

# **Project WET**

## **Curriculum and Activity Guide**

Aligned By Subject  
With  
**The North Carolina Standard Course of Study**  
**Grades K-8**



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# Science

# Science

## Kindergarten

Goal 1: The learner will make observations and build an understanding of similarities and differences in animals.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will make observations and build an understanding of weather concepts.

Objectives: 2.01, 2.03, 2.04

2.01: Observe and report daily weather changes throughout the year.

2.02: Identify different weather features including precipitation, wind, temperature, and cloud cover.

2.03: Identify types of precipitation, changes in wind, force, direction and sky conditions.

**Activity:** A House of Seasons, p. 155  
Poetic Precipitation (K-2 Option), p. 182

Objective 2.04: Observe and determine the effects of weather on human activities.

**Activity:** The Thunderstorm, p. 196

Goal 3: The learner will make observations and build an understanding of the properties of common objects.

Objective 3.03: Describe how objects look, feel, smell, taste, and sound using their own senses.

**Activity:** Stream Sense, p. 191

Goal 4: The learner will use appropriate tools and measurements to increase their ability to describe their world.

**Activity:** *No activity directly applied to this goal.*

## **Grade 1**

Goal 1: The learner will conduct investigation and make observations to build an understanding of the needs of living organisms.

Objective: 1.02: Investigate the needs of a variety of different animals: air, water, food, shelter, and space.

**Activity:** Aqua Bodies (Part I), p. 63  
Aqua Notes, p. 66  
Life Box, p. 76

Goal 2: The learner will make observations and use student-made rules to build an understanding of solid earth materials.

Objective: 2.03: Observe the various components that combine to make soil.

**Activity:** Get the Groundwater Picture (Parts I and II), p. 136

Goal 3: The learner will make observations and conduct investigations to build an understanding of the properties and relationships of objects.

Objectives 3.01, 3.03

3.01: Describe the differences in the properties of solids and liquids.

3.03 Classify solids according to their properties. Color, texture, shape (ability to roll or stack), ability to float or sink in water.

**Activity:** Water Match, p. 50

Goal 4: The learner will make observations and conduct investigations to build an understanding of balance, motion, and weighing objects.

**Activity:** *No activity directly applied to this goal.*

## **Grade 2**

Goal 1: The learner will conduct investigations and build an understanding of animal life cycles.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will conduct investigations and use appropriate tools to build and understanding of the changes in weather.

Objective 2.03: Describe weather using quantitative measures of: temperature, wind direction, wind speed, and precipitation.

**Activity:** The Thunderstorm, p. 196

Objective 2.06: Observe and record weather changes over time and relate to time of day and time of year.

**Activity:** A House of Seasons, p. 155

Goal 3: The learner will observe and conduct investigations to build an understanding of changes in properties.

Objectives: 3.01, 3.02, 3.03

3.01: Identify three states of matter: solid, liquid, and gas.

3.02: Observe changes in state due to heating and cooling of common materials.

3.03: Show that solids, liquids, and gases can be characterized by their properties.

**Activity:** Water Match, p. 50

Objectives: 3.05, 3.06

3.05: Investigate and observe how mixtures can be made by combining solids, liquids, gases and how they can be separated again.

3.06: Observe that a new material is made by combining two or more materials with properties different from the original material.

**Activity:** What's the Solution? p. 54

Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of the concepts of sound.

Objective 4.05: Observe and describe how sounds are made by using a variety of instruments and other "sound makers" including the human vocal cords.

**Activity:** The Thunderstorm, p. 196  
The Rainstick, p. 442

## Grade 3

Goal 1: The learner will conduct investigations and build an understanding of plant growth and adaptations.

Objectives: 1.01, 1.02

1.01: Observe and measure how the quantities and qualities of nutrients, light, and water in the environment affect plant growth.

1.02: Observe and describe how environmental conditions determine how well plants survive and grow in a particular environment.

**Activity:** Thirsty Plants, p. 116  
Water Address, p. 122  
Irrigation Interpretation, p. 254

Goal 2: The learner will conduct investigations to build an understanding of soil properties.

Objective 2 02: Investigate and observe that different soils absorb water at different rates.

**Activity:** Just Passing Through, p. 166  
Wetland Soils in Living Color, p. 212

Objectives: 2.03, 2.04

2.03: Determine the ability of soil to support the growth of many plants, including those important to our food supply.

2.04: Identify the basic components of soil: sand, clay, and humus.

**Activity:** Get the Ground Water Picture (Parts I and II), p.136

Goal 3: The learner will make observations and use appropriate technology to build understanding of the earth/moon/sun system.

**Activity:** *No activity directly applied to this goal.*

Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of the form and function of the skeletal and muscle system of the human body.

**Activity:** *No activity directly applied to this goal.*

## **Grade 4**

Goal 1: The learner will make observations and conduct investigations to build an understanding of animal behavior and adaptation.

Objective 1.01: Observe and describe how all living and nonliving things affect the life of a particular animal including: other animals, plants, weather, and climate.

**Activity:** Life in the Fast Lane, p.79  
Salt Marsh Players, p. 99  
Water Address, p. 122  
Macroinvertebrate Mayhem, p. 322

Goal 2: The learner will conduct investigations and use appropriate technology to build an understanding of the composition and uses of rocks and minerals.

**Activity:** *No activity directly applied to this goal.*

Goal 3: The learner will make observations and conduct investigations to build an understanding of magnetism and electricity.

**Activity:** *No activity directly applied to this goal.*

Goal 4: The learner will conduct investigations and use appropriate technology to build an understanding of how food provides energy and materials for growth and repair of the body.

**Activity:** *No activity directly applied to this goal.*

## **Grade 5**

Goal 1: The learner will conduct investigations to build an understanding of the interdependence of plant and animals.

Objectives: 1.01, 1.03, 1.04, 1.05

- 1.01: Describe and compare several common ecosystems (communities of organisms and their interaction with the environment).
- 1.03: Explain why an ecosystem can support a variety of organisms.
- 1.04: Discuss and determine the role of light, temperature, and soil composition in an ecosystem's capacity to support life.
- 1.05 Determine the interaction of organisms within an ecosystem.

**Activity:** Life in the Fast Lane, p. 79  
Salt Marsh Players, p. 99  
Water Address, p. 122  
Macroinvertebrate Mayhem, p. 322

Goal 2: The learner will make observations and conduct investigations to build an understanding of landforms.

Objectives: 2.01, 2.03, 2.06

- 2.01: Identify and analyze forces that cause change in landforms over time including water and ice, wind, and gravity.
- 2.02: Investigate and discuss the role of the water cycle and how movement of water over and through the landscape helps shape land forms.
- 2.03: Discuss and consider the wearing away and movement of rock and soil in erosion and its importance in forming: canyons, valleys, meanders, and tributaries.
- 2.05: Discuss how the flow of water and the slope of the land affect erosion.
- 2.06: Discuss how the flow of water and the slope of the land affect erosion.

**Activity:** Branching Out, p. 129  
The Great Stony Book, p. 150  
Just Passing Through, p. 166

Goal 3: The learner will conduct investigations and use appropriate technology to build an understanding of weather and climate.

Objective 3.01: Investigate the water cycle including the processes of: evaporation, condensation, precipitation, and run-off.

**Activity:** Incredible Journey, p. 161  
Water Models, p. 201

Objective 3.04: Explain how global atmospheric movement patterns affect local weather.

**Activity:** Piece It Together, p. 174

Objective 3.05: Compile and use weather data to establish a climate record and reveal any trends.

**Activity:** The Thunderstorm, p. 196

Objective 3.06: Discuss and determine the influence of geography on weather and climate: mountains, sea breezes, water bodies.

**Activity:** Great Water Journeys, p. 246

Goal 4: The learner will conduct investigations and use appropriate technologies to build an understanding of forces and motion in technological designs.

Objectives: 4.02, 4.04, 4.05

4.02: Evaluate how pushing or pulling forces can change the position and motion of an object.

4.04: Determine factors that affect motion including: force, friction, inertia, and momentum.

4.05: Build and use a model to solve a mechanical design problem. Devise a test for the model. Evaluate the results of test.

**Activity:** Energetic Water, p. 242

Objective: 4.03: Explain how energy is needed to make machines move: moving air; gravity.

**Activity:** Water in Motion, p. 450

## **Grade 6**

Goal 1: The learner will design and conduct investigations to demonstrate an understanding of scientific inquiry.

Objective 1.05: Analyze evidence to: explain observations, make inferences and predictions, develop the relationship between evidence and explanation.

**Activity:** Adventures in Density, p. 25  
H<sub>2</sub>Olympics, p. 30

Objectives: 1.06, 1.08

1.06: Use mathematics to gather, organize, and present quantitative data resulting from scientific investigations: measurement, analysis of data, graphing, prediction models.

1.08: Use oral and written language to: communicate findings. Defend conclusions of scientific investigations.

**Activity:** Water Meter, p. 271

Goal 2: The learner will demonstrate an understanding of technological design.

**Activity:** *No activity directly applied to this goal.*

Goal 3: The learner will build an understanding of the geological cycles, forces, processes, and agents which shape the lithosphere.

Objective 3.05: Analyze soil properties that can be observed and measured to predict soil quality including: color, horizontal profile, infiltration, soil temperature, structure, consistency, texture, particle size, pH, fertility, and soil moisture.

**Activity:** Capture, Store, and Release, p. 133  
Wetland Soils of Living Color, p. 212  
Get the Ground Water Picture, p. 136

Goal 4: The learner will investigate the cycling of matter.

Objective 4.01: Describe the flow of energy and matter in natural systems: water, nitrogen, carbon dioxide, and oxygen are substances cycled between the living and nonliving environments.

**Activity:** Molecules in Motion, p. 47  
Thirsty Plants, p. 116  
Imagine, p. 157  
Incredible Journey, p. 161  
Water Models, p. 201

Goal 5: The learner will build understanding of the Solar System.

**Activity:** *No activity directly applied to this goal.*

Goal 6: The learner will conduct investigations and examine models and devices to build an understanding of the characteristics of energy transfer and/or transformation.

Objective 6.02: Analyze heat flow through materials or across space from warm objects to cooler objects until both objects are at equilibrium.

**Activity:** Molecules in Motion, p. 47

Objective 6.07: Analyze the Law of Conservation of Energy: conclude that energy cannot be created or destroyed, but only changed from one form into another; conclude that the amount of energy stays the same, although within the process some energy is always converted to heat; and some systems transform energy with less loss of heat than others.

**Activity:** Cold Cash in the Icebox, p. 373

Goal 7: The learner will conduct investigations and use technologies and information systems to build an understanding of population dynamics.

Objective 7.01: Describe ways in which organisms interact with each other and with nonliving parts of the environment: coexistence/cooperation/competition.

**Activity:** Life in the Fast Lane, p. 79  
Salt Marsh Players, p.99  
Macroinvertebrate Mayhem, p. 322

Objective 7.02: Investigate factors that determine the growth and survival of organisms including: light, soil, and water.

**Activity:** Life Box, p. 76

Objectives: 7.04, 7.05

7.04: Evaluate data related to human population growth, along with problems and solutions: waste disposal, food supplies, resource availability, transportation, and socio-economic patterns.

7.05: Examine evidence that overpopulation by any species impacts the environment.

**Activity:** A-Maze-Ing Water, p. 219  
Common Water, p. 232  
Sum of the Parts, p. 267  
Water Works, p. 274

## **Grade 7**

Goal 1: The learner will design and conduct investigations to demonstrate an understanding of scientific inquiry.

Objectives: 1.01, 1.08, 1.09

- 1.01: Identify and create questions and hypotheses that can be answered through scientific investigations.
- 1.08: Use oral and written language to: communicate findings, and defend conclusions of scientific investigations.
- 1.09: Use technologies and information systems to: research, gather and analyze data, visualize data, and disseminate findings to others.

**Activity:** Water Actions, p. 12  
Is There Water on Zork? p. 43  
Sparkling Water, p. 348

Goal 2: The learner will demonstrate an understanding of technological design.

Objective 2.03: Evaluate technological designs for: application of scientific principles, risks and benefits, constraints of design, and consistent testing protocols.

**Activity:** Water Crossings, p. 421

Goal 3: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of the atmosphere.

Objective 3.01: Examine evidence that atmospheric properties can be studied to predict atmospheric conditions and weather hazards: humidity, temperature, wind speed and direction, air pressure, and precipitation.

**Activity:** Piece It Together, p.174  
Water Models, p. 201

Goal 4: The learner will conduct investigations, use models, simulations, and appropriate technologies and information systems to build an understanding of the complementary nature of the human body system.

Objectives: 4.01, 4.02, 4.03

4.01: Analyze how human body systems interact to provide for the needs of the human organism: musculoskeletal, cardiovascular, endocrine and nervous, digestive and circulatory, excretory, reproductive, respiratory, immune, and nervous system.

4.02: Describe how systems within the human body are defined by the functions it perform.

4.03: Explain how the structure of an organ is adapted to perform specific functions with one or more systems: liver, heart, lung, brain, stomach, and kidney.

**Activity:** Aqua Notes, p. 66

Objective 4.08: Explain how understanding human body systems can help make informed decisions regarding health.

**Activity:** No Bellyachers, p. 85  
Super Sleuths, p. 107

Goal 5: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of heredity and genetics.

**Activity:** *No activity directly applied to this goal.*

Goal 6: The learner will conduct investigations, use models, simulations, and appropriate technologies and information systems to build an understanding of motion and forces.

Objective: 6.05: Describe and measure quantities that characterize moving objects and their interactions within a system: time, distance, mass, force, velocity, center of mass, and acceleration.

**Activity:** Energetic Water, p. 243

## **Grade 8**

Goal 1: The learner will design and conduct investigations to demonstrate an understanding of scientific inquiry.

Objective 1.05: Analyze evidence to: explain observations; make inferences and predictions; and develop the relationship between evidence and explanation.

**Activity:** Adventures in Density, p. 25

Objective 1.06: Use mathematics to gather, organize, and present quantitative data resulting from scientific investigations: measurement, analysis of data, graphing, and prediction models.

**Activity:** Choices and Preferences p. 367

Objective 1.05, 1.08

1.08: Use oral and written language to: communicate findings, defend conclusions of scientific investigations, describe strengths and weaknesses of claims, arguments, and/or data.

**Activity:** Dilemma Derby, p. 377

Goal 2: The learner will demonstrate an understanding of technological design.

Objective 2.02: Use information systems to: identify scientific needs, human needs, or problems that are subject to technical solution.

**Activity:** Wet Work Shuffle, p. 360

Goal 3: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of the hydrosphere.

Objective 3.01: Analyze the unique properties of water including: universal solvent; cohesion and adhesion; density and buoyancy; and specific heat.

**Activity:** Adventures in Density, p. 25  
H2O Olympics, p. 30  
Hangin' Together, p. 35  
Is There Water On Zork? p. 43  
What's the Solution? p. 54

Objective 3.02: Explain the structure of the hydrosphere including: water distribution on earth; local river basin; and local water availability.

**Activity:** Branching Out, p. 129  
Get the Groundwater Picture, p. 136  
The Incredible Journey, p. 161  
Drop in the Bucket, p. 238

Objective 3.03: Evaluate evidence that Earth's oceans are a reservoir of nutrients, dissolved gases, and life forms including: estuaries, value and sustainability of marine resources.

**Activity:** Salt Marsh Players, p. 99

Objective 3.04: Describe how terrestrial and aquatic food webs are interconnected.

**Activity:** Salt Marsh Players, p. 99

Objective 3.05: Analyze hydrospheric data over time to predict the health of a water system including temperature, dissolved oxygen, pH, nitrates, turbidity, and bio-indicators.

**Activity:** Macroinvertebrates Mayhem, p. 322  
Where are the Frogs? p.279

Objective 3.07: Describe how humans affect the quality of water: point and non-point sources of water pollution in North Carolina. Possible effects of excess nutrients in North Carolina waters. Economic trade-offs. Local water issues.

**Activity:** Get the Ground Water Picture, p.136  
A-Maze-Ing Water, p. 219  
Color Me A Watershed, p. 223  
Common Water, p. 232  
Sum of the Parts, p. 267  
Back to the Future, p. 293  
A Grave Mistake, p. 311  
The Price is Right, p. 333  
Hot Water, p. 388  
Whose Problem Is It? p. 429

Objective 3.08: Recognize that the good health of environments and organisms requires: monitoring of the hydrosphere, water quality standards, methods of water treatment, maintaining safe water quality, and stewardship.

**Activity:** A-Maze-Ing Water, p. 219  
The Pucker Effect, p. 338  
Reaching Your Limits, p. 344  
Sparkling Water, p. 348  
Super Bowl Surge, p. 353

Goal 4: The learner will conduct investigations and utilize technology and information systems to build an understanding of chemistry.

**Activity:** *No activity directly applied to this goal.*

Goal 5: The learner will conduct investigations and utilize appropriate technologies and information systems to build an understanding of evidence of evolution in organism and landforms.

Objective 5.02: Correlate evolutionary theories and processes: biological, geological, and technological.

**Activity:** Old Water, p. 171

Goal 6: The learner will conduct investigations, use models, simulations, and appropriate technologies and information systems to build an understanding of cell theory.

Objective 6.02: Analyze structure, functions, and processes within animal cells for: capture and release of energy, feedback information, dispose of wastes, reproduction, movement, and specialized needs.

**Activity:** Let's Even Things Out, p. 72

Goal 7: The learner will conduct investigations, use models, simulation, and appropriate technologies and information systems to build and understanding of microbiology.

Objective 7.02: Describe diseases caused by microscopic biological hazards including: viruses, bacteria, parasites, contagions, and mutagens.

**Activity:** Poison Pump, p. 93  
Super Sleuths, p. 107

Objective 7.03: Analyze data to determine trends or patterns to determine how an infectious disease may spread including: carriers, vectors, and conditions conducive to disease.

**Activity:** No Bellyachers, p. 85  
Poison Pump, p. 93  
Super Sleuths, p. 107

Objective 7.04: Evaluate the human attempt to reduce the risk of and treatments for microbial infections including: solutions with anti-microbial properties, antibiotic treatment, and research.

**Activity:** No Bellyachers, p. 85

# Math

# Math

## Kindergarten

Goal 1: Number and Operations – The learner will recognize, model, and write whole numbers through 30.

**Activity:** *No activity directly applied to this goal.*

Goal 2: Measurement – The learner will explore concepts of measurement.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will explore the concepts of Geometry

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will collect, organize and display data.

Objectives: 4.01, 4.02

4.01: Collect and organize data as a group activity.

4.02: Display and describe data with concrete and pictorial graphs as a group activity.

**Activity:** Aqua Bodies, p. 63  
A Drop in the Bucket (K-2 Option), p. 238

Goal 5: Algebra – The learner will model simple patterns and sort objects.

Objective 5.01: Sort and classify objects by one attribute.

**Activity:** Water Match, p. 50  
A House of Seasons, p. 155  
Choices and Preferences (K-2 Option), p. 367

## Grade 1

Goal 1: Number and Operations – The learner will read, write and model whole numbers through 99 and compute with whole numbers.

**Activity:** *No activity directly applied to this goal.*

Goal 2: Measurement – The learner will use non-standard units of measure and tell time.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will identify, describe, draw, and build basic geometric figures.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use data and simple probability concepts.

**Activity:** *No activity directly applied to this goal.*

Goal 5: Algebra – The learner will demonstrate an understanding of classification and patterning.

**Activity:** *No activity directly applied to this goal.*

## **Grade 2**

Goal 1: Number and Operations – The learner will read, write, model, and compute with whole numbers through 999.

Objective 1.01: Develop number sense for whole numbers through 999. (i.e. Estimate)

**Activity:** The Long Haul, p. 260

Objective 1.02: Use area or region models and set models of fractions to explore part-whole relationships in contexts.

- a. Represent fractions (halves, thirds, fourths) concretely and symbolically.
- b. Compare fractions (halves, thirds, fourths) using models.
- c. Make different representations of the same fraction.
- d. Combine fractions to describe parts of a whole.

**Activity:** Aqua Bodies, p. 63

Goal 2: Measurement – The learner will recognize and use standard units of metric and customary measurement.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will perform simple transformation.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use data and simple probability concepts.

**Activity:** *No activity directly applied to this goal.*

Goal 5: Algebra – The learner will recognize and represent patterns and simple mathematical relationships.

**Activity:** *No activity directly applied to this goal.*

## **Grade 3**

Goal 1: Number and Operations – The learner will model, identify, and compute with whole numbers through 9,999.

Objective 1.03: Develop fluency with multiplication from 1x1 to 12x12 and division up to two-digit by one-digit numbers using:

- a. Strategies for multiplying and dividing numbers.
- b. Estimation of products and quotients in appropriate.
- c. Relations between operations.

**Activity:** Choices and Preferences, Water Index, p. 367

Goal 2: Measurement – The learner will recognize and use standard units of metric and customary measurement.

Objective 2.02: Estimate and measure using appropriate units.  
a. capacity (cups, pints, quarts, gallons, liter).

**Activity:** The Long Haul, p. 260

Goal 3: Geometry – The learner will recognize and use basic geometric properties of two- and three-dimensional figures.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use data and simple probability concepts.

Objective 4.01: Collect, organize, analyze, and display data (including graphs and tables) to solve problems.

**Activity:** Choices and Preferences, Water Index, p. 367

Goal 5: Algebra – The learner will recognize, determine, and represent patterns and simple mathematical relationships.

**Activity:** *No activity directly applied to this goal.*

## **Grade 4**

Goal 1: Number and Operations – The learner will read, write, model, and compute with non-negative rational numbers.

**Activity:** *No activity directly applied to this goal.*

Goal 2: Measurement – The learner will understand and use perimeter and area.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will recognize and use geometric properties and relationships.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use graphs, probability, and data analysis.

Objective 4.01: Collect, organize, analyze, and display data (including line graphs and bar graphs to solve problems).

**Activity:** Every Drop Counts, p. 307  
Choices and Preferences, Water Index, p. 367  
Easy Street, p. 382

Objectives: 4.02, 4.03

4.02: Describe the distribution of data using median, range, and mode.

4.03: Solve problems by comparing two sets of related data.

**Activity:** Choices and Preferences, Water Index, p. 367  
Easy Street, p. 382

Objective 4.04: Design experiments and list all possible outcomes and probabilities for an event.

**Activity:** Easy Street, p. 382

Goal 5: Algebra – The learner will demonstrate an understanding of mathematical relationships.

Objective 5.01: Identify, describe, and generalize relationships in which: quantities change proportionally, and change in one quantity relates to change in a second quantity.

**Activity:** Macroinvertebrate Mayhem, p. 322

## **Grade 5**

Goal 1: Number and Operations – The learner will understand and compute with non-negative rational numbers.

**Activity:** *No activity directly applied to this goal.*

Goal 2: Measurement – The learner will recognize and use standard units of metric and customary measurement.

Objective 2.01: Estimate the measure of an object in one system given the measure of that object in another system.

**Activity:** Aqua Bodies, p. 63  
Water Meter, p. 271  
Money Down the Drain, p. 329

Goal 3: Geometry – The learner will understand and use properties and relationships of plane figures.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use graphs and data analysis.

Objective 4.01: Collect, organize, analyze, and display data (including stem and leaf plots) to solve problems.

**Activity:** Money Down the Drain, p. 328  
Cold Cash in the Icebox, p. 373

Objective: 4.02, 4.04

4.02: Compare and contrast different representations of the same data; discuss the effectiveness of each representation.

4.04: Solve problems with data from a single set or multiple sets of data using median, range, and mode.

**Activity:** Choices and Preferences, Water Index, p. 367

Goal 5: Algebra – The learner will demonstrate an understanding of patterns, relationships, and elementary algebraic representations.

**Activity:** *No activity directly applied to this goal.*

## **Grade 6**

Goal 1: Number and Operations – The learner will understand and compute with rational numbers.

**Activity:** *No activity directly applied to this goal.*

Goal 2: Measurement – The learner will select and use appropriate tools to measure two- and three-dimensional figures.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will understand and use properties and relationships of geometric figures in the coordinate.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Analysis and Probability – The learner will understand and determine probabilities.

Objective 4.06: Design and conduct experiments or surveys to solve problems; report and analyze results.

**Activity:** Thirsty Plants, p. 117

Goal 5: Algebra – The learner will demonstrate an understanding of simple algebraic expressions.

**Activity:** *No activity directly applied to this goal.*

## **Grade 7**

Goal 1: Number and Operations – The learner will understand and compute with rational numbers.

Objective 1.03: Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

**Activity:** AfterMath, p. 289

Goal 2: Measurement – The learner will understand and use measurement involving two-dimensional figures.

**Activity:** *No activity directly applied to this goal.*

Goal 3: Geometry – The learner will understand and use properties and relationships in geometry.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use graphs and data analysis.

Objective 4.01: Collect, organize, analyze, and display data (including box plots and histograms) to solve problems.

**Activity:** Wet Vacation, p. 206  
AfterMath, p. 289  
Easy Street, p. 382

Objectives 4.02, 4.05

4.02: Calculate, use, and interpret the mean, median, mode, and frequency distribution, and inter-quartile range for a set of data.

4.05: Describe how the mean, median, mode, range, frequency distribution, and inter-quartile range of a set of data affect its graph.

**Activity:** Choices and Preferences, Water Index, p. 367

Goal 5: Algebra – The learner will demonstrate an understanding of linear relations and fundamental algebraic concepts.

**Activity:** *No activity directly applied to this goal.*

## **Grade 8**

Goal 1: Number and Operations – The learner will understand and compute with real numbers.

Objective 1.01: Develop number sense for the real numbers.

- a. Define and use irrational numbers.
- b. Compare and order.
- c. Use estimates of irrational numbers in appropriate situations.

**Activity:** Choices and Preferences, Water Index, p. 367

Objective 1.02: Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

**Activity:** Easy Street, p. 382

Goal 2: Measurement – The learner will understand and use measurement concepts.

Objective 2.02: Apply and use concepts of indirect measurement.

**Activity:** Get the Ground Water Picture, p. 136  
Old Water, p. 171  
A Drop in the Bucket, p. 239  
Every Drop Counts, p.307

Goal 3: Geometry – The learner will understand and use properties and relationships in geometry.

**Activity:** *No activity directly applied to this goal.*

Goal 4: Data Analysis and Probability – The learner will understand and use graphs and data analysis.

Objective 4.01: Collect, organize, analyze, and display data (including the Pythagorean theorem) to solve problems.

**Activity:** H<sub>2</sub>O Olympics, p. 30  
Wet Vacation, p. 206  
Choices and Preferences, Water Index, p. 367  
Easy Street, p. 382

Goal 5: Algebra – The learner will understand and use linear relations and functions.

**Activity:** *No activity directly applied to this goal.*

# **English**

# **Language Arts**

# English Language Arts

## Kindergarten

Goal 1: The learner will develop and apply enabling strategies to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

Objective 2.06: Understand and follow oral-graphic directions.

**Activity:** Aqua Notes, p. 66

Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.

**Activity:** *No activity directly applied to this goal.*

Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.

Objective 4.04: Maintain conversation and discussion: attending to oral presentation; taking turns expressing ideas; and asking questions.

**Activity:** Choices and Preferences, Water Index (K-2 Option), p.367

Goal 5: The learner will apply grammar and language conventions to communicate effectively.

**Activity:** *No activity directly applied to this goal.*

## Grade 1

Goal 1: The learner will develop and apply enabling strategies and skills to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

**Activity:** *No activity directly applied to this goal.*

Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.

Objective 3.04: Share personal experiences and responses to experiences with text: publishing non-print texts, discussing interpretations, and recording personal responses.

**Activity:** Stream Sense, p. 191  
Water Messages in Stone, p. 454

Objective 3.06: Discuss authors’/speakers’ use of different kinds of sentences to interest a reader/learner and communicate a message.

**Activity:** Aqua Notes, p. 66

Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.

Objective 4.06: Compose a variety of products (e.g., stories, journal entries, letters, response logs, simple poems, oral retellings) using a writing process.

**Activity:** Aqua Notes, p. 66  
Poetic Precipitation (K-2 Option), p. 182  
The Thunderstorm (Part I), p. 196  
Irrigation Interpretation (K-2 Option), p. 254  
What’s Happening (K-2 Option), p. 425

Goal 5: The learner will apply grammar and language conventions to communicate effectively.

**Activity:** *No activity directly applied to this goal.*

## **Grade 2**

Goal 1: The learner will develop and apply enabling strategies and skills to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

**Activity:** *No activity directly applied to this goal.*

Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.

**Activity:** *No activity directly applied to this goal.*

Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.

Objectives: 4.05, 4.08, 4.09

4.05: Respond appropriately when participating in a group discourse by adapting language and communication behaviors to the situation to accomplish a specific purpose.

4.08: Write structured, informative presentations and narratives when given help with organization.

4.09: Use media and technology to enhance the presentation of information to an audience for a specific purpose.

**Activity:** Aqua Notes, p. 66  
The Thunderstorm (Part I), p. 196

Goal 5: The learner will apply grammar and language conventions to communicate effectively.

**Activity:** *No activity directly applied to this goal.*

## **Grade 3**

Goal 1: The learner will develop and apply enabling strategies and skills to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

**Activity:** *No activity directly applied to this goal.*

Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.

Objectives: 3.02, 3.05, 3.06

3.02: Identify and discuss similarities and differences in events, characters, concepts and ideas within and across selections and support them by referencing the text.

3.05: Analyze, compare and contrast printed and visual information (e.g., graphs, charts, maps).

3.06: Conduct research for assigned and self-selected projects (with assistance) from a variety of sources (e.g., print and non-print texts, artifacts, people, libraries, databases, computer networks).

**Activity:** Piece It Together, p. 174

Objectives: 3.03, 3.05

3.03: Use text and own experiences to verify facts, concepts, and ideas.

3.05: Analyze, compare and contrast printed and visual information (e.g., graphs, charts, maps).

**Activity:** Water Write, p. 457

Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.

Objectives: 4.03, 4.06, 4.07

4.03: Share written and oral products in a variety of ways (e.g., author's chair, book making, publications, discussions, presentations).

4.06: Compose a draft that conveys major ideas and maintains focus on the topic by using preliminary plans.

4.07: Compose a variety of fiction, nonfiction, poetry, and drama selections using self-selected topics and forms (e.g., poems, simple narratives, short reports, learning logs, letters, notes, directions, instructions).

**Activity:** Aqua Notes, p. 66  
Imagine, p. 157  
Poetic Precipitation, p.182  
Stream Sense, p.191  
The Thunderstorms, p. 196

Objective 4.04: Use planning strategies (with assistance) to generate topics and to organize ideas (e.g., drawing, mapping, discussing, listing).

**Activity:** Stream Sense, p. 191  
Water Messages in Stone, p.454

Goal 5: The learner will apply grammar and language conventions to communicate effectively.

**Activity:** *No activity directly applied to this goal.*

## **Grade 4**

Goal 1: The learner will develop and apply enabling strategies and skills to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

Objective 2.02: Interact with the text before, during, and after reading, listening, and viewing by: setting a purpose using prior knowledge and text information,

making predictions, formulating questions, locating relevant information, and making connections with previous experiences, information, and ideas.

**Activity:** Raining Cats and Dogs, p. 435

Objectives: 2.05, 2.09

2.05: Make inferences, draw conclusions, make generalizations, and support by referencing the text.

2.09: Listen actively by: asking questions, paraphrasing what was said, interpreting speaker's verbal and non-verbal messages, interpreting speaker's purposes and/or intent.

**Activity:** Water Write, p. 457

**Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.**

Objectives: 3.01, 3.05

3.01: Respond to fiction, nonfiction, poetry, and drama using interpretive, critical, and evaluative processes by: analyzing the impact of authors' word choice and context, examining the reasons for characters' actions, identifying and examining characters' motives, considering a situation or problem from different characters' points of view, analyzing differences among genres, and making inferences and drawing conclusions about characters, events and themes.

3.05: Analyze and integrate information from one or more sources to expand understanding of text including graphs, charts, and/or maps.

**Activity:** Water Concentration, p. 407

Objective 3.05: Analyze and integrate information from one or more sources to expand understanding of text including graphs, charts, and/or maps.

**Activity:** Piece It Together, p. 174

**Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.**

Objective 4.02: Use oral and written language to: present information and ideas in a clear, concise manner, discuss, interview, solve problems, and make decisions.

**Activity:** Piece It Together, p. 174  
Water Write, p. 457

Objective 4.03: Make oral and written presentations using visual aids with an awareness of purpose and audience.

**Activity:** Aqua Notes, p. 66  
Imagine, p. 157

Water Messages in Stone, p.454

Objective 4.07: Compose fiction, nonfiction, poetry, and drama using self-selected and assigned topics and forms (e.g., personal and imaginative narratives, research reports, diaries, journals, logs, rules, instructions).

**Activity:** Aqua Notes, p. 66  
Poetic Precipitation, p. 182  
Stream Sense, p. 191  
The Thunderstorm, p. 196  
Water Write, p. 457

Goal 5: The learner will apply grammar and language conventions to communicate effectively.

Objective 5.07: Use established criteria to edit for language conventions and format.

**Activity:** Water Write, p. 457

## **Grade 5**

Goal 1: The learner will develop and apply enabling strategies and skills to read and write.

**Activity:** *No activity directly applied to this goal.*

Goal 2: The learner will develop and apply strategies and skills to comprehend text that is read, heard, and viewed.

Objective 2.02: Interact with the text before, during, and after reading, listening, and viewing by: making predictions, formulating questions, supporting answers from textual information, previous experience, and/or other sources, drawing on personal, literary, and cultural understandings, seeking additional information, and making connections with previous experiences, information, and ideas.

**Activity:** Piece It Together, p. 174  
Raining Cats and Dogs, p. 435

Objective 2.04: Identify elements of fiction and nonfiction and support by referencing the text to determine the: plot development, author's choice of words, effectiveness of figurative language (e.g., personification, flashback), and tone.

**Activity:** Raining Cats and Dogs, p. 435

Objective 2.09: Listen actively and critically by: asking questions, delving deeper into the topic, elaborating on the information and ideas presented, evaluating information and ideas, making inferences and drawing conclusions, and

making judgments.

**Activity:** What's Happening, p. 425

Water Write, p. 457

Objective 2.10: Identify strategies used by a speaker or writer to inform, entertain, or influence an audience.

**Activity:** Salt Marsh Players, p. 99

Aqua Notes, p. 66

**Goal 3: The learner will make connections through the use of oral language, written language, and media and technology.**

Objective 3.01: Respond to fiction, nonfiction, poetry, and drama using interpretive, critical, and evaluative processes by: analyzing word choice and content, examining reasons for a character's actions, taking into account the situation and basic motivation of the character, creating and presenting a product that effectively demonstrates a personal response to a selection or experience, examining alternative perspectives, evaluating the differences among genres, examining relationships among characters, making and evaluating inferences and conclusions about characters, events, and themes.

**Activity:** Water Address, p.122

Objective 3.02: Make connections within and between texts by recognizing similarities and differences based on a common lesson, theme, or message.

**Activity:** Water Write, p. 457

Objective 3.06: Conduct research (with assistance) from a variety of sources for assigned or self-selected projects (e.g., print and non-print texts, artifacts, people, libraries, databases, computer networks).

**Activity:** Piece It Together, p. 174

Water Concentration, p. 407

**Goal 4: The learner will apply strategies and skills to create oral, written, and visual texts.**

Objective 4.02: Use oral and written language to: formulate hypotheses, evaluate

information and ideas, present and support arguments, influence the thinking of others.

**Activity:** Water Crossings, p. 421

Objective 4.03: Make oral and written presentations to inform or persuade selecting vocabulary for impact.

**Activity:** Water Concentration, p. 407  
What's Happening, p. 425

Objective 4.06: Compose a draft that elaborates on major ideas and adheres to the topic by using an appropriate organizational pattern that accomplishes the purpose of the writing task and effectively communicates its content.

**Activity:** Water Address, p. 122  
Imagine, p. 157

Objective 4.07: Compose a variety of fiction, nonfiction, poetry, and drama using self-selected topic and format (e.g., poetry, research reports, news articles, letters to the editor, business letters).

**Activity:** Salt Marsh Players, p. 99  
Poetic Precipitation, p. 182  
Water Crossings, p. 421

Objective 4.08: Focus revision on target elements by: improving word choice, rearranging text for clarity, creating simple and/or complex sentences for clarity or impact, and developing a lead, characters, or mood.

**Activity:** Water Crossings, p. 421  
What's Happening, p. 425

Objective 4.09: Produce work that follows the conventions of particular genres (e.g., essay, feature story, business letter).

**Activity:** Salt Marsh Players, p. 99

Objective 4.10: Use technology as a tool to enhance and/or publish a product.

**Activity:** Water Concentration, p. 407  
What's Happening, p. 425

**Goal 5: The learner will apply grammar and language conventions to communicate effectively.**

Objective 5.04: Determine the impact of word choice on written and spoken language.

**Activity:** Water Crossings, p. 421

## **Grade 6**

Goal 1: The learner will use language to express individual perspectives drawn from personal or related experience.

Objective: 1.02, 1.04

1.02: Explore expressive materials that are read, heard, and/or viewed by: analyzing the characteristics of expressive works, comparing and/or contrasting information, determining the main idea and or significance of events, and generating a learning log or journal.

1.04: Reflect on learning experiences by: describing personal learning growth and changes in perspective, identifying changes in self throughout the learning process, and interpreting how personal circumstances and background shape interaction with text.

**Activity:** Water Log, p. 19

Objective 1.03: Interact appropriately in group settings by: listening attentively, showing empathy, contributing relevant comments connecting personal experiences to content, monitoring own understanding of the discussion and seeking clarification as needed.

**Activity:** Piece It Together, p. 174

Goal 2: The learner will explore and analyze information from a variety of sources.

Objective 2.02: Use multiple sources of print and non-print information in designing and developing informational materials (such as brochures, newsletters, and infomercials) through: exploring a variety of sources from which information may be attained (e.g., books, Internet, electronic databases, CD-ROM), distinguishing between primary and secondary sources, analyzing the effects of the presentation and/or the accuracy of information.

**Activity:** Nature Rules! p. 262  
What's Happening, p. 425

Goal 3: The learner will examine the foundations and the use of argument.

Objective 3.01: Explore argumentative works that are read, heard, and/or viewed by: monitoring comprehension for understanding what is read, heard, and/or viewed, analyzing the characteristics of argumentative works, determining

the importance of author's word choice and focus, summarizing the author's purpose and stance, making connections between works, self and related topics, drawing inferences, responding to public documents (such as but not limited to editorials and school and community policies), and distinguishing between fact and opinion.

**Activity:** Water Bill of Rights, p. 403

**Goal 4: The learner will use critical thinking skills and create criteria to evaluate text and multimedia.**

Objective 4.02: Analyze the communication and develop (with teacher assistance) and apply appropriate criteria to evaluate the quality of the communication by: using knowledge of language structure and literary or media techniques, drawing conclusions based on evidence, reasons, or relevant information, and considering the implications, consequences, or impact of those conclusions.

**Activity:** What's Happening, p. 425

Objective 4.03: Recognize and develop a stance of a critic by: considering alternative points of view or reasons, remaining fair-minded and open to other interpretations, and constructing a critical response/review of a work/topic.

**Activity:** Nature Rules! p. 262  
Water Bill of Rights, p. 403

**Goal 5: The learner will respond to various literary genres using interpretive and evaluative processes.**

Objective 5.01: Increase fluency, comprehension, and insight through a meaningful and comprehensive literacy program by: extending understanding by creating products for different purposes, different audiences and within various contexts, and exploring relationships between and among characters, ideas, concepts, and/or experiences.

**Activity:** Water Write, p. 457

**Goal 6: The learner will apply convention of grammar and language usage.**

Objective 6.02: Identify and edit errors in spoken and written English by: reviewing and using common spelling rules, applying common spelling patterns, and developing and mastering an individualized list of words that are commonly misspelled, applying proofreading symbols when editing, producing final drafts that demonstrate accurate spelling and the correct use of punctuation and capitalization, and developing an awareness of errors in everyday

speech.

**Activity:** Nature Rules! p. 262

## **Grade 7**

Goal 1: The learner will use language to express individual perspectives in response to personal, social, cultural, and historical issues.

Objective 1.02: Respond to expressive materials that are read, heard, and/or viewed by:

monitoring comprehension for understanding of what is read, heard, and/or viewed, summarizing the characteristics of expressive works, determining the importance of literary effects on the reader/viewer/listener, making connections between works, self and related topics, comparing and/or contrasting information, drawing inferences and/or conclusions, determining the main idea and/or significance of events, generating a learning log or journal, maintaining an annotated list of works read/viewed, creating an artistic interpretation that connects self and/or society to the selection, and constructing and presenting book/media reviews.

**Activity:** Easy Street, p. 382

Objective 1.03: Interact in group settings by: responding appropriately to comments and questions, offering personal opinions confidently without dominating, giving appropriate reasons that support opinions, and soliciting and respecting another person's opinion.

**Activity:** Nature Rules! p. 262  
Hot Water, p. 388  
Wish Book, p. 460

Goal 2: The learner will synthesize and use information from a variety of sources.

Objective 2.01: Respond to informational materials that are read, heard, and/or viewed by: monitoring comprehension for understanding of what is read, heard and/or viewed, analyzing the characteristics of informational works, summarizing information, determining the importance of information, making connections to related topics/information, drawing inferences and/or conclusions, and generating questions.

**Activity:** Super Sleuths (Wrap Up, Action), p. 107  
Nature Rules! p. 262  
Easy Street, p. 382

Goal 3: The learner will refine the understanding and use of argument.

Objective 3.01: Explore and analyze argumentative works that are read, heard and/or viewed by drawing inferences.

**Activity:** Super Sleuths, p. 107

Objective 3.02: Explore and analyze the problem-solution process by utilizing the problem-solution process within various contexts/situations.

**Activity:** AfterMath, p. 289  
What's Happening? p. 425

Goal 4: The learner will refine critical thinking skills to create criteria to evaluate text and multimedia.

Objective 4.01: Analyze the purpose of the author or creator by: monitoring comprehension for understanding of what is read, heard and/or viewed, examining any bias, apparent or hidden messages, emotional factors, and/or propaganda techniques, exploring and evaluating the underlying assumptions of the author/creator, and understanding the effects of author's craft on the reader/viewer/listener.

**Activity:** Water Write, p. 457

Objective 4.02: Develop (with assistance) and apply appropriate criteria to evaluate the quality of the communication by drawing conclusions based on evidence, reasons, or relevant information and considering the implications, consequences, or impact of those conclusions.

**Activity:** Piece It Together, p. 175  
Wish Book, p. 460

Goal 5: The learner will respond to various literary genres using interpretive and evaluative processes.

Objective 5.01: Increase fluency, comprehension, and insight through a meaningful and comprehensive literacy program by analyzing the effects of texts of such literary devices as figurative language, dialogue, flashback, allusion, and irony, analyzing the connections of relationships between and among characters, ideas, concepts, and/or experiences, and engaging in small group discussions.

**Activity:** Raining Cats and Dogs, p. 435

Goal 6: The learner will apply convention of application of grammar and language usage.

Objective 6.02: Continue to identify and edit errors in spoken and written English by using common spelling rules, applying common spelling patterns, and developing and mastering an individualized list of words that are commonly misspelled, mastering proofreading symbols for editing, producing final drafts/presentations that demonstrate accurate spelling and the correct use of punctuation, capitalization, and format, and listening to and monitoring self to correct errors.

**Activity:** Nature Rules! p. 262

## **Grade 8**

Goal 1: The learner will use language to express individual perspectives through analysis of personal, social, cultural, and historical issues.

Objective 1.03: Interact in group activities and/or seminars in which the student: shares personal reactions to questions raised, gives reasons and cites examples from text in support of expressed opinions, and clarifies, illustrates, or expands on a response when asked to do so, and asks classmates for similar expansion.

**Activity:** Adventures in Density, p.25  
Nature Rules! p. 262  
Easy Street, p. 382  
Raining Cats and Dogs, p. 435  
Water Celebration, p. 446

Goal 2: The learner will use and evaluate information from a variety of sources.

Objective 2.02: Use multiple sources of print and non-print information to explore and create research products in both written and presentational forms by: determining purpose, audience, and context, understanding the focus, recognizing and/or choosing a relevant topic, recognizing and/or selecting presentational format (e.g., video, essay, interactive technology) appropriate to audience, evaluating information for extraneous detail, inconsistencies, relevant facts, and organization, researching and organizing information to achieve purpose, using notes and/or memory aids to structure information, supporting ideas with examples, definitions, analogies, and direct references to primary and secondary sources, noting and/or citing sources used, and recognizing the use of and/or employing graphics such as charts, diagrams, and graphs to enhance the communication of information.

**Activity:** Water: Read All About It! p. 400

Goal 3: The learner will continue to refine the understanding and use of argument.

**Activity:** *No activity directly applied to this goal.*

Goal 4: The learner will continue to refine critical thinking skills to create criteria to evaluate text and multimedia.

Objective 4.02: Analyze and develop (with limited assistance) and apply appropriate criteria to evaluate the quality of the communication by: using knowledge of language structure and literary or media techniques, drawing conclusions based on evidence, reasons, or relevant information, and considering the implications, consequences, or impact of those conclusions.

**Activity:** Wet Vacation, p. 206  
Water: Read All About It! p. 400

Goal 5: The learner will respond to various literary genres using interpretive and evaluative processes.

Objective 5.01: Increase fluency, comprehension, and insight through a meaningful and comprehensive literacy program by leading small group discussions and extending understanding by creating products for different purposes, different audiences, and within various contexts.

**Activity:** Wet Vacation, p. 206  
Water Write, p. 457

Objective 5.02: Study the characteristics of literary genres (fiction, nonfiction, drama, and poetry) through reading a variety of literature and other text (e.g., young adult novels, short stories, biographies, plays, free verse, narrative poems), evaluating what impact genre-specific characteristics have on the meaning of the text., evaluating how the author's choice and use of a genre shapes the meaning of the literary work, and evaluating what impact literary elements have on the meaning of the text.

**Activity:** Dust Bowls and Failed Levees, p. 303  
Water Crossings, p. 421

Goal 6: The learner will apply convention of application of grammar and language usage.

Objective 6.02: Continue to identify and edit errors in spoken and written English by: using correct spelling of words appropriate in difficulty for eighth graders and refining mastery of an individualized list of commonly misspelled words, producing final drafts/presentations that demonstrate accurate spelling and

the correct use of punctuation, capitalization, and spelling and the correct use of punctuation, capitalization, and format, self correcting errors in everyday speech, independently practicing formal oral presentations.

**Activity:** Nature Rules! p. 262  
Water: Read All About It! p. 400  
Water Crossings, p. 421  
Water Write, p. 457

# **Social Studies**

# Social Studies

## Kindergarten

Goal 1: The learner will investigate how individuals, families, and groups are similar and different.

Activity: *No activity directly applied to this goal.*

Goal 2: The learner will identify and exhibit qualities of responsible citizenship in the classroom, school, and other social environments.

Activity: *No activity directly applied to this goal.*

Goal 3: The learner will recognize and understand the concept of change in various settings.

Activity: *No activity directly applied to this goal.*

Goal 4: The learner will explain celebrated holidays and special days in communities.

Activity: *No activity directly applied to this goal.*

Goal 5: The learner will express basic geographic concepts in real life situations.

Objective 5.04: Recognize and explain seasonal changes of the environment.

Activity: House of Seasons p. 155

Goal 6: The learner will apply basic economic concepts to home, school, and the community.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will recognize how technology is used at home, school, and the community.

Activity: *No activity directly applied to this goal.*

## Grade 1

Goal 1: The learner will analyze how individuals, families, and groups are similar and different.

Activity: No activity directly applied to this goal.

Goal 2: The learner will identify and exhibit qualities of good citizenship in the classroom, school, and other social environments.

Objective: 2.03, 2.05, 2.06

- 2.03: Participate in democratic decision-making.
- 2.05: Identify the need for fairness in rules by individuals and by people in authority.
- 2.06: Predict consequences that may result from responsible and irresponsible actions.

Activity: Pass the Jug p. 392

Goal 3: The learner will recognize and understand the concept of change in various settings.

Objective 3.04: Recognize that members of the community are affected by changes in the community that occur over time.

Activity: Common Water (K-2 Option) p. 232

Goal 4: The learner will explain different celebrated holidays and special days in communities.

Objective 4.01: Recognize and describe religious and secular symbols/celebrations associated with special days of diverse cultures.

Activity: Water Celebrations (Option 1) p. 446

Goal 5: The learner will express basic geographic concepts in real life situations.

Objective 5.06: Compare and contrast geographic features of places within various communities.

Activity: Stream Sense p. 191

Goal 6: The learner will apply basic economic concepts to home, school, and the community.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will recognize how technology is used at home, school, and the community.

Activity: *No activity directly applied to this goal.*

## **Grade 2**

Goal 1: The learner will identify and exhibit qualities of responsible citizenship in the classroom, school, and other social environments.

Activity: *No activity directly applied to this goal.*

Goal 2: The learner will evaluate relationships between people and their governments.

Activity: *No activity directly applied to this goal.*

Goal 3: The learner will analyze how individuals, families, and communities are alike and different.

Activity: *No activity directly applied to this goal.*

Goal 4: The learner will exhibit an understanding of change in communities over time.

Objective: 4.01, 4.02, 4.03

4.01: Analyze the effects of change in communities and predict future changes.

4.02: Analyze environmental issues, past and present, and determine their impact on different cultures.

4.03: Describe human movement in the establishment of settlement patterns such as rural, urban, and suburban.

Activity: Common Water (K-2 Option) p. 232

Goal 5: The learner will understand the relationship between people and geography in various communities.

Objective 5.01: Define geography and use geographic terms to describe landforms, bodies of water, weather, and climate.

Activity: House of Seasons p.155  
Piece It Together p. 174

Objectives: 5.01, 5.02, 5.03, 5.04, 5.05, 5.06

5.01: Define geography and use geographic terms to describe landforms, bodies of water, weather, and climate.

5.02: Describe the role of a geographer and apply geographic tools, such as maps, globes, compasses and photographs, in the understanding of locations and characteristics of places and regions.

5.03: Compare and contrast the physical features of communities and regions.

5.04: Identify the absolute and relative location of communities.

5.05: Interpret maps, charts, and pictures of locations.

5.06: Identify and describe the people, vegetation, and animal life specific to certain regions and describe their interdependence.

Activity: Piece It Together p. 174

Goal 6: The learner will analyze how people depend on the physical environment and use natural resources to meet basic needs.

Objectives: 6.01, 6.03, 6.04

- 6.01: Identify natural resources and cite ways people conserve and replenish natural resources.
- 6.02: Cite ways people modify the physical environment to meet their needs and explain the consequences.
- 6.03: Identify means and methods of human movement as they relate to the physical environment.

Activity: Common Water (K-2 Option) p. 232

Goal 7: The learner will apply basic economic concepts and evaluate the use of economic resources within communities.

Activity: No activity directly applied to this goal.

Goal 8: The learner will recognize how technology is used at home, school, and in the community.

Activity: No activity directly applied to this goal.

## **Grade 3**

Goal 1: The learner will characterize qualities of good citizenship by identifying people who made a difference in the community and other social environments.

Objective 1.01: Identify and demonstrate characteristics of responsible citizenship and explain how citizen participation can impact changes within a community.

Activity: Dilemma Derby p. 377

Goal 2: The learner will analyze the multiple roles that individuals perform in families, workplaces, and communities.

Objectives: 2.02, 2.03

2.02: Analyze similarities and differences among families in different times and in different places.

2.03: Describe similarities and differences among communities in different times and in different places.

Activity: Piece It Together p. 174

Goal 3: The learner will examine how individuals can initiate change in families, neighborhoods, and communities.

Objective 3.02: Describe how individuals, events, and ideas change over time.

Activity: Old Water p. 171  
Every Drop Counts p. 307  
Water Messages in Stone p. 454

Goal 4: The learner will explain geographic concepts and the relationship between people and geography in real life situations.

Objectives: 4.02, 4.04

4.02: Use appropriate source maps to locate communities.

4.04: Compare how people in different communities adapt to or modify the physical environment to meet their needs.

Activity: Piece It Together p. 174

Objective 4.03: Use geographic terminology to describe and explain variations in the physical environment as communities.

Activity: Rainy Day Hike p. 186

Goal 5: The learner will apply basic economic principles to the study of communities.

Activity: *No activity directly applied to this goal.*

Goal 6: The learner will recognize how technology is used at home, school, and in the community.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will analyze the role of real and fictional heroes in shaping the culture of communities.

Activity: *No activity directly applied to this goal.*

## **Grade 4**

Goal 1: The learner will apply the five themes of geography to North Carolina and its people.

Objective 4.03: Use geographic terminology to describe and explain variations in the physical environment as communities.

Activity: Imagine p. 157  
The Incredible Journey p. 161

Goal 2: The learner will examine the importance of the role of ethnic groups and examine the multiple roles they have played in the development of North Carolina.

Activity: *No activity directly applied to this goal.*

Goal 3: The learner will trace the history of colonization in North Carolina and evaluate its significance for diverse people's ideas.

Activity: *No activity directly applied to this goal.*

Goal 4: The learner will analyze social and political institutions in North Carolina such as government, education, religion, and family and how they structure society, influence behavior, response to human needs

Activity: *No activity directly applied to this goal.*

Goal 5: The learner will examine the impact of various cultural groups on North Carolina.

Objective 5.01: Explain different celebrated holidays, special days, and cultural traditions in North Carolina communities.

Activity: Water Celebration p. 446

Goal 6: The learner will evaluate how North Carolinians apply basic economic principles within community, state, and nation.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will recognize how technology influences change within North Carolina.

Objective 7.03: Explain how technology changed and influenced the movement of people, goods, and ideas over time.

Activity: Water Concentration p. 407  
Wish Book p. 460

## **Grade 5**

Goal 1: The learner will apply key geographic concepts to the United States and other countries of North America.

Objective 1.01: Describe the absolute and relative location of major landforms, bodies of water, and natural resources in the United States and other countries of North America.

Activity: The Incredible Journey p. 161

Objective 1.02: Analyze how absolute and relative location influence ways of living in the United States and other countries of North America.

Activity: Wet Vacation p. 206

Objective 1.03: Compare and contrast the physical and cultural characteristics of regions within the United States, and other countries of North America.

Activity: Branching Out p. 129  
Capture, Store, and Release p. 133  
Geyser Guts p. 144

Objective 1.06: Explain how people of the United States and other countries of North America adapt to, modify, and use their physical environment.

Activity: Sum of the Parts p. 267

Objective 1.07: Analyze the past movement of people, goods, and ideas within and among the United States, Canada, Mexico, and Central America and compare it to movement today.

Activity: Water Crossings p. 421

Goal 2: The learner will analyze political and social institutions in North America and examine how these institutions respond to human needs, structure society, and influence behavior.

Activity: *No activity directly applied to this goal.*

Goal 3: The learner will examine the roles various ethnic groups have played in the development of the United States and its neighboring countries.

Activity: *No activity directly applied to this goal.*

Goal 4: The learner will trace key developments in United States history and describe their impact on the land and people of the nation and its neighboring countries.

Objective 4.03: Describe the contributions of people of diverse cultures throughout the history of the United States.

Activity: Energetic Water p. 242

Goal 5: The learner will evaluate ways the United States and other countries of North America make decisions about the allocation and use of economic resources.

Objective 5.02: Analyze the economic effects of the unequal distribution of natural resources on the United States and its neighbors.

Activity: A Drop in the Bucket p. 238

Objective 5.05: Evaluate the influence of discoveries, inventions, and innovations on

economic interdependence.

Activity: Energetic Water p. 242  
Cold Cash in the Icebox p. 373  
Water Concentration p. 407

Goal 6: The learner will recognize how technology has influenced change within the United States and other countries in North America.

Objectives 6.01, 6.02

6.01: Explore the meaning of technology as it encompasses discoveries from the first primitive tools to today's personal computer.

6.02 Relate how certain technological discoveries have changed the course of history and reflect on the broader social and environmental changes that can occur from the discovery of such technologies.

Activity: Energetic Water p. 242  
Cold Cash in the Icebox p. 373  
Water Concentration p. 407  
Wish Book p. 460

## **Grade 6**

Goal 1: The learner will use the five themes of geography and geographic tools to answer geographic questions and analyze geographic concepts.

Objective 1.02: Generate, interpret, and manipulate information from tools such as maps, globes, charts, graphs, databases, and models to pose and answer questions about space and place, environment and society, and spatial dynamics and connections.

Activity: Poison Pump p.93  
Super Sleuths p. 107  
Great Water Journeys p. 246  
AfterMath p. 289

Goal 2: The learner will assess the relationship between physical environment and cultural characteristics of selected societies and regions of South America and Europe.

Objective 2.02: Describe factors that influence changes in distribution patterns of population, resources, and climate in selected regions of South America and Europe and evaluate their impact on the environment.

Activity: Piece It Together p. 174

Goal 3: The learner will analyze the impact of interactions between humans and their physical environments in South America and Europe.

Objective 3.03: Examine the development and use of tools and technologies and assess their influence on the human ability to use, modify, or adapt to their environment.

Activity: Irrigation Interpretation p. 254

Goal 4: The learner will identify significant patterns in the movement of people, goods and ideas over time and place in South America and Europe.

Activity: No activity directly applied to this goal.

Goal 5: The learner will evaluate the ways people of South America and Europe make decisions about the allocation and use of resources.

Activity: *No activity directly applied to this goal.*

Goal 6: The learner will recognize the relationship between economic activity and the quality of life in South America and Europe.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will assess connections between historical events and contemporary issues.

Activity: *No activity directly applied to this goal.*

Goal 8: The learner will assess the influence and contributions of individuals and cultural groups in South America and Europe.

Objective 8.03: Identify major discoveries, innovations, and inventions, and assess their influence on societies past and present.

Activity: Easy Street p. 382  
Wish Book p. 460

Goal 9: The learner will analyze the different forms of government developed in South America and Europe.

Activity: *No activity directly applied to this goal.*

Goal 10: The learner will compare the rights and civic responsibilities of individuals in political structures in South America and Europe.

Activity: *No activity directly applied to this goal.*

Goal 11: The learner will recognize the common characteristics of different cultures in South America and Europe.

Objective 11.03: Compare characteristics of political, economic, religious, and social institutions of selected cultures, and evaluate their similarities and differences.

Activity: Water Celebration p. 446

Goal 12: The learner will assess the influence of major religions, ethical beliefs, and values in South America and Europe.

Activity: *No activity directly applied to this goal.*

Goal 13: The learner will describe the historic, economic, and cultural connections among North Carolina, the United States, South America, and Europe.

Activity: *No activity directly applied to this goal.*

## **Grade 7**

Goal 1: The learner will use the five themes of geography and geographic tools to answer geographic questions and analyze geographic concepts.

Objective 1.02: Generate, interpret, and manipulate information from tools such as maps, globes, charts, graphs, databases, and models to pose and answer questions about space and place, environment and society, and spatial dynamics and connections.

Activity: Super Sleuths p. 107  
Great Water Journeys p. 246

Goal 2: The learner will assess the relationship between physical environment and cultural characteristics of selected societies and regions of Africa, Asia, and Australia.

Objective 2.02: Describe factors that influence changes in distribution patterns of population, resources, and climate in selected regions of Africa, Asia, and Australia and evaluate their impact on the environment.

Activity: Pass the Jug p. 392

Goal 3: The learner will analyzed the impact of interactions between humans and their physical environments in Africa, Asia, and Australia.

Objective 3.03: Examine the development and use of tools and technologies and assess their influence on the human ability to use, modify, or adapt to their environment.

Activity: Piece It Together p. 174

Goal 4: The learner will identify significant patterns in the movement of people, goods, and ideas over time and place in Africa, Asia, and Australia.

Activity: *No activity directly applied to this goal.*

Goal 5: The learner will evaluate the varied ways people of Africa, Asia, and Australia make decisions about allocation and use of economic resources.

Objective 5.03: Explain how the allocation of scarce resources requires economic Systems to make basic decisions regarding the production and distribution of goods and services, and evaluate the impact on the standard of living in selected societies and regions of Africa, Asia, and Australia.

Activity: Irrigation Interpretation p. 254

Goal 6: The learner will recognize the relationship between economic activity and the quality of life in Africa, Asia, and Australia.

Objective: 6.01, 6.03

6.01: Describe different levels of economic development and assess their connections to standard of living indicators such as purchasing power, literacy rate, and life expectancy.

6.02: Examine the influence of education and technology on productivity and economic development in selected nations and regions of Africa, Asia, and Australia.

Activity: Irrigation Interpretation p. 254

Goal 7: The learner will assess the connections between historical events and contemporary issues in Africa, Asia and Australia.

Activity: *No activity directly applied to this goal.*

Goal 8: The learner will assess the influence and contributions of individuals and cultural groups in Africa, Asia, and Australia.

Activity: *No activity directly applied to this goal.*

Goal 9: The learner will analyze the different forms of government developed in Africa, Asia, and Australia.

Activity: *No activity directly applied to this goal.*

Goal 10: The learner will compare the rights and civic responsibilities of individuals in political structures in Africa, Asia, and Australia.

Activity: *No activity directly applied to this goal.*

Goal 11: The learner will recognize the common characteristics of different cultures in Africa, Asia, and Australia.

Objective 11.01: Identify the concepts associated with culture such as language, religion, family, and ethnic identity, and analyze how they can link and separate societies.

Activity: Water Celebration p. 446

Goal 12: The learner will assess the influence of major religions, ethical beliefs, and values on cultures in Africa, Asia, and Australia.

Activity: *No activity directly applied to this goal.*

Goal 13 The learner will describe the historic, economic, and cultural connections among North Carolina, the United States, Africa, Asia, and Australia.

Objective 13.02: Describe the diverse cultural connections that have influenced the development of language, art, music, and belief systems in North Carolina and the United States and analyze their role in creating a changing cultural mosaic.

Activity: Rainstick p. 442

## **Grade 8**

Goal 1: The learner will analyze important geographic, political, economic, and social aspects of life in the region prior to the Revolutionary Period.

Objective 1.01: Assess the impact of geography on the settlement and developing economy of the Carolina colony.

Activity: Water Crossings p. 421

Goal 2: The learner will trace the causes and effects of the Revolutionary War, and assess the impact of major events, problems and personalities during the Constitutional Period in North Carolina and the new nation.

Objective 2.05: Describe the impact of documents such as the Mecklenburg Resolves, the Halifax Resolves, the Albany Plan of Union, the Declaration of Independence, the State Constitution of 1776, the Articles of Confederation, the United States Constitution, and the Bill of Rights on the formation of the state and national governments.

Activity: Water Bill of Rights p. 403

Goal 3: The learner will identify key events and evaluate the impact of reform and expansion in North Carolina during the first half of the 19<sup>th</sup> century.

Objective 3.08: Examine the impact of national events such as the Louisiana Purchase, the Lewis and Clark Expedition, the War with Mexico, and the California Gold Rush, and technological advances on North Carolina.

Activity: Water Crossings p. 421

Goal 4: The learner will examine the causes, course, and character of the Civil War and Reconstruction, and their impact on North Carolina and the nation.

Activity: *No activity directly applied to this goal.*

Goal 5: The learner will evaluate the impact of political, economic, social, and technological changes on life in North Carolina from 1870 to 1930.

Objective 5.04: Identify technological advances, and evaluate their influence on the quality of life in North Carolina.

Activity: Easy Street p. 382  
Water Concentration p. 407  
Wish Book p. 460

Goal 6: The learner will analyze the immediate and long-term effects of the Great Depression and World War II on North Carolina.

Activity: *No activity directly applied to this goal.*

Goal 7: The learner will analyze changes in North Carolina during the postwar period to the 1970's.

Activity: *No activity directly applied to this goal.*

Goal 8: The learner will evaluate the impact of demographic, economic, technological, social, and political developments in North Carolina since the 1970's.

Activity: *No activity directly applied to this goal.*

Goal 9: The learner will explore examples of and opportunities for active citizenship, past and present, at the local and state levels.

Objective 9.01: Describe contemporary political, economic, and social issues at the state and local levels and evaluate their impact on the community.

Activity: A Grave Mistake p. 311  
The Pucker Effect p. 339  
Super Bowl Surge (Part 1) p. 353  
Wet Work Shuffle p. 360  
Choices and Preferences, Water Index p. 367  
Pass the Jug p. 392  
Perspectives p. 397

Objective 9.03: Describe opportunities for and benefits of civic participation.

Activity: Dilemma Derby p. 377  
Easy Street p. 382