shrew #21 Adopt a Tree #54 I'd Like to Visit a Place Where...

**English K.3** The student will build oral communication skills.

●	◎	○
	#6 Picture This! #51 Make Your Own Paper #87 Earth Manners #95 Did You Notice?	#2 Get In Touch With Trees #18 Tale of the Sun #41 How Plants Grow #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #54 I'd Like to Visit a Place Where...

**English K.7** The student will develop an understanding of basic phonetic principles.

●	◎	○
	#54 I'd Like to Visit a Place Where...	

**English K.8** The student will demonstrate comprehension of fiction and nonfiction.

●	◎	○
#18 Tale of the Sun #36 Pollution Search	#87 Earth Manners	

**English K.11** The student will write to communicate ideas.

●	◎	○
#1 The Shape of Things	#21 Adopt a Tree #24 Nature's Recyclers #46 School Yard Safari #78 Signs of Fall #95 Did You Notice?	#20 Environmental Exchange Box #22 Trees As Habitats

**English 1.1** The student will continue to demonstrate growth in the use of oral language.

●	◎	○
	#4 Sounds Around #6 Picture This! #8 The Forest of S. T. Shrew #18 Tale of the Sun #22 Trees As Habitats #24 Nature's Recyclers #31 Plant a Tree #32 A Forest of Many Uses #36 Pollution Search #51 Make Your Own Paper #55 Planning the Ideal Community #78 Signs of Fall #87 Earth Manners #89 Trees for Many Reasons #95 Did You Notice?	#2 Get In Touch With Trees #41 How Plants Grow #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #54 I'd Like to Visit a Place Where...

**English 1.2** The student will continue to expand and use listening and speaking vocabularies.

●	◎	○
	#1 The Shape of Things #18 Tale of the Sun #22 Trees As Habitats #24 Nature's Recyclers #87 Earth Manners #95 Did You Notice?	#8 The Forest of S. T. Shrew #43 Have Seeds Will Travel #54 I'd Like to Visit a Place Where... #77 Trees In Trouble

**English 1.3** The student will adapt or change oral language to fit the situation.

●	◎	○
	#31 Plant a Tree #32 A Forest of Many Uses #51 Make Your Own Paper #78 Signs of Fall #87 Earth Manners #89 Trees for Many Reasons #95 Did You Notice?	#2 Get In Touch With Trees #6 Picture This! #12 Tree Treasures #18 Tale of the Sun #41 How Plants Grow #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #54 I'd Like to Visit a Place Where...

**English 1.6** The student will apply phonetic principles to read and spell.

●	◎	○
	#54 I'd Like to Visit a Place Where...	

**English 1.8** The student will read familiar stories, poems, or passages with fluency and expression.

●	◎	○
	#54 I'd Like to Visit a Place Where...	

**English 1.9** The student will read and demonstrate comprehension of a variety of fiction and nonfiction.

●	◎	○
	#36 Pollution Search #87 Earth Manners #89 Trees for Many Reasons	

**English 1.10** The student will use simple reference materials.

●	◎	○
	#54 I'd Like to Visit a Place Where...	

**English 1.11** The student will print legibly.

●	◎	○
		#8 The Forest of S. T. Shrew #76 Tree Cookies #78 Signs of Fall

**English 1.12** The student will write to communicate ideas.

●	◎	○
	#21 Adopt a Tree #24 Nature's Recyclers #31 Plant a Tree	#8 The Forest of S. T. Shrew #20 Environmental Exchange Box #22 Trees As Habitats

**English 2.1** The student will demonstrate an understanding of oral language structure.

●	◎	○
	#22 Trees As Habitats #24 Nature's Recyclers #87 Earth Manners	

**English 2.2** The student will continue to expand listening and speaking vocabularies.

●	◎	○
	#22 Trees As Habitats #24 Nature's Recyclers #87 Earth Manners #95 Did You Notice?	#8 The Forest of S.T. Shrew #12 Tree Treasures #18 Tale of the Sun #54 I'd Like to Visit a Place Where... #77 Trees In Trouble

**English 2.3** The student will use oral communication skills.

●	◎	○
	#6 Picture This! #22 Trees As Habitats #24 Nature's Recyclers #31 Plant a Tree #32 A Forest of Many Uses #51 Make Your Own Paper #55 Planning the Ideal Community #78 Signs of Fall #87 Earth Manners #89 Trees for Many Reasons #95 Did You Notice?	#2 Get In Touch With Trees #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #54 I'd Like to Visit a Place Where...

**English 2.4** The student will use phonetic strategies when reading and writing.

●	◎	○
		#18 Tale of the Sun

**English 2.5** The student will use meaning clues and language structure when reading.

●	◎	○
		#18 Tale of the Sun

**English 2.7** The student will read fiction and nonfiction, using a variety of strategies independently.

●	◎	○
	#54 I'd Like to Visit a Place Where...	#18 Tale of the Sun

**English 2.8** The student will demonstrate comprehension of fiction and nonfiction.

●	◎	○
	#8 The Forest of S. T. Shrew #18 Tale of the Sun #36 Pollution Search #87 Earth Manners #89 Trees for Many Reasons	

**English 2.9** The student will demonstrate comprehension of information in reference materials.

●	◎	○
		#21 Adopt a Tree #46 School Yard Safari

**English 2.11** The student will write stories, letters, and simple explanations.

●	◎	○
	#21 Adopt a Tree #24 Nature's Recyclers #31 Plant a Tree	#8 The Forest of S. T. Shrew #20 Environmental Exchange Box #22 Trees As Habitats

**English 3.1** The student will use effective communication skills in group activities.

●	◎	○
	#4 Sounds Around #6 Picture This! #18 Tale of the Sun #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #32 A Forest of Many Uses #34 Who Works in This Forest? #51 Make Your Own Paper #55 Planning the Ideal Community #87 Earth Manners #95 Did You Notice?	#12 Tree Treasures #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #44 Water Wonders #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #54 I'd Like to Visit a Place Where... #58 There Ought To Be a Law #78 Signs of Fall #79 Tree Lifecycle

**English 3.2** The student will present brief oral reports.

●	◎	○
	#6 Picture This! #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers	

**English 3.3** The student will apply word-analysis skills when reading.

●	◎	○
	#54 I'd Like to Visit a Place Where...	#2 Get In Touch With Trees #18 Tale of the Sun

**English 3.4** The student will use strategies to read a variety of fiction and nonfiction materials.

●	◎	○
	#7 Habitat Pen Pals #8 The Forest of S. T. Shrew #54 I'd Like to Visit a Place Where...	#18 Tale of the Sun

**English 3.5** The student will read and demonstrate comprehension of fiction.

●	◎	○
	#7 Habitat Pen Pals #8 The Forest of S. T. Shrew #78 Signs of Fall #80 Nothing Succeeds Like Succession #87 Earth Manners #89 Trees for Many Reasons	#4 Sounds Around #18 Tale of the Sun #77 Trees In Trouble

**English 3.6** The student will continue to read and demonstrate comprehension of nonfiction.

●	◎	○
	#34 Who Works in this Forest? #49 Tropical Treehouse #59 Power of Print	

**English 3.7** The student will demonstrate comprehension of information from a variety of print resources.

●	◎	○
	#49 Tropical Treehouse #76 Tree Cookies #95 Did You Notice?	#21 Adopt a Tree #46 School Yard Safari #58 There Ought To Be a Law #59 Power of Print #88 Life on the Edge

**English 3.10** The student will write stories, letters, simple explanations, and short reports across all content areas.

●	◎	○
#7 Habitat Pen Pals	#21 Adopt a Tree #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #44 Water Wonders #49 Tropical Treehouse	#2 Get In Touch With Trees #8 The Forest of S. T. Shrew #20 Environmental Exchange Box #22 Trees As Habitats #46 School Yard Safari #59 Power of Print #78 Signs of Fall

**English 4.1** The student will use effective oral communication skills in a variety of settings.

●	◎	○
	#4 Sounds Around #11 Can It Be Real? #13 We All Need Trees #18 Tale of the Sun #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #32 A Forest of Many Uses #34 Who Works in This Forest? #45 Web of Life #51 Make Your Own Paper #55 Planning the Ideal Community #87 Earth Manners #89 Trees for Many Reasons #90 The Native Way #92 A Look at Lifestyles #95 Did You Notice?	#12 Tree Treasures #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #44 Water Wonders #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #53 On the Move #54 I'd Like to Visit a Place Where... #58 There Ought To Be a Law #78 Signs of Fall #79 Tree Lifecycle

**English 4.2** The student will make and listen to oral presentations and reports.

●	◎	○
	#9 Planet of Plenty #11 Can It Be Real? #13 We All Need Trees #39 Energy Sleuths #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #59 Power of Print #91 In the Good Old Days	#53 On the Move #54 I'd Like to Visit a Place Where...

**English 4.3** The student will read fiction and nonfiction with fluency and accuracy.

●	◎	○
	#42 Sunlight and Shades of Green	#69 Forest for the Trees

**English 4.4** The student will read and demonstrate comprehension of fiction.

●	⊙	○
	#7 Habitat Pen Pals #18 Tale of the Sun #90 The Native Way	#4 Sounds Around #8 The Forest of S. T. Shrew #13 We All Need Trees #59 Power of Print

**English 4.5** The student will read and demonstrate comprehension of nonfiction.

●	⊙	○
#90 The Native Way	#7 Habitat Pen Pals #26 Dynamic Duos #39 Energy Sleuths #45 Web of Life #49 Tropical Treehouse #80 Nothing Succeeds Like Succession #92 A Look at Lifestyles #93 Paper Civilizations	#4 Sounds Around #18 Tale of the Sun #34 Who Works in This Forest? #69 Forest for the Trees #77 Trees In Trouble

**English 4.6** The student will demonstrate comprehension of information resources to research a topic.

●	⊙	○
	#10 Charting Diversity #11 Can It Be Real? #39 Energy Sleuths #45 Web of Life #49 Tropical Treehouse #76 Tree Cookies #90 The Native Way #91 In the Good Old Days #92 A Look at Lifestyles #95 Did You Notice?	#21 Adopt a Tree #46 School Yard Safari #58 There Ought To Be a Law #59 Power of Print #81 Living With Fire #82 Resource-Go-Round #88 Life on the Edge

**English 4.7** The student will write effective narratives, poems, and explanations.

●	⊙	○
#7 Habitat Pen Pals	#5 Poet-Tree #9 Planet of Plenty #21 Adopt a Tree #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #38 Every Drop Counts #39 Energy Sleuths #44 Water Wonders #91 In the Good Old Days	#2 Get In Touch With Trees #4 Sounds Around #8 The Forest of S. T. Shrew #11 Can It Be Real? #20 Environmental Exchange Box #22 Trees As Habitats #46 School Yard Safari #54 I'd Like to Visit a Place Where... #59 Power of Print #78 Signs of Fall #90 The Native Way

**English 4.8** The student will edit writing for correct capitalization, spelling, punctuation, and sentence structure.

●	⊙	○
#7 Habitat Pen Pals		#20 Environmental Exchange Box

**English 5.1** The student will listen, draw conclusions, and share responses in subject-related group learning activities.

●	◎	○
#70 Soil Stories	#4 Sounds Around #11 Can It Be Real? #13 We All Need Trees #18 Tale of the Sun #22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #32 A Forest of Many Uses #34 Who Works in This Forest? #45 Web of Life #51 Make Your Own Paper #55 Planning the Ideal Community #56 We Can Work It Out #89 Trees for Many Reasons #90 The Native Way #92 A Look at Lifestyles #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#12 Tree Treasures #17 People of the Forest #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #44 Water Wonders #46 School Yard Safari #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #52 A Look at Aluminum #53 On the Move #54 I'd Like to Visit a Place Where... #58 There Ought To Be a Law #78 Signs of Fall #79 Tree Lifecycle

**English 5.2** The student will use effective nonverbal communication skills.

●	◎	○
		#52 A Look at Aluminum #70 Soil Stories

**English 5.3** The student will make planned oral presentations.

●	◎	○
#17 People of the Forest #70 Soil Stories	#9 Planet of Plenty #39 Energy Sleuths #47 Are Vacant Lots Vacant? #48 Field, Forest, and Stream #56 We Can Work It Out #91 In the Good Old Days #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#52 A Look at Aluminum #53 On the Move #57 Democracy in Action

**English 5.4** The student will read fiction and nonfiction with fluency and accuracy.

●	◎	○
	#42 Sunlight and Shades of Green	#18 Tale of the Sun #60 Publicize It! #69 Forest for the Trees

**English 5.5** The student will read and demonstrate comprehension of fiction.

●	⊙	○
	#5 Poet-Tree #7 Habitat Pen Pals #18 Tale of the Sun #36 Pollution Search #89 Trees for Many Reasons #92 A Look at Lifestyles	#4 Sounds Around #8 The Forest of S. T. Shrew #70 Soil Stories #77 Trees In Trouble #80 Nothing Succeeds Like Succession

**English 5.6** The student will read and demonstrate comprehension of nonfiction.

●	⊙	○
#17 People of the Forest #90 The Native Way	#7 Habitat Pen Pals #13 We All Need Trees #26 Dynamic Duos #39 Energy Sleuths #59 Power of Print #60 Publicize It! #93 Paper Civilizations #94 Where Are the Cedars of Lebanon?	#34 Who Works in This Forest? #70 Soil Stories

**English 5.7** The student will demonstrate comprehension of information from a variety of resources.

●	⊙	○
	#10 Charting Diversity #11 Can It Be Real? #39 Energy Sleuths #45 Web of Life #49 Tropical Treehouse #57 Democracy in Action #59 Power of Print #60 Publicize It! #76 Tree Cookies #90 The Native Way #91 In the Good Old Days #92 A Look at Lifestyles #95 Did You Notice?	#46 School Yard Safari #58 There Ought To Be a Law #81 Living With Fire #82 Resource-Go-Round #88 Life on the Edge

**English 5.8** The student will write for a variety of purposes: to describe, to inform, to entertain, and to explain.

●	◎	○
#5 Poet-Tree #7 Habitat Pen Pals #17 People of the Forest	#9 Planet of Plenty #21 Adopt a Tree #23 The Fallen Log #24 Nature's Recyclers #31 Plant a Tree #38 Every Drop Counts #39 Energy Sleuths #44 Water Wonders #48 Field, Forest, and Stream #49 Tropical Treehouse #57 Democracy in Action #59 Power of Print #60 Publicize It! #91 In the Good Old Days #96 Improve Your Place	#2 Get In Touch With Trees #4 Sounds Around #8 The Forest of S. T. Shrew #11 Can It Be Real? #20 Environmental Exchange Box #22 Trees As Habitats #46 School Yard Safari  #52 A Look at Aluminum #54 I'd Like to Visit a Place Where... #70 Soil Stories #78 Signs of Fall

**English 5.9** The student will edit writing for correct grammar, capitalization, spelling, punctuation, and sentence structure.

●	◎	○
#7 Habitat Pen Pals #17 People of the Forest	#60 Publicize It!	#20 Environmental Exchange Box #31 Plant a Tree #54 I'd Like to Visit a Place Where...

**English 6.1** The student will analyze oral participation in small-group activities.

●	◎	○
#19 Values on the Line	#22 Trees As Habitats #23 The Fallen Log #24 Nature's Recyclers #55 Planning the Ideal Community #56 We Can Work It Out #89 Trees for Many Reasons #92 A Look at Lifestyles	#12 Tree Treasures #18 Tale of the Sun #49 Tropical Treehouse #54 I'd Like to Visit a Place Where... #57 Democracy in Action #69 Forest for the Trees #70 Soil Stories #94 Where Are the Cedars of Lebanon?

**English 6.2** The student will listen critically and express opinions in oral presentations.

●	◎	○
#19 Values on the Line	#9 Planet of Plenty #11 Can It Be Real? #39 Energy Sleuths #50 400-Acre Wood #56 We Can Work It Out #70 Soil Stories #89 Trees for Many Reasons #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#49 Tropical Treehouse #54 I'd Like to Visit a Place Where...

**English 6.3** The student will read and learn the meanings of unfamiliar words and phrases.

●	⊙	○
	#42 Sunlight and Shades of Green #49 Tropical Treehouse	#60 Publicize It! #69 Forest for the Trees

**English 6.4** The student will read and demonstrate comprehension of a variety of fiction, narrative nonfiction, and poetry.

●	⊙	○
#5 Poet-Tree	#7 Habitat Pen Pals #33 Forest Consequences #91 In the Good Old Days	#4 Sounds Around #8 The Forest of S. T. Shrew #13 We All Need Trees #17 People of the Forest #18 Tale of the Sun

**English 6.5** The student will read and demonstrate comprehension of a variety of informational selections.

●	⊙	○
#17 People of the Forest #90 The Native Way	#7 Habitat Pen Pals #10 Charting Diversity #13 We All Need Trees #18 Tale of the Sun #26 Dynamic Duos #29 Rain Reasons #33 Forest Consequences #39 Energy Sleuths #45 Web of Life #49 Tropical Treehouse #56 We Can Work It Out #57 Democracy in Action #59 Power of Print #60 Publicize It! #72 Air We Breathe #76 Tree Cookies #80 Nothing Succeeds Like Succession #83 Reduce, Reuse, Recycle #89 Trees for Many Reasons #91 In the Good Old Days #92 A Look at Lifestyles #93 Paper Civilizations #94 Where Are the Cedars of Lebanon? #95 Did You Notice?	#4 Sounds Around #8 The Forest of S. T. Shrew #11 Can It Be Real? #21 Adopt a Tree #34 Who Works in This Forest? #35 Loving It Too Much\ #36 Pollution Search #52 A Look at Aluminum #58 There Ought to be a Law #69 Forest for the Trees #77 Trees In Trouble #81 Living With Fire #82 Resource-Go-Round #88 Life on the Edge

**English 6.6** The student will write narratives, descriptions, and explanations.

●	◎	○
#7 Habitat Pen Pals #17 People of the Forest	#9 Planet of Plenty #38 Every Drop Counts #39 Energy Sleuths #44 Water Wonders #54 I'd Like to Visit a Place Where #59 Power of Print #60 Publicize It! #91 In the Good Old Days #96 Improve Your Place	#2 Get In Touch With Trees #4 Sounds Around #8 The Forest of S. T. Shrew #11 Can It Be Real? #20 Environmental Exchange Box  #52 A Look at Aluminum #70 Soil Stories #78 Signs of Fall

**English 6.7** The student will edit writing for correct grammar, capitalization, punctuation, spelling, and sentence structure.

●	◎	○
#7 Habitat Pen Pals #17 People of the Forest	#59 Power of Print #60 Publicize It!	#20 Environmental Exchange Box #31 Plant a Tree #54 I'd Like to Visit a Place Where...

**English 7.1** The student will give and seek information in conversations, in group discussions, and in oral presentations.

●	◎	○
#19 Values on the Line #70 Soil Stories #71 Watch on Wetlands	#11 Can It Be Real? #22 Trees As Habitats #23 The Fallen Log #31 Plant a Tree #32 A Forest of Many Uses #33 Forest Consequences #39 Energy Sleuths #45 Web of Life #48 Field, Forest, and Stream #50 400-Acre Wood #51 Make Your Own Paper #56 We Can Work It Out #72 Air We Breathe #89 Trees for Many Reasons #90 The Native Way #92 A Look at Lifestyles #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#29 Rain Reasons #35 Loving It Too Much #41 How Plants Grow #42 Sunlight and Shades of Green #43 Have Seeds Will Travel #44 Water Wonders #46 School Yard Safari #47 Are Vacant Lots Vacant? #49 Tropical Treehouse #52 A Look at Aluminum #53 On the Move #54 I'd Like to Visit a Place Where... #55 Planning the Ideal Community #57 Democracy in Action #58 There Ought To Be a Law #69 Forest for the Trees

**English 7.2** The student will identify the relationship between a speaker's verbal and nonverbal messages.

●	◎	○
	#56 We Can Work It Out	#19 Values on the Line #50 400-Acre Wood #52 A Look at Aluminum #57 Democracy in Action #70 Soil Stories

**English 7.3** The student will describe persuasive messages in nonprint media, including television, radio, and video.

●	⊙	○
#60 Publicize It!	#56 We Can Work It Out #92 A Look at Lifestyles	#19 Values on the Line #39 Energy Sleuths #57 Democracy in Action #71 Watch on Wetlands #89 Trees for Many Reasons

**English 7.4** The student will read to determine the meanings and pronunciations of unfamiliar words and phrases.

●	⊙	○
	#2 Get In Touch With Trees #5 Poet-Tree	

**English 7.5** The student will read and demonstrate comprehension of a variety of fiction, narrative nonfiction, and poetry.

●	⊙	○
	#5 Poet-Tree #59 Power of Print	

**English 7.6** The student will read and demonstrate comprehension of a variety of informational texts.

●	⊙	○
#17 People of the Forest #90 The Native Way	#26 Dynamic Duos #33 Forest Consequences #39 Energy Sleuths #45 Web of Life #49 Tropical Treehouse #50 400-Acre Wood #59 Power of Print #60 Publicize It! #71 Watch on Wetlands #72 Air We Breathe #80 Nothing Succeeds Like Succession #89 Trees for Many Reasons #91 In the Good Old Days #92 A Look at Lifestyles #93 Paper Civilizations #94 Where Are the Cedars of Lebanon?	#35 Loving It Too Much #69 Forest for the Trees #77 Trees In Trouble

**English 7.7** The student will apply knowledge of appropriate reference materials.

●	⊙	○
#45 Web of Life	#10 Charting Diversity #11 Can It Be Real? #39 Energy Sleuths #57 Democracy in Action #59 Power of Print #60 Publicize It! #83 Reduce, Reuse, Recycle #90 The Native Way #91 In the Good Old Days #92 A Look at Lifestyles #95 Did You Notice?	#31 Plant a Tree #50 400-Acre Wood #52 A Look at Aluminum #58 There Ought To Be a Law #70 Soil Stories #76 Tree Cookies #82 Resource-Go-Round #88 Life on the Edge

**English 7.8** The student will develop narrative, expository, and persuasive writing.

●	⊙	○
	#21 Adopt a Tree #23 The Fallen Log #31 Plant a Tree #38 Every Drop Counts #39 Energy Sleuths #44 Water Wonders #50 400-Acre Wood #57 Democracy in Action #59 Power of Print #60 Publicize It! #71 Watch on Wetlands #91 In the Good Old Days #96 Improve Your Place	#11 Can It Be Real? #17 People of the Forest #20 Environmental Exchange Box #22 Trees As Habitats #52 A Look at Aluminum #54 I'd Like to Visit a Place Where... #70 Soil Stories

**English 7.9** The student will edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing.

●	⊙	○
#17 People of the Forest	#59 Power of Print #60 Publicize It!	#20 Environmental Exchange Box #31 Plant a Tree #54 I'd Like to Visit a Place Where...

**English 8.1** The student will use interviewing techniques to gain information.

●	⊙	○
#19 Values on the Line #40 Then and Now #71 Watch on Wetlands	#56 We Can Work It Out	#51 Make Your Own Paper #52 A Look at Aluminum #54 I'd Like to Visit a Place Where... #57 Democracy in Action #72 Air We Breathe #95 Did You Notice? #96 Improve Your Place

**English 8.2** The student will develop and deliver oral presentations in groups and individually.

●	◎	○
	#11 Can It Be Real? #39 Energy Sleuths #50 400-Acre Wood #56 We Can Work It Out #89 Trees for Many Reasons #94 Where Are the Cedars of Lebanon? #96 Improve Your Place	#54 I'd Like to Visit a Place Where...

**English 8.3** The student will analyze mass media messages.

●	◎	○
#60 Publicize It!	#57 Democracy In Action #59 Power of Print #83 Reduce, Reuse, Recycle #90 The Native Way #92 A Look at Lifestyles	#71 Watch on Wetlands #88 Life on the Edge

**English 8.4** The student will apply knowledge of word origins, derivations, inflections, analogies, and figurative language to extend vocabulary development.

●	◎	○
	#59 Power of Print	#5 Poet-Tree #60 Publicize It!

**English 8.5** The student will read and analyze a variety of narrative and poetic forms.

●	◎	○
	#5 Poet-Tree #59 Power of Print #91 In the Good Old Days	

**English 8.6** The student will read, comprehend, and analyze a variety of informational sources.

●	◎	○
#17 People of the Forest #90 The Native Way	#11 Can It Be Real? #26 Dynamic Duos #33 Forest Consequences #39 Energy Sleuths #50 400-Acre Wood #59 Power of Print #60 Publicize It! #71 Watch on Wetlands #72 Air We Breathe #80 Nothing Succeeds Like Succession #89 Trees for Many Reasons #91 In the Good Old Days #92 A Look at Lifestyles #93 Paper Civilizations	#35 Loving It Too Much #70 Soil Stories #77 Trees In Trouble

**English 8.7** The student will write in a variety of forms, including narrative, expository and persuasive, and informational.

●	◎	○
	#5 Poet-Tree #21 Adopt a Tree #23 The Fallen Log #31 Plant a Tree #38 Every Drop Counts #39 Energy Sleuths #44 Water Wonders #50 400-Acre Wood #57 Democracy in Action #59 Power of Print #60 Publicize It! #71 Watch on Wetlands #91 In the Good Old Days #96 Improve Your Place	#11 Can It Be Real? #17 People of the Forest #20 Environmental Exchange Box #22 Trees As Habitats #52 A Look at Aluminum #54 I'd Like to Visit a Place Where... #90 The Native Way

**English 8.8** The student will edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing.

●	◎	○
#17 People of the Forest	#59 Power of Print #60 Publicize It!	#20 Environmental Exchange Box #31 Plant a Tree #54 I'd Like to Visit a Place Where...

# HISTORY AND SOCIAL SCIENCE STANDARDS OF LEARNING

**HSS K.6** The student will match simple descriptions of work that people do with the names of those jobs.

●	⊙	○
#74 People, Places, Things	#51 Make Your Own Paper	

**HSS K.7** The student will identify the difference between basic needs and wants and recognize that people use money to purchase goods.

●	⊙	○
	#21 Adopt a Tree #74 People, Places, Things	#31 Plant a Tree

**HSS 1.1** The student will interpret information presented in picture time lines to show sequence of events and will distinguish between past and present.

●	⊙	○
		#51 Make Your Own Paper

**HSS 1.4** The student will develop map skills.

●	⊙	○
		#74 People, Places, Things

**HSS 1.5** The student will construct a simple map of a familiar area, using basic map symbols in the map legend.

●	⊙	○
#55 Planning the Ideal Community	#4 Sounds Around #74 People, Places, Things	#47 Are Vacant Lots Vacant?

**HSS 1.6** The student will describe how location, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.

●	⊙	○
#55 Planning the Ideal Community	#53 On the Move	#54 I'd Like to Visit a Place Where...

**HSS 1.7** The student will explain the difference between goods and services and will describe how people are both buyers and sellers of goods and services.

●	⊙	○
	#55 Planning the Ideal Community	#12 Tree Treasures #51 Make Your Own Paper

**HSS 2.1** The student will explain how the contributions of ancient China and Egypt have influenced the present world in terms of architecture, inventions, the calendar, and written language.

●	⊙	○
		#51 Make Your Own Paper

**HSS 2.2** The student will compare the lives and contributions of American Indians (First Americans), with emphasis on the Powhatan of the Eastern Woodland, the Sioux of the Plains, and the Pueblo people of the Southwest.

●	⊙	○
	#18 Tale of the Sun #75 Tipi Talk	

**HSS 2.3** The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.

●	⊙	○
	#53 On the Move	#51 Make Your Own Paper #74 People, Places, Things

**HSS 2.6** The student will demonstrate map skills by constructing simple maps, using title, map, legend, and compass rose.

●	⊙	○
#55 Planning the Ideal Community		

**HSS 2.7** The student will describe the differences between natural resources, human resources, and capital resources.

●	⊙	○
	#12 Tree Treasures #21 Adopt a Tree #55 Planning the Ideal Community #74 People, Places, Things	#16 Pass the Plants, Please #31 Plant a Tree #51 Make Your Own Paper

**HSS 2.9** The student will explain that scarcity (limited resources) requires people to make choices about producing and consuming goods and services.

●	⊙	○
	#21 Adopt a Tree	#31 Plant a Tree #51 Make Your Own Paper

**HSS 3.6** The student will interpret geographic information from maps, tables, graphs, and charts.

●	⊙	○
	#82 Resource-Go-Round	#49 Tropical Treehouse

**HSS 3.7** The student will explain how producers use natural resources, human resources, and capital resources to produce goods and services for consumers.

●	⊙	○
	#12 Tree Treasures #21 Adopt a Tree #82 Resource-Go-Round	#16 Pass the Plants, Please #31 Plant a Tree #51 Make Your Own Paper #89 Trees For Many Reasons

**HSS 3.8** The student will recognize the concepts of specialization and interdependence in the production of goods and services.

●	⊙	○
#82 Resource-Go-Round	#34 Who Works in this Forest?	#12 Tree Treasures #51 Make Your Own Paper #89 Trees For Many Reasons

**HSS 3.9** The student will identify examples of making an economic choice and will explain the idea of opportunity cost.

●	⊙	○
		#89 Trees For Many Reasons

**HSS 3.10** The student will recognize why government is necessary in the classroom, school, and community.

●	⊙	○
#58 There Ought To Be a Law		#4 Sounds Around #10 Charting Diversity #31 Plant a Tree #89 Trees for Many Reasons

**VS.1** The student will develop skills for historical and geographical analysis.

●	⊙	○
	#92 A Look at Lifestyles	#53 On the Move #95 Did You Notice?

**VS.2** The student will demonstrate knowledge of the geography and early inhabitants of Virginia.

●	⊙	○
#90 The Native Way	#92 A Look at Lifestyles	#20 Environmental Exchange Box #54 I'd Like to Visit a Place Where... #89 Trees for Many Reasons

**VS.3** The student will demonstrate knowledge of the first permanent English settlement in America by...

●	⊙	○
		#95 Did You Notice?

**VS.4** The student will demonstrate knowledge of life in the Virginia colony by...

●	⊙	○
		#95 Did You Notice?

**VS.5** The student will demonstrate knowledge of the role of Virginia in the American Revolution by...

●	⊙	○
		#95 Did You Notice?

**VS.9** The student will demonstrate knowledge of twentieth century Virginia by...

●	⊙	○
		#73 Waste Watchers

**VS.10** The student will demonstrate knowledge of government, geography, and economics by...

●	⊙	○
		#73 Waste Watchers

**USI.1** The student will develop skills for historical and geographical analysis, including the ability to....

●	⊙	○
	#95 Did You Notice?	#53 On the Move

**USI.3** The student will demonstrate knowledge of how early cultures developed in North America by...

●	⊙	○
#75 Tipi Talk #90 The Native Way #92 A Look at Lifestyles	#18 Tale of the Sun	#40 Then and Now

**USI.5** The student will demonstrate knowledge of the factors that shaped colonial America by...

●	⊙	○
		#40 Then and Now #95 Did You Notice?

**USI.6** The student will demonstrate knowledge of the causes and results of the American Revolution by...

●	⊙	○
		#95 Did You Notice?

**USI.8** The student will demonstrate knowledge of westward expansion and reform in America from 1801-1861 by...

●	⊙	○
	#92 A Look at Lifestyles	#40 Then and Now #53 On the Move #91 In the Good Old Days

**USII.1** The student will develop skills for historical and geographical analysis, including the ability to....

●	⊙	○
	#95 Did You Notice?	

**USII.2** The student will use maps, globes, photographs, pictures, and tables for...

●	⊙	○
	#85 In the Driver's Seat	

**USII.3** The student will demonstrate knowledge of how life changed after the Civil War by...

●	⊙	○
#90 The Native Way	#92 A Look at Lifestyles	#40 Then and Now

**USII.5** The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by...

●	⊙	○
	#95 Did You Notice?	#40 Then and Now #53 On the Move #91 In the Good Old Days

**USII.7** The student will demonstrate knowledge of the economic, social, and political transformation of the United States and the world between the end of World War II and the present by...

●	⊙	○
		#40 Then and Now #95 Did You Notice?

**USII.8** The student will demonstrate knowledge of the key domestic issues during the second half of the twentieth century by...

●	⊙	○
	#85 In the Driver's Seat #86 Our Changing World	#40 Then and Now #53 On the Move #84 A Peek at Packaging #93 Paper Civilizations #95 Did You Notice?

**CE.1** The student will develop the social studies skills citizenship requires, including the ability to...

●	⊙	○
	#50 400-Acre Wood	#69 Forest for the Trees #95 Did You Notice?

**CE.2** The student will demonstrate knowledge of the foundations of American constitutional government by...

●	⊙	○
	#90 The Native Way	

**CE.3** The student will demonstrate knowledge of citizenship and the rights, duties, and responsibilities of citizens by...

●	⊙	○
#58 There Ought To Be a Law	#50 400-Acre Wood #57 Democracy in Action #71 Watch on Wetlands #96 Improve Your Place	#4 Sounds Around #19 Values on the Line #33 Forest Consequences #35 Loving It Too Much #52 A Look at Aluminum #55 Planning the Ideal Community #56 We Can Work It Out #73 Waste Watchers

**CE.6** The student will demonstrate knowledge of the American constitutional government by...

●	⊙	○
		#50 400-Acre Wood

**CE.7** The student will demonstrate knowledge of how public policy is made at the local, state, and national levels of government by...

●	⊙	○
#58 There Ought To Be a Law	#57 Democracy in Action #71 Watch on Wetlands	#4 Sounds Around #19 Values on the Line #33 Forest Consequences #35 Loving It Too Much #49 Tropical Treehouse #50 400-Acre Wood #73 Waste Watchers

**CE.9** The student will demonstrate knowledge of how economic decisions are made in the marketplace by...

●	⊙	○
	#84 A Peek at Packaging	#50 400-Acre Wood #69 Forest for the Trees #88 Life on the Edge #89 Trees for Many Reasons

**CE.11** The student will demonstrate knowledge of the role of government in the United States economy by...

●	⊙	○
	#56 We Can Work It Out #71 Watch on Wetlands	#19 Values on the Line #31 Plant a Tree #33 Forest Consequences #35 Loving It Too Much #49 Tropical Treehouse #52 A Look at Aluminum #55 Planning the Ideal Community #69 Forest for the Trees #73 Waste Watchers #88 Life on the Edge #89 Trees for Many Reasons

**WHI.1** The student will improve skills in historical research and geographical analysis by...

●	⊙	○
	#94 Where Are the Cedars of Lebanon?	

**WHI.2** The student will demonstrate knowledge of early development of humankind from the Paleolithic Era to the agricultural revolution by...

●	⊙	○
#90 The Native Way		

**WHI.3** The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by...

●	⊙	○
		#93 Paper Civilizations #94 Where Are the Cedars of Lebanon?