

# STANDARDS ALIGNMENT













*The following is a standards alignment guide for Fair Oaks Farms. The guide aligns to the Indiana Academic Standards and highlights Fair Oaks Farms STEM experience. Through experiences and resources provided by Fair Oaks Farms, students can experience all of the Science and Engineering Process Standards*

<b>Science and Engineering Process Standards</b>
<b>SEPS.1</b> Posing questions (for science) and defining problems (for engineering)
<b>SEPS.2</b> Developing and using models and tools
<b>SEPS.3</b> Constructing and performing investigations
<b>SEPS.4</b> Analyzing and interpreting data
<b>SEPS.5</b> Using mathematics and computational thinking
<b>SEPS.6</b> Constructing explanations (for science) and designing solutions (for engineering)
<b>SEPS.7</b> Engaging in argument from evidence
<b>SEPS.8</b> Obtaining, evaluating, and communicating information























**FAIR OAKS**

— F A R M S —






















# Kindergarten Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>K.PS.1</b> Plan and conduct an investigation using all senses to describe and classify different kinds of objects by their composition and physical properties. Explain these choices to others and generate questions about the objects.				
<b>K.PS.2</b> Identify and explain possible uses for an object based on its properties and compare these uses with other students' ideas.				
<b>K.PS.3</b> Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.				
<b>K.PS.4</b> Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.				
<b>Earth and Space Science (ESS)</b>				
<b>K.ESS.1</b> Make observations to determine the effect of sunlight on Earth's surface and use tools and materials to design and build a structure to reduce the warming effect on Earth's surface.				
<b>K.ESS.2</b> Describe and compare objects seen in the night and day sky, observing that the sun and moon move across the sky.				
<b>K.ESS.3</b> Investigate the local weather conditions to describe patterns over time.				























# Kindergarten Standard Alignment

<p><b>K.ESS.4</b> Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</p>				
<b>Life Science (LS)</b>				
<p><b>K.LS.1</b> Describe and compare the growth and development of common living plants and animals.</p>				
<p><b>K.LS.2</b> Describe and compare the physical features of common living plants and animals.</p>				
<p><b>K.LS.3</b> Use observations to describe patterns of what plants and animals (including humans) need to survive.</p>				
<b>Engineering (E)</b>				
<p><b>K-2.E.1</b> Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.</p>				
<p><b>K-2.E.2</b> Develop a simple sketch, drawing, or physical model to illustrate and investigate how the shape of an object helps it function as needed to solve an identified problem.</p>				
<p><b>K-2.E.3</b> Analyze data from the investigation of two objects constructed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>				

















# Kindergarten Standard Alignment

English Language Arts	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Reading: Foundations</b>				
K.RF.1 Understand and apply knowledge of print concepts, phonics, phonemic awareness, vocabulary, and fluency and comprehension as a foundation for developing reading skills.				
<b>Reading: Literature</b>				
K.RL.1 Actively engage in group reading activities with purpose and understanding.				
<b>Reading: Nonfiction</b>				
K.RN.1 Actively engage in group reading activities with purpose and understanding.				
<b>Reading: Vocabulary</b>				
K.RV.1 Use words, phrases, and strategies acquired through conversations, reading and being read to, and responding to literature and nonfiction texts to build and apply vocabulary.				
<b>Writing</b>				
K.W.1 Write for specific purposes and audiences				
<b>Speaking and Listening</b>				
K.SL.1 Listen actively and communicate effectively with a variety of audiences and for different purposes.				
<b>Media Literacy</b>				
K.ML.1 Recognize various types of media.				













# Kindergarten Standard Alignment

Mathematics	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Number Sense</b>				
<b>K.NS.1</b> Count to at least 100 by ones and tens and count on by one from any number.				
<b>K.NS.2</b> Write whole numbers from zero to 20 and recognize number words from zero to 10. Represent a number of objects with a written numeral zero to 20 (with zero representing a count of no objects).				
<b>K.NS.3</b> Find the number that is one more than or one less than any whole number up to 20.				
<b>K.NS.4</b> Say the number names in standard order when counting objects, pairing each object with one and only one number name and each number name with one and only one object. Understand that the last number describes the number of objects counted and that the number of objects is the same regardless of their arrangement or the order in which they were counted.				
<b>K.NS.5</b> Count up to 20 objects arranged in a line, a rectangular array, or a circle. Count up to 10 objects in a scattered configuration. Count out the number of objects, given a number from one to 20.				
<b>K.NS.6</b> Recognize sets of one to 10 objects in patterned arrangements and tell how many without counting.				
<b>K.NS.7</b> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g. by using matching and counting strategies).				
<b>K.NS.8</b> Compare the values of two numbers from 1 to 20 presented as written numerals.				
<b>K.NS.9</b> Correctly use the words for comparison, including: one and many; none, some and all; more and less; most and least; and equal to, more than and less than.				

















# Kindergarten Standard Alignment

<b>K.NS.10</b> Separate sets of 10 or fewer objects into equal groups.				
<b>K.NS.11</b> Develop initial understandings of place value and the base 10 number system by showing equivalent forms of whole numbers from 10 to 20 as groups of tens and ones using objects and drawings.				
<b>Computation and Algebraic Thinking</b>				
<b>K.CA.1</b> Use objects, drawings, mental images, sounds, etc., to represent addition and subtraction within 10.				
<b>K.CA.2</b> Solve real-world problems that involve addition and subtraction within 10 (e.g., by using objects or drawings to represent the problem).				
<b>K.CA.3</b> Use objects, drawings, etc., to decompose numbers less than or equal to 10 into pairs in more than one way, and record each decomposition with a drawing or an equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ). [In Kindergarten, students should see equations and be encouraged to trace them, however, writing equations is not required.]				
<b>K.CA.4</b> Find the number that makes 10 when added to the given number for any number from one to nine (e.g., by using objects or drawings), and record the answer with a drawing or an equation.				
<b>K.CA.5</b> Create, extend, and give an appropriate rule for simple repeating and growing patterns with numbers and shapes.				
<b>Geometry</b>				
<b>K.G.1</b> Describe the positions of objects and geometric shapes in space using the terms inside, outside, between, above, below, near, far, under, over, up, down, behind, in front of, next to, to the left of and to the right of.				
<b>K.G.2</b> Compare two- and three-dimensional shapes in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).				
<b>K.G.3</b> Model shapes in the world by composing shapes from objects (e.g., sticks and clay balls) and drawing shapes.				


















# Kindergarten Standard Alignment

<p><b>K.G.4</b> Compose simple geometric shapes to form larger shapes (e.g., create a rectangle composed of two triangles).</p>				
<b>Measurement</b>				
<p><b>K.M.1</b> Make direct comparisons of the length, capacity, weight, and temperature of objects, and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler, or holds more.</p>				
<p><b>K.M.2</b> Understand concepts of time, including: morning, afternoon, evening, today, yesterday, tomorrow, day, week, month, and year. Understand that clocks and calendars are tools that measure time.</p>				
<b>Data Analysis</b>				
<p><b>K.DA.1</b> Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group and explain the reasoning used.</p>				























# Kindergarten Standard Alignment

Social Studies	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<b>Standard 1:</b> Students examine the connections of their own environment with the past. They begin to distinguish between events and people of the past and the present, and use a sense of time in classroom planning and participation.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students learn that they are citizens of their school, community, and the United States; identify symbols of the nation; and understand the importance of being a responsible citizen who knows why rules are needed and follows them.				
<b>Geography</b>				
<b>Standard 3:</b> Students understand that maps and globes are different representations of the Earth's surface and begin to explore the physical and human geographic characteristics of their school, neighborhood, and community.				
<b>Economics</b>				
<b>Standard 4:</b> Students explain that people do different jobs and work to meet basic economic wants.				























# First Grade Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>1.PS.1</b> Characterize materials as solid, liquid, or gas and investigate their properties, record observations and explain the choices to others based on evidence (i.e., physical properties).				
<b>1.PS.2</b> Predict and experiment with methods (sieving, evaporation) to separate solids and liquids based on their physical properties.				
<b>1.PS.3</b> Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.				
<b>1.PS.4</b> Make observations to collect evidence and explain that objects can be seen only when illuminated.				
<b>Earth and Space Science (ESS)</b>				
<b>1.ESS.1</b> Use observations of the sun, moon, and stars to describe patterns that can be predicted.				
<b>1.ESS.2</b> Observe and compare properties of sand, clay, silt, and organic matter. Look for evidence of sand, clay, silt, and organic matter as components of soil samples.				
<b>1.ESS.3</b> Observe a variety of soil samples and describe in words and pictures the soil properties in terms of color, particle size and shape, texture, and recognizable living and nonliving items.				
<b>1.ESS.4</b> Develop solutions that could be implemented to reduce the impact of humans on the land, water, air, and/or other living things in the local environment.				
<b>Life Science (LS)</b>				





# First Grade Standard Alignment

<p><b>1.LS.1</b> Develop representations to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p>				
<p><b>1.LS.2</b> Develop a model mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. Explore how those external parts could solve a human problem.</p>				
<p><b>1.LS.3</b> Make observations of plants and animals to compare the diversity of life in different habitats.</p>				
<p><b>1.LS.4</b> Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.</p>				
<p><b>Engineering (E)</b></p>				
<p><b>K-2.E.1</b> Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.</p>				
<p><b>K-2.E.2</b> Develop a simple sketch, drawing, or physical model to illustrate and investigate how the shape of an object helps it function as needed to solve an identified problem.</p>				
<p><b>K-2.E.3</b> Analyze data from the investigation of two objects constructed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>				













# First Grade Standard Alignment

English Language Arts	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Reading Foundation</b>				
<b>1.RF.1</b> Develop an understanding of the five components of reading (print concepts, phonemic awareness, phonics, vocabulary, and fluency and comprehension) to build foundational reading skills.				
<b>Reading Literature</b>				
<b>1.RL.1</b> With support, read and comprehend literature that is grade-level appropriate.				
<b>Reading Nonfiction</b>				
<b>1.RN.1</b> With support, read and comprehend nonfiction that is grade-level appropriate.				
<b>Reading Vocabulary</b>				
<b>1.RV.1</b> Use words, phrases, and strategies acquired through conversations, reading and being read to, and responding to literature and nonfiction texts to build and apply vocabulary.				
<b>Writing</b>				
<b>1.W.1</b> Write routinely over brief time frames and for a variety of purposes and audiences.				
<b>Speaking and Listening</b>				
<b>1.SL.1</b> Listen actively and adjust the use of spoken language (e.g., vocabulary) to communicate effectively with a variety of audiences and for different purposes.				
<b>Media Literacy</b>				
<b>1.ML.1</b> Recognize the role of the media in informing, persuading, entertaining, or transmitting culture.				











# First Grade Standard Alignment

Mathematics	Crop Adventure	Crop Adventure Resources	Pig Adventure	Pig Adventure Resources
<b>Number Sense</b>				
<b>1.NS.1</b> Count to at least 120 by ones, fives, and tens from any given number. In this range, read and write numerals and represent a number of objects with a written numeral.				
<b>1.NS.2</b> Understand that 10 can be thought of as a group of ten ones — called a “ten.” Understand that the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. Understand that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).				
<b>1.NS.3</b> Match the ordinal numbers first, second, third, etc., with an ordered set up to 10 items.				
<b>1.NS.4</b> Use place value understanding to compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .				
<b>1.NS.5</b> Find mentally ten more or ten less than a given two-digit number without having to count, and explain the thinking process used to get the answer.				
<b>1.NS.6</b> Show equivalent forms of whole numbers as groups of tens and ones, and understand that the individual digits of a two-digit number represent amounts of tens and ones.				
<b>Computation and Algebraic Thinking</b>				
<b>1.CA.1</b> Demonstrate fluency with addition facts and the corresponding subtraction facts within 20. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a 10 (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or				













# First Grade Standard Alignment

known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ). Understand the role of 0 in addition and subtraction.				
<b>1.CA.2</b> Solve real-world problems involving addition and subtraction within 20 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).				
<b>1.CA.3</b> Create a real-world problem to represent a given equation involving addition and subtraction within 20.				
<b>1.CA.4</b> Solve real-world problems that call for addition of three whole numbers whose sum is within 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).				
<b>1.CA.5</b> Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and that sometimes it is necessary to compose a ten.				
<b>1.CA.6</b> Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? $6 = 6$ , $7 = 8 - 1$ , $5 + 2 = 2 + 5$ , $4 + 1 = 5 + 2$ ).				
<b>1.CA.7</b> Create, extend, and give an appropriate rule for number patterns using addition within 100.				
<b>Geometry</b>				
<b>1.G.1</b> Identify objects as two-dimensional or three-dimensional. Classify and sort two-dimensional and three-dimensional objects by shape, size, roundness and other attributes. Describe how two-dimensional shapes make up the faces of three-dimensional objects.				
















# First Grade Standard Alignment

<p><b>1.G.2</b> Distinguish between defining attributes of two- and three-dimensional shapes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size). Create and draw two-dimensional shapes with defining attributes.</p>				
<p><b>1.G.3</b> Use two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. [In grade 1, students do not need to learn formal names such as "right rectangular prism."]</p>				
<p><b>1.G.4</b> Partition circles and rectangles into two and four equal parts; describe the parts using the words halves, fourths, and quarters; and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of, the parts. Understand for partitioning circles and rectangles into two and four equal parts that decomposing into equal parts creates smaller parts.</p>				
<b>Measurement</b>				
<p><b>1.M.1</b> Use direct comparison or a nonstandard unit to compare and order objects according to length, area, capacity, weight, and temperature.</p>				
<p><b>1.M.2</b> Tell and write time to the nearest half-hour and relate time to events (before/after, shorter/longer) using analog clocks. Understand how to read hours and minutes using digital clocks.</p>				
<p><b>1.M.3</b> Identify the value of a penny, nickel, dime, and a collection of pennies, nickels, and dimes.</p>				
<b>Data Analysis</b>				
<p><b>1.DA.1</b> Organize and interpret data with up to three choices (What is your favorite fruit? apples, bananas, oranges); ask and answer questions about the total number of data points, how many in each choice, and how many more or less in one choice compared to another.</p>				


















# First Grade Standard Alignment

Social Studies Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<b>Standard 1:</b> Students identify continuity and change in the different environments around them, including school and neighborhood communities, and identify individuals, events, and symbols that are important to our country.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students explain the meaning of government; explain why rules and laws are needed in the school and community. They identify individual rights and responsibilities, and use a variety of sources to learn about the functions of government and roles of citizens.				
<b>Geography</b>				
<b>Standard 3:</b> Students identify the basic elements of maps and globes and explain basic facts concerning the relationship of the sun to daily and seasonal weather. They identify selected geographic characteristics of their home, school, and neighborhood.				
<b>Economics</b>				
<b>Standard 4:</b> Students explain how people in the school and community use goods and services and make choices as both producers and consumers.				

















# Second Grade Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>2.PS.1</b> Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.				
<b>2.PS.2</b> Predict the result of combining solids and liquids in pairs. Mix, observe, gather, record, and discuss evidence of whether the result may have different properties than the original materials.				
<b>2.PS.3</b> Construct an argument with evidence that some changes caused by heating and cooling can be reversed and some cannot.				
<b>2.PS.4</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.				
<b>Earth and Space Science (ESS)</b>				
<b>2.ESS.1</b> Record detailed weather observations, including cloud cover, cloud type, and type of precipitation on a daily basis over a period of weeks and correlate observations to the time of year. Chart and graph collected data.				
<b>2.ESS.2</b> Investigate the severe weather of the region and its impact on the community, looking at forecasting to prepare for, and respond to, severe weather.				









# Second Grade Standard Alignment

<p><b>2.ESS.3</b> Investigate how wind or water change the shape of the land and design solutions for prevention.</p>				
<p><b>2.ESS.4</b> Obtain information to identify where water is found on Earth and that it can be solid or liquid.</p>				
<p><b>Life Science (LS)</b></p>				
<p><b>2.LS.1</b> Determine patterns and behavior (adaptations) of parents and offspring which help offspring to survive.</p>				
<p><b>2.LS.2</b> Compare and contrast details of body plans and structures within the life cycles of plants and animals.</p>				
<p><b>2.LS.3</b> Classify living organisms according to variations in specific physical features (i.e. body coverings, appendages) and describe how those features may provide an advantage for survival in different environments.</p>				
<p><b>Engineering (E)</b></p>				
<p><b>K-2.E.1</b> Pose questions, make observations, and obtain information about a situation people want to change. Use this data to define a simple problem that can be solved through the construction of a new or improved object or tool.</p>				
<p><b>K-2.E.2</b> Develop a simple sketch, drawing, or physical model to illustrate and investigate how the shape of an object helps it function as needed to solve an identified problem.</p>				
<p><b>K-2.E.3</b> Analyze data from the investigation of two objects constructed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>				









# Second Grade Standard Alignment

English Language Arts	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Reading Foundation</b>				
<b>2.RF.1</b> Develop an understanding of the five components of reading (print concepts, phonemic awareness, phonics, vocabulary, and fluency and comprehension) to build foundational reading skills.				
<b>Reading Literature</b>				
<b>2.RL.1</b> Read and comprehend a variety of literature within a range of complexity appropriate for grades 2-3. By the end of grade 2, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end.				
<b>Reading Nonfiction</b>				
<b>2.RN.1</b> Read and comprehend a variety of nonfiction within a range of complexity appropriate for grades 2-3. By the end of grade 2, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end.				
<b>Reading Vocabulary</b>				
<b>2.RV.1</b> Use words, phrases, and strategies acquired through conversations, reading and being read to, and responding to literature and nonfiction texts to build and apply vocabulary.				
<b>Writing</b>				
<b>2.W.1</b> Write routinely over brief time frames and for a variety of tasks, purposes, and audiences; apply reading standards to write				









# Second Grade Standard Alignment

in response to literature and nonfiction texts.				
<b>Speaking and Listening</b>				
<b>2.SL.1</b> Listen actively and adjust the use of spoken language (e.g., conventions, vocabulary) to communicate effectively with a variety of audiences and for different purposes.				
<b>Media Literacy</b>				
<b>2.ML.1</b> Recognize the role of the media in informing, persuading, entertaining, and transmitting culture.				





















# Second Grade Standard Alignment

Mathematics	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Number Sense</b>				
<b>2.NS.1</b> Count by ones, twos, fives, tens, and hundreds up to at least 1,000 from any given number.				
<b>2.NS.2</b> Read and write whole numbers up to 1,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000.				
<b>2.NS.3</b> Plot and compare whole numbers up to 1,000 on a number line.				
<b>2.NS.4</b> Match the ordinal numbers first, second, third, etc., with an ordered set up to 30 items.				
<b>2.NS.5</b> Determine whether a group of objects (up to 20) has an odd or even number of members (e.g., by placing that number of objects in two groups of the same size and recognizing that for even numbers no object will be left over and for odd numbers one object will be left over, or by pairing objects or counting them by 2s).				
<b>2.NS.6</b> Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (e.g., 706 equals 7 hundreds, 0 tens, and 6 ones). Understand that 100 can be thought of as a group of ten tens - called a “hundred.” Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).				
<b>2.NS.7</b> Use place value understanding to compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.				
<b>Computation and Algebraic Thinking</b>				

# Second Grade Standard Alignment

<p><b>2.CA.1</b> Add and subtract fluently within 100.</p>				
<p><b>2.CA.2</b> Solve real-world problems involving addition and subtraction within 100 in situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all parts of the addition or subtraction problem (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). Use estimation to decide whether answers are reasonable in addition problems.</p>				
<p><b>2.CA.3</b> Solve real-world problems involving addition and subtraction within 100 in situations involving lengths that are given in the same units (e.g., by using drawings, such as drawings of rulers, and equations with a symbol for the unknown number to represent the problem).</p>				
<p><b>2.CA.4</b> Add and subtract within 1000, using models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; describe the strategy and explain the reasoning used. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones, and that sometimes it is necessary to compose or decompose tens or hundreds.</p>				
<p><b>2.CA.5</b> Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal groups.</p>				
<p><b>2.CA.6</b> Show that the order in which two numbers are added (commutative property) and how the numbers are grouped in addition (associative property) will not change the sum. These properties can be used to show that numbers can be added in any order.</p>				
<p><b>2.CA.7</b> Create, extend, and give an appropriate rule for number patterns using addition and subtraction within 1000.</p>				

















# Second Grade Standard Alignment

<p><b>2.G.1</b> Identify, describe, and classify two- and three-dimensional shapes (triangle, square, rectangle, cube, right rectangular prism) according to the number and shape of faces and the number of sides and/or vertices. Draw two-dimensional shapes.</p>				
<p><b>2.G.2</b> Create squares, rectangles, triangles, cubes, and right rectangular prisms using appropriate materials.</p>				
<p><b>2.G.3</b> Investigate and predict the result of composing and decomposing two- and three-dimensional shapes.</p>				
<p><b>2.G.4</b> Partition a rectangle into rows and columns of same-size (unit) squares and count to find the total number of same-size squares.</p>				
<p><b>2.G.5</b> Partition circles and rectangles into two, three, or four equal parts; describe the shares using the words halves, thirds, half of, a third of, etc.; and describe the whole as two halves, three thirds, four fourths. Recognize that equal parts of identical wholes need not have the same shape.</p>				
<b>Measurement</b>				
<p><b>2.M.1</b> Describe the relationships among inch, foot, and yard. Describe the relationship between centimeter and meter.</p>				
<p><b>2.M.2</b> Estimate and measure the length of an object by selecting and using appropriate tools, such as rulers, yardsticks, meter sticks, and measuring tapes to the nearest inch, foot, yard, centimeter and meter.</p>				
<p><b>2.M.3</b> Understand that the length of an object does not change regardless of the units used. Measure the length of an object twice using length units of different lengths for the two measurements. Describe how the two measurements relate to the size of the unit chosen.</p>				
<p><b>2.M.4</b> Estimate and measure volume (capacity) using cups and pints.</p>				











## Second Grade Standard Alignment

<b>2.M.5</b> Tell and write time to the nearest five minutes from analog clocks, using a.m. and p.m. Solve real-world problems involving addition and subtraction of time intervals on the hour or half hour.				
<b>2.M.6</b> Describe relationships of time, including: seconds in a minute; minutes in an hour; hours in a day; days in a week; and days, weeks, and months in a year.				
<b>2.M.7</b> Find the value of a collection of pennies, nickels, dimes, quarters and dollars.				
<b>Data Analysis</b>				
<b>2.DA.1</b> Draw a picture graph (with single-unit scale) and a bar graph (with single-unit scale) to represent a data set with up to four choices (What is your favorite color? red, blue, yellow, green). Solve simple put-together, take-apart, and compare problems using information presented in the graphs.				



























# Second Grade Standard Alignment

Social Studies Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<b>Standard 1:</b> Students differentiate between events that happened in the past and recently, recognize examples of continuity and change in local and regional communities, and consider ways that people and events of the past and present influence their lives.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students explain why communities have government and laws, demonstrate that people in the United States have both rights and responsibilities, and identify individual actions that contribute to the good of the community and nation.				
<b>Geography</b>				
<b>Standard 3:</b> Students locate their community, state and nation on maps and globes; identify major geographic characteristics of their local community; explore geographic relationships between the physical and environmental characteristics of their community; and compare neighborhoods in their community to those in other parts of the world/country.				
<b>Economics</b>				
<b>Standard 4:</b> Students describe how people in a community use productive resources, create a variety of businesses and industries, specialize in different types of jobs, and depend on each other to supply goods and services.				





















# Third Grade Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>3.PS.1</b> Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.				
<b>3.PS.2</b> Identify types of simple machines and their uses. Investigate and build simple machines to understand how they are used.				
<b>3.PS.3</b> Generate sound energy using a variety of materials and techniques, and recognize that it passes through solids, liquids, and gases (i.e. air).				
<b>3.PS.4</b> Investigate and recognize properties of sound that include pitch, loudness (amplitude), and vibration as determined by the physical properties of the object making the sound.				
<b>Earth and Space Science (ESS)</b>				
<b>3.ESS.1</b> Obtain and combine information to determine seasonal weather patterns across the different regions of the United States.				
<b>3.ESS.2</b> Develop solutions that could be implemented to reduce the impact of weather related hazards.				
<b>3.ESS.3</b> Observe the detailed characteristics of rocks and minerals. Identify and classify rocks as being composed of different combinations of minerals.				



## Third Grade Standard Alignment











<p><b>3.ESS.4</b> Determine how fossils are formed, discovered, layered over time, and used to provide evidence of the organisms and the environments in which they lived long ago.</p>				
<b>Life Science (LS)</b>				
<p><b>3.LS.1</b> Analyze evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p>				
<p><b>3.LS.2</b> Plan and conduct an investigation to determine the basic needs of plants to grow, develop, and reproduce.</p>				
<p><b>3.LS.3</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p>				
<p><b>3.LS.4</b> Construct an argument that some animals form groups that help members survive.</p>				
<b>Engineering (E)</b>				
<p><b>3-5.E.1</b> Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.</p>				
<p><b>3-5.E.2</b> Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p>				
<p><b>3-5.E.3</b> Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>				

# Third Grade Standard Alignment









English Language Arts	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Reading Foundation</b>				
<b>3.RF.1</b> Apply foundational reading skills to build reading fluency and comprehension.				
<b>Reading Literature</b>				
<b>3.RL.1</b> Read and comprehend a variety of literature within a range of complexity appropriate for grades 2-3. By the end of grade 3, students interact with texts proficiently and independently.				
<b>Reading Nonfiction</b>				
<b>3.RN.1</b> Read and comprehend a variety of nonfiction within a range of complexity appropriate for grades 2-3. By the end of grade 3, students interact with texts proficiently and independently.				
<b>Reading Vocabulary</b>				
<b>3.RV.1</b> Build and use accurately conversational, general academic, and content-specific words and phrases.				
<b>Writing</b>				
<b>3.W.1</b> Write routinely over a variety of time frames and for a range of discipline-specific tasks, purposes, and audiences; apply reading standards to write in response to literature and nonfiction texts.				
<b>Speaking and Listening</b>				
<b>3.SL.1</b> Listen actively and adjust the use of spoken language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.				

# Third Grade Standard Alignment











Media Literacy				
<b>3.ML.1</b> Recognize the role of the media in informing, persuading, entertaining, or transmitting culture.				

Mathematics	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
Number Sense				
<b>3.NS.1</b> Read and write whole numbers up to 10,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 10,000.				
<b>3.NS.2</b> Compare two whole numbers up to 10,000 using $>$ , $=$ , and $<$ symbols.				
<b>3.NS.3</b> Understand a fraction, $1/b$ , as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction, $a/b$ , as the quantity formed by $a$ parts of size $1/b$ . [ <i>In grade 3, limit denominators of fractions to 2, 3, 4, 6, 8.</i> ]				
<b>3.NS.4</b> Represent a fraction, $1/b$ , on a number line by defining the interval from 0 to 1 as the whole, and partitioning it into $b$ equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.				
<b>3.NS.5</b> Represent a fraction, $a/b$ , on a number line by marking off lengths $1/b$ from 0. Recognize that the resulting interval has size $a/b$ , and that its endpoint locates the number $a/b$ on the number line.				
<b>3.NS.6</b> Understand two fractions as equivalent (equal) if they are the same size, based on the same whole or the same point on a number line.				







# Third Grade Standard Alignment

<b>3.NS.7</b> Recognize and generate simple equivalent fractions (e.g., $1/2 = 2/4$ , $4/6 = 2/3$ ). Explain why the fractions are equivalent (e.g., by using a visual fraction model).				
<b>3.NS.8</b> Compare two fractions with the same numerator or the same denominator by reasoning about their size based on the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual fraction model).				
<b>3.NS.9</b> Use place value understanding to round 2- and 3-digit whole numbers to the nearest 10 or 100.				
<b>Computation</b>				
<b>3.C.1</b> Fluently add and subtract whole numbers within 1000 using strategies and algorithms based on place value, properties of operations, and relationships between addition and subtraction.				
<b>3.C.2</b> Represent the concept of multiplication of whole numbers with the following models: equal-sized groups, arrays, area models, and equal "jumps" on a number line. Understand the properties of 0 and 1 in multiplication.				
<b>3.C.3</b> Represent the concept of division of whole numbers with the following models: partitioning, sharing, and an inverse of multiplication. Understand the properties of 0 and 1 in division.				
<b>3.C.4</b> Interpret whole-number quotients of whole numbers (e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each).				
<b>3.C.5</b> Multiply and divide within 100 using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ), or properties of operations.				
<b>3.C.6</b> Demonstrate fluency with mastery of multiplication facts and corresponding division facts of 0 to 10.				
<b>Algebraic Thinking</b>				


## Third Grade Standard Alignment









<p><b>3.AT.1</b> Solve real-world problems involving addition and subtraction of whole numbers within 1000 (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p>				
<p><b>3.AT.2</b> Solve real-world problems involving whole number multiplication and division within 100 in situations involving equal groups, arrays, and measurement quantities (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p>				
<p><b>3.AT.3</b> Solve two-step real-world problems using the four operations of addition, subtraction, multiplication and division (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p>				
<p><b>3.AT.4</b> Interpret a multiplication equation as equal groups (e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each). Represent verbal statements of equal groups as multiplication equations.</p>				
<p><b>3.AT.5</b> Determine the unknown whole number in a multiplication or division equation relating three whole numbers.</p>				
<p><b>3.AT.6</b> Create, extend, and give an appropriate rule for number patterns within 100 (including patterns in the addition table or multiplication table).</p>				
<b>Geometry</b>				
<p><b>3.G.1</b> Identify and describe the following: cube, sphere, prism, pyramid, cone, and cylinder.</p>				
<p><b>3.G.2</b> Understand that shapes (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize and draw rhombuses, rectangles, and squares as examples of quadrilaterals. Recognize and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>				

## Third Grade Standard Alignment









<p><b>3.G.3</b> Identify, describe and draw points, lines and line segments using appropriate tools (e.g., ruler, straightedge, and technology), and use these terms when describing two-dimensional shapes.</p>				
<p><b>3.G.4</b> Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole (<math>1/2</math>, <math>1/3</math>, <math>1/4</math>, <math>1/6</math>, <math>1/8</math>).</p>				
<b>Measurement</b>				
<p><b>3.M.1</b> Estimate and measure the mass of objects in grams (g) and kilograms (kg) and the volume of objects in quarts (qt), gallons (gal), and liters (l). Add, subtract, multiply, or divide to solve one-step real-world problems involving masses or volumes that are given in the same units (e.g., by using drawings, such as a beaker with a measurement scale, to represent the problem).</p>				
<p><b>3.M.2</b> Choose and use appropriate units and tools to estimate and measure length, weight, and temperature. Estimate and measure length to a quarter-inch, weight in pounds, and temperature in degrees Celsius and Fahrenheit.</p>				
<p><b>3.M.3</b> Tell and write time to the nearest minute from analog clocks, using a.m. and p.m., and measure time intervals in minutes. Solve real-world problems involving addition and subtraction of time intervals in minutes.</p>				
<p><b>3.M.4</b> Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts using the \$ symbol in the form of dollars and cents (e.g., \$4.59). Solve real-world problems to determine whether there is enough money to make a purchase.</p>				
<p><b>3.M.5</b> Find the area of a rectangle with whole-number side lengths by modeling with unit squares, and show that the area is the same as would be found by multiplying the side lengths. Identify and draw rectangles with the same perimeter and different areas or with the same area and different perimeters.</p>				
<p><b>3.M.6</b> Multiply side lengths to find areas of rectangles with whole-number side lengths to solve real-world problems and other mathematical problems, and represent whole-number products as</p>				

## Third Grade Standard Alignment













rectangular areas in mathematical reasoning.				
<b>3.M.7</b> Find perimeters of polygons given the side lengths or given an unknown side length.				
<b>Data Analysis</b>				
<b>3.DA.1</b> Create scaled picture graphs, scaled bar graphs, and frequency tables to represent a data set—including data collected through observations, surveys, and experiments—with several categories. Solve one- and two-step “how many more” and “how many less” problems regarding the data and make predictions based on the data.				
<b>3.DA.2</b> Generate measurement data by measuring lengths with rulers to the nearest quarter of an inch. Display the data by making a line plot, where the horizontal scale is marked off in appropriate units, such as whole numbers, halves, or quarters.				

<b>Social Studies Standards</b>	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<b>Standard 1:</b> Students describe how significant people, events and developments have shaped their own community and region; compare their community to other communities in the region in other times and places; and use a variety of resources to gather information about the past.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students explain what it means to be citizens of their community, state, and nation; be able to identify the functions and major services provided by local governments; use a variety of				

























# Third Grade Standard Alignment

resources to gather information about their local, state, and national governments; and demonstrate understanding of democratic principles and practices.				
<b>Geography</b>				
<b>Standard 3:</b> Students explain that simple grid systems (latitude and longitude) are used to locate places on maps and globes, begin to understand the Earth/sun relationship, identify the distinctive physical and cultural features of their community, explain the geographic relationships between their own community and the state and other states within the region, and compare the geographic characteristics of their own community with communities in other parts of the world/country.				
<b>Economics</b>				
<b>Standard 4:</b> Students explain how people in the local community make choices about using goods, services and productive resources; how they engage in trade to satisfy their economic wants and needs; how they use a variety of sources to gather and apply information about economic changes in the community; and how they compare costs and benefits in economic decision making.				





# Fourth Grade Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>4.PS.1</b> Investigate transportation systems and devices that operate on or in land, water, air and space and recognize the forces (lift, drag, friction, thrust and gravity) that affect their motion.				
<b>4.PS.2</b> Investigate the relationship of the speed of an object to the energy of that object.				
<b>4.PS.3</b> Investigate how multiple simple machines work together to perform everyday tasks.				
<b>4.PS.4</b> Describe and investigate the different ways in which energy can be generated and/or converted from one form of energy to another form of energy.				
<b>4.PS.5</b> Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.				
<b>Earth and Space Science (ESS)</b>				
<b>4.ESS.1</b> Investigate how the moon appears to move through the sky and it changes day to day, emphasizing the importance of how the moon impacts the Earth, the rising and setting times, and solar and lunar eclipses.				





















# Fourth Grade Standard Alignment

<p><b>4.ESS.2</b> Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p>				
<p><b>4.ESS.3</b> Describe how geological forces change the shape of the land suddenly and over time.</p>				
<p><b>4.ESS.4</b> Develop solutions that could be implemented to reduce the impact of humans on the natural environment and the natural environment on humans.</p>				
<p><b>Life Science (LS)</b></p>				
<p><b>4.LS.1</b> Observe, analyze, and interpret how offspring are very much, but not exactly, like their parents or one another. Describe how these differences in physical characteristics among individuals in a population may be advantageous for survival and reproduction.</p>				
<p><b>4.LS.2</b> Use evidence to support the explanation that a change in the environment may result in a plant or animal will survive and reproduce, move to a new location, or die.</p>				
<p><b>4.LS.3</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction in a different ecosystems.</p>				
<p><b>Engineering (E)</b></p>				
<p><b>3-5.E.1</b> Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.</p>				





# Fourth Grade Standard Alignment

<b>3-5.E.2</b> Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.				
<b>3-5.E.3</b> Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.				

# Fourth Grade Standard Alignment

<b>Reading: Foundations</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>Reading Foundation</b>				
<b>4.RF.1</b> Apply foundational reading skills to build reading fluency and comprehension.				
<b>Reading Literature</b>				
<b>4.RL.1</b> Read and comprehend a variety of literature within a range of complexity appropriate for grades 4-5. By the end of grade 4, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end.				
<b>Reading Nonfiction</b>				
<b>4.RN.1</b> Read and comprehend a variety of nonfiction within a range of complexity appropriate for grades 4-5. By the end of grade 4, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end.				
<b>Reading Vocabulary</b>				
<b>4.RV.1</b> Build and use accurately general academic and content-specific words and phrases.				
<b>Writing</b>				
<b>4.W.1</b> Write routinely over a variety of time frames and for a range of discipline-specific tasks, purposes, and audiences; apply reading standards to support reflection and response to literature and nonfiction texts.				
<b>Speaking and Listening</b>				
<b>4.SL.1</b> Listen actively and adjust the use of spoken language (e.g., conventions, style, vocabulary) to communicate effectively with a				

# Fourth Grade Standard Alignment

variety of audiences and for different purposes.				
<b>Media Literacy</b>				
<b>4.ML.1</b> Identify how information found in electronic, print, and mass media is used to inform, persuade, entertain, and transmit culture.				

# Fourth Grade Standard Alignment

Mathematics	Crop Adventure	Crop Adventure Resources	Pig Adventure	Pig Adventure Resources
<b>Number Sense</b>				
<b>4.NS.1</b> Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.				
<b>4.NS.2</b> Compare two whole numbers up to 1,000,000 using $>$ , $=$ , and $<$ symbols.				
<b>4.NS.3</b> Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.				
<b>4.NS.4</b> Explain why a fraction, $a/b$ , is equivalent to a fraction, $(n \times a)/(n \times b)$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. [In grade 4, limit denominators of fractions to 2, 3, 4, 5, 6, 8, 10, 25, 100.]				
<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $1/2$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual fraction model).				
<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $1/2 = 0.5 = 0.50$ , $7/4 = 1 \frac{3}{4} = 1.75$ ).				

# Fourth Grade Standard Alignment

<p><b>4.NS.7</b> Compare two decimals to hundredths by reasoning about their size based on the same whole. Record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions (e.g., by using a visual model).</p>				
<p><b>4.NS.8</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.</p>				
<p><b>4.NS.9</b> Use place value understanding to round multi-digit whole numbers to any given place value.</p>				
<b>Computation</b>				
<p><b>4.C.1</b> Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.</p>				
<p><b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.</p>				
<p><b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.</p>				
<p><b>4.C.4</b> Multiply fluently within 100.</p>				
<p><b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.</p>				
<p><b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).</p>				

# Fourth Grade Standard Alignment

<p><b>4.C.7</b> Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.</p>				
<b>Algebraic Thinking</b>				
<p><b>4.AT.1</b> Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p>				
<p><b>4.AT.2</b> Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.</p>				
<p><b>4.AT.3</b> Interpret a multiplication equation as a comparison (e.g., interpret <math>35 = 5 \times 7</math> as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.</p>				
<p><b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison. [In grade 4, division problems should not include a remainder.]</p>				
<p><b>4.AT.5</b> Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem).</p>				
<p><b>4.AT.6</b> Describe a relationship between two variables and use to find a second number when a first number is given. Generate a number pattern that follows a given rule.</p>				
<b>Geometry</b>				
<p><b>4.G.1</b> Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge and technology).</p>				

# Fourth Grade Standard Alignment

<p><b>4.G.2</b> Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.</p>				
<p><b>4.G.3</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint.</p>				
<p><b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.</p>				
<p><b>4.G.5</b> Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).</p>				
<b>Measurement</b>				
<p><b>4.M.1</b> Measure length to the nearest quarter-inch, eighth-inch, and millimeter.</p>				
<p><b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.</p>				
<p><b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.</p>				
<p><b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.</p>				












# Fourth Grade Standard Alignment

<p><b>4.M.5</b> Understand that an angle is measured with reference to a circle, with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. Understand an angle that turns through <math>\frac{1}{360}</math> of a circle is called a “one-degree angle,” and can be used to measure other angles. Understand an angle that turns through <math>n</math> one-degree angles is said to have an angle measure of <math>n</math> degrees.</p>				
<p><b>4.M.6</b> Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.</p>				
<b>Data Analysis</b>				
<p><b>4.DA.1</b> Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs.</p>				
<p><b>4.DA.2</b> Make a line plot to display a data set of measurements in fractions of a unit (<math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.</p>				
<p><b>4.DA.3</b> Interpret data displayed in a circle graph.</p>				





























# Fourth Grade Standard Alignment

Social Studies Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<b>Standard 1:</b> Students trace the historical periods, places, people, events, and movements that have led to the development of Indiana as a state.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students describe the components and characteristics of Indiana’s constitutional form of government; explain the levels and three branches of Indiana’s government; understand citizenship rights and responsibilities; investigate civic and political issues and problems; use inquiry and communication skills to report findings in charts, graphs, written and verbal forms; and demonstrate responsible citizenship by exercising civic virtues and participation skills.				
<b>Geography</b>				
<b>Standard 3:</b> Students explain how the Earth/sun relationship influences the climate of Indiana; identify the components of Earth’s physical systems; describe the major physical and cultural characteristics of Indiana; give examples of how people have adapted to and modified their environment, past and present; identify regions of Indiana, and compare the geographic characteristics of Indiana with states and regions in other parts of the world/country.				
<b>Economics</b>				
<b>Standard 4:</b> Students study and compare the characteristics of Indiana’s changing economy in the past and present.				

















# Fifth Grade Science Standards

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>5.PS.1</b> Describe and measure the volume and mass of a sample of a given material.				
<b>5.PS.2</b> Demonstrate that regardless of how parts of an object are assembled the mass of the whole object is identical to the sum of the mass of the parts; however, the volume can differ from the sum of the volumes. (Law of Conservation of Mass)				
<b>5.PS.3</b> Determine if matter has been added or lost by comparing mass when melting, freezing, or dissolving a sample of a substance. (Law of Conservation of Mass)				
<b>5.PS.4</b> Describe the difference between weight being dependent on gravity and mass comprised of the amount of matter in a given substance or material.				
<b>Earth and Space Science (ESS)</b>				
<b>5.ESS.1</b> Analyze the scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.				
<b>5.ESS.2</b> Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.				









# Fifth Grade Science Standards

<p><b>5.ESS.3</b> Investigate ways individual communities within the United States protect the Earth's resources and environment.</p>				
<p><b>5.ESS.4</b> Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p>				
<p><b>Life Science (LS)</b></p>				
<p><b>5.LS.1</b> Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>				
<p><b>5.LS.2</b> Observe and classify common Indiana organisms as producers, consumers, decomposers, or predator and prey based on their relationships and interactions with other organisms in their ecosystem.</p>				
<p><b>5.LS.3</b> Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</p>				
<p><b>Engineering (E)</b></p>				
<p><b>3-5.E.1</b> Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.</p>				
<p><b>3-5.E.2</b> Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p>				
<p><b>3-5.E.3</b> Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>				

# Fifth Grade Science Standards





<b>Reading: Foundations</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>Reading Foundation</b>				
<b>5.RF.1</b> Apply foundational reading skills to build reading fluency and comprehension.				
<b>Reading Literature</b>				
<b>5.RL.1</b> Read and comprehend a variety of literature within a range of complexity appropriate for grades 4-5. By the end of grade 5, students interact with texts proficiently and independently.				
<b>Reading Nonfiction</b>				
<b>5.RN.1</b> Read and comprehend a variety of nonfiction within a range of complexity appropriate for grades 4-5. By the end of grade 5, students interact with texts proficiently and independently.				
<b>Reading Vocabulary</b>				
<b>5.RV.1</b> Build and use accurately general academic and content-specific words and phrases.				
<b>Writing</b>				
<b>5.W.1</b> Write routinely over a variety of time frames and for a range of discipline-specific tasks, purposes, and audiences; apply reading standards to support reflection and response to literature and nonfiction texts.				
<b>Speaking and Listening</b>				

# Fifth Grade Science Standards





<p><b>5.SL.1</b> Listen actively and adjust the use of spoken language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.</p>				
<b>Media Literacy</b>				
<p><b>5.ML.1</b> Identify how information found in electronic, print, and mass media is used to inform, persuade, entertain, and transmit culture.</p>				

<b>Mathematics</b>	Crop Adventure	Crop Adventure Resources	Pig Adventure	Pig Adventure Resources
<b>Number Sense</b>				
<p><b>5.NS.1</b> Use a number line to compare and order fractions, mixed numbers, and decimals to thousandths. Write the results using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols.</p>				
<p><b>5.NS.2</b> Explain different interpretations of fractions, including: as parts of a whole, parts of a set, and division of whole numbers by whole numbers.</p>				
<p><b>5.NS.3</b> Recognize the relationship that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right, and inversely, a digit in one place represents 1/10 of what it represents in the place to its left.</p>				
<p><b>5.NS.4</b> Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p>				

# Fifth Grade Science Standards

<p><b>5.NS.5</b> Use place value understanding to round decimal numbers up to thousandths to any given place value.</p>				
<p><b>5.NS.6</b> Understand, interpret, and model percents as part of a hundred (e.g. by using pictures, diagrams, and other visual models).</p>				
<b>Computation</b>				
<p><b>5.C.1</b> Multiply multi-digit whole numbers fluently using a standard algorithmic approach.</p>				
<p><b>5.C.2</b> Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning used.</p>				
<p><b>5.C.3</b> Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.</p>				
<p><b>5.C.4</b> Add and subtract fractions with unlike denominators, including mixed numbers.</p>				
<p><b>5.C.5</b> Use visual fraction models and numbers to multiply a fraction by a fraction or a whole number.</p>				
<p><b>5.C.6</b> Explain why multiplying a positive number by a fraction greater than one results in a product greater than the given number. Explain why multiplying a positive number by a fraction less than 1 results in a product smaller than the given number. Relate the principle of fraction equivalence, <math>a/b = (n \times a)/(n \times b)</math>, to the effect of multiplying <math>a/b</math> by one.</p>				
<p><b>5.C.7</b> Use visual fraction models and numbers to divide a unit fraction by a non-zero whole number and to divide a whole number by a unit fraction.</p>				







# Fifth Grade Science Standards



<p><b>5.C.8</b> Add, subtract, multiply, and divide decimals to hundredths, using models or drawings and strategies based on place value or the properties of operations. Describe the strategy and explain the reasoning.</p>				
<p><b>5.C.9</b> Evaluate expressions with parentheses or brackets involving whole numbers using the commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property.</p>				
<b>Algebraic Thinking</b>				
<p><b>5.AT.1</b> Solve real-world problems involving multiplication and division of whole numbers (e.g. by using equations to represent the problem). In division problems that involve a remainder, explain how the remainder affects the solution to the problem.</p>				
<p><b>5.AT.2</b> Solve real-world problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators (e.g., by using visual fraction models and equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and assess whether the answer is reasonable.</p>				
<p><b>5.AT.3</b> Solve real-world problems involving multiplication of fractions, including mixed numbers (e.g., by using visual fraction models and equations to represent the problem).</p>				
<p><b>5.AT.4</b> Solve real-world problems involving division of unit fractions by non-zero whole numbers, and division of whole numbers by unit fractions (e.g., by using visual fraction models and equations to represent the problem).</p>				
<p><b>5.AT.5</b> Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to hundredths, including problems that involve money in decimal notation (e.g. by using equations, models or drawings and strategies based on place value or properties of operations to represent the problem).</p>				
<p><b>5.AT.6</b> Graph points with whole number coordinates on a coordinate plane. Explain how the coordinates relate the point as the distance</p>				

# Fifth Grade Science Standards













from the origin on each axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).				
<b>5.AT.7</b> Represent real-world problems and equations by graphing ordered pairs in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.				
<b>5.AT.8</b> Define and use up to two variables to write linear expressions that arise from real-world problems, and evaluate them for given values.				
<b>Geometry</b>				
<b>5.G.1</b> Identify, describe, and draw triangles (right, acute, obtuse) and circles using appropriate tools (e.g., ruler or straightedge, compass and technology). Understand the relationship between radius and diameter.				
<b>5.G.2</b> Identify and classify polygons including quadrilaterals, pentagons, hexagons, and triangles (equilateral, isosceles, scalene, right, acute and obtuse) based on angle measures and sides. Classify polygons in a hierarchy based on properties.				
<b>Measurement</b>				
<b>5.M.1</b> Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step real-world problems.				
<b>5.M.2</b> Find the area of a rectangle with fractional side lengths by modeling with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.				
<b>5.M.3</b> Develop and use formulas for the area of triangles, parallelograms and trapezoids. Solve real-world and other mathematical problems that involve perimeter and area of triangles, parallelograms and trapezoids, using appropriate units for measures.				

# Fifth Grade Science Standards






<p><b>5.M.4</b> Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths or multiplying the height by the area of the base.</p>				
<p><b>5.M.5</b> Apply the formulas <math>V = l \times w \times h</math> and <math>V = B \times h</math> for right rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths to solve real-world problems and other mathematical problems.</p>				
<p><b>5.M.6</b> Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems and other mathematical problems.</p>				
<b>Data Analysis</b>				
<p><b>5.DS.1</b> Formulate questions that can be addressed with data and make predictions about the data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, bar graphs, and line graphs. Recognize the differences in representing categorical and numerical data.</p>				
<p><b>5.DS.2</b> Understand and use measures of center (mean and median) and frequency (mode), to describe a data set.</p>				

<h2 style="margin: 0;">Social Studies Standards</h2>	<p>The Pig Adventure</p>	<p>The Pig Adventure Resources</p>	<p>The Crop Adventure</p>	<p>The Crop Adventure Resources</p>
	<p><b>History</b></p>			
<p><b>Standard 1:</b> Students describe the historical movements that influenced the development of the United States from pre-Columbian</p>				












# Fifth Grade Science Standards

times up to 1800, with an emphasis on the American Revolution and the founding of the United States.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students identify main components and characteristics of the United States government. Students identify and explain key ideas in government from the colonial and founding periods that continue to shape civic and political life.				
<b>Geography</b>				
<b>Standard 3:</b> Students describe the influence of the Earth/sun relationship on climate and use global grid systems; identify regions; describe physical and cultural characteristics; and locate states, capitals and major physical features of the United States. They also explain the changing interaction of people with their environment in regions of the United States and show how the United States is related geographically to the rest of the world.				
<b>Economics</b>				
<b>Standard 4:</b> Students describe the productive resources and market relationships that influence the way people produce goods and services and earn a living in the United States in different historical periods. Students consider the importance of economic decision making and how people make economic choices that influence their future.				



# Sixth Grade Science Standards









Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>6.PS.1</b> Distinguish between the terms position, distance, and displacement, as well as, the terms speed and velocity.				
<b>6.PS.2</b> Describe the motion of an object graphically showing the relationship between time and position.				
<b>6.PS.3</b> Describe how potential and kinetic energy can be transferred from one form to another.				
<b>6.PS.4</b> Investigate the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.				
<b>Earth and Space Science (ESS)</b>				
<b>6.ESS.1</b> Describe the role of gravity and inertia in maintaining the regular and predictable motion of celestial bodies.				
<b>6.ESS.2</b> Design models to describe how Earth's rotation, revolution, tilt, and interaction with the sun and moon cause seasons, tides, changes in daylight hours, eclipses, and phases of the moon.				
<b>6.ESS.3</b> Compare and contrast the Earth, its moon, and other planets in the solar system, including comets and asteroids. (Comparisons should be made in regard to size, surface features, atmospheric characteristics, and the ability to support life.)				

# Sixth Grade Science Standards













Life Science (LS)				
6.LS.1 Investigate and describe how homeostasis is maintained as living things seek out their basic needs of food, water, shelter, space, and air.				
6.LS.2 Describe the role of photosynthesis in the flow of energy in food chains, energy pyramids, and food webs. Create diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.				
6.LS.3 Describe specific relationships (predator/prey, consumer/producer, parasite/host) and symbiotic relationships between organisms. Construct an explanation that predicts why patterns of interactions develop between organisms in an ecosystem.				
6.LS.4 Investigate and use data to explain how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.				
6.LS.5 Research invasive species and discuss their impact on ecosystems.				
Engineering (E)				
6-8.E.1 Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.				
6-8.E.2 Evaluate competing design solutions using a systematic process to identify how well they meet the criteria and constraints of the problem.				

# Sixth Grade Science Standards

<p><b>6-8.E.3</b> Analyze data from investigations to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p>				
<p><b>6-8.E.4</b> Develop a prototype to generate data for repeated investigations and modify a proposed object, tool, or process such that an optimal design can be achieved.</p>				









<b>Reading: Foundations</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>Reading Literature</b>				
<p><b>6.RL.1</b> Read a variety of literature within a range of complexity appropriate for grades 6-8. By the end of grade 6, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end of the range.</p>				
<b>Reading Nonfiction</b>				
<p><b>6.RN.1</b> Read a variety of nonfiction within a range of complexity appropriate for grades 6-8. By the end of grade 6, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed at the high end of the range.</p>				
<b>Reading Vocabulary</b>				
<p><b>6.RV.1</b> Acquire and use accurately grade-level appropriate general academic and content-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>				

# Sixth Grade Science Standards









Writing				
6.W.1 Write routinely over a variety of time frames for a range of tasks, purposes, and audiences; apply reading standards to support analysis, reflection, and research by drawing evidence from literature and nonfiction texts.				
Speaking and Listening				
6.SL.1 Listen actively and adjust the use of spoken language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.				
Media Literacy				
6.M.L Critically analyze information found in electronic, print, and mass media used to inform, persuade, entertain, and transmit culture.				

Mathematics	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
Number Sense				
6.NS.1 Understand that positive and negative numbers are used to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.				
6.NS.2 Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., $-(-3) = 3$ ), and that 0 is its own opposite.				



# Sixth Grade Science Standards

<p><b>6.NS.3</b> Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.</p>				
<p><b>6.NS.4</b> Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p>				
<p><b>6.NS.5</b> Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator.</p>				
<p><b>6.NS.6</b> Identify and explain prime and composite numbers.</p>				
<p><b>6.NS.7</b> Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.</p>				
<p><b>6.NS.8</b> Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: <math>a/b</math>, <math>a</math> to <math>b</math>, <math>a:b</math>.</p>				
<p><b>6.NS.9</b> Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.</p>				
<p><b>6.NS.10</b> Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).</p>				
<b>Computation</b>				
<p><b>6.C.1</b> Divide multi-digit whole numbers fluently using a standard algorithmic approach.</p>				






# Sixth Grade Science Standards

<p><b>6.C.2</b> Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.</p>				
<p><b>6.C.3</b> Solve real-world problems with positive fractions and decimals by using one or two operations.</p>				
<p><b>6.C.4</b> Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.</p>				
<p><b>6.C.5</b> Evaluate positive rational numbers with whole number exponents.</p>				
<p><b>6.C.6</b> Apply the order of operations and properties of operations (identity, inverse, commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property) to evaluate numerical expressions with nonnegative rational numbers, including those using grouping symbols, such as parentheses, and involving whole number exponents.</p>				
<b>Algebra and Functions</b>				
<p><b>6.AF.1</b> Evaluate expressions for specific values of their variables, including expressions with whole-number exponents and those that arise from formulas used in geometry and other real-world problems.</p>				
<p><b>6.AF.2</b> Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.</p>				
<p><b>6.AF.3</b> Define and use multiple variables when writing expressions to represent real-world and other mathematical problems, and evaluate them for given values.</p>				
<p><b>6.AF.4</b> Understand that solving an equation or inequality is the process of answering the following question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or</p>				





# Sixth Grade Science Standards





inequality true.				
<b>6.AF.5</b> Solve equations of the form $x + p = q$ , $x - p = q$ , $px = q$ , and $x/p = q$ fluently for cases in which $p$ , $q$ and $x$ are all nonnegative rational numbers. Represent real-world problems using equations of these forms and solve such problems.				
<b>6.AF.6</b> Write an inequality of the form $x > c$ , $x \geq c$ , $x < c$ , or $x \leq c$ , where $c$ is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.				
<b>6.AF.7</b> Understand that signs of numbers in ordered pairs indicate the quadrant containing the point. Identify rules or patterns in the signs as they relate to the quadrants Graph points with rational number coordinates on a coordinate plane.				
<b>6.AF.8</b> Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.				
<b>6.AF.9</b> Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.				
<b>6.AF.10</b> Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.				
<b>Geometry and Measurement</b>				
<b>6.GM.1</b> Convert between measurement systems (English to metric and metric to English) given conversion factors, and use these conversions in solving real-world problems.				

# Sixth Grade Science Standards









<p><b>6.GM.2</b> Know that the sum of the interior angles of any triangle is <math>180^\circ</math> and that the sum of the interior angles of any quadrilateral is <math>360^\circ</math>. Use this information to solve real-world and mathematical problems.</p>				
<p><b>6.GM.3</b> Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.</p>				
<p><b>6.GM.4</b> Find the area of complex shapes composed of polygons by composing or decomposing into simple shapes; apply this technique to solve real-world and other mathematical problems.</p>				
<p><b>6.GM.5</b> Find the volume of a right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas <math>V = lwh</math> and <math>V = Bh</math> to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.</p>				
<p><b>6.GM.6</b> Construct right rectangular prisms from nets and use the nets to compute the surface area of prisms; apply this technique to solve real-world and other mathematical problems.</p>				
<b>Data Analysis</b>				
<p><b>6.DS.1</b> Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.</p>				
<p><b>6.DS.2</b> Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.</p>				
<p><b>6.DS.3</b> Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).</p>				

# Sixth Grade Science Standards









<p><b>6.DS.4</b> Summarize numerical data sets in relation to their context in multiple ways, such as:</p> <ul style="list-style-type: none"> <li>● report the number of observations</li> <li>● describe the nature of the attribute under investigation, including how it was measured and its units of measurement</li> <li>● determine quantitative measures of center (mean and/or median) and spread (range and interquartile range)</li> <li>● describe any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered</li> </ul> <p>relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered</p>				
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Social Studies Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
History				
<p><b>Standard 1:</b> Students explore the key historic movements, events, and figures that contributed to the development of modern Europe and America from early civilizations through modern times by examining religious institutions, trade and cultural interactions, political institutions, and technological developments.</p>				
Civics and Government				
<p><b>Standard 2:</b> Students compare and contrast forms of government in different historical periods with contemporary political structures of Europe and the Americas and examine the rights and responsibilities of individuals in different political systems.</p>				
Geography				







# Sixth Grade Science Standards

<b>Standard 3:</b> Students identify the characteristics of climate regions in Europe and the Americas and describe major physical features, countries and cities of Europe, and the Western Hemisphere.				
<b>Economics</b>				
<b>Standard 4:</b> Students examine the influence of physical and cultural factors upon the economic systems of countries in Europe and the Americas.				











# Seventh Grade Science Standards

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<b>7.PS.1</b> Draw, construct models, or use animations to differentiate between atoms, elements, molecules, and compounds.				
<b>7.PS.2</b> Describe the properties of solids, liquids, and gases. Develop models that predict and describe changes in particle motion, density, temperature, and state of a pure substance when thermal energy is added or removed.				
<b>7.PS.3</b> Investigate the Law of Conservation of Mass by measuring and comparing the mass of a substance before and after a change of state.				
<b>7.PS.4</b> Investigate Newton’s first law of motion (Law of Inertia) and how different forces (gravity, friction, push and pull) affect the velocity of an object.				
<b>7.PS.5</b> Investigate Newton’s second law of motion to show the relationship among force, mass and acceleration.				
<b>7.PS.6</b> Investigate Newton’s third law of motion to show the relationship between action and reaction forces.				
<b>7.PS.7</b> Construct a device that uses one or more of Newton’s laws of motion. Explain how motion, acceleration, force, and mass are affecting the device.				













# Seventh Grade Science Standards

<p><b>7.PS.8</b> Investigate a process in which energy is transferred from one form to another and provide evidence that the total amount of energy does not change during the transfer when the system is closed. (Law of conservation of energy)</p>				
<p><b>7.PS.9</b> Compare and contrast the three types of heat transfer: radiation, convection, and conduction.</p>				
<b>Earth and Space Science (ESS)</b>				
<p><b>7.ESS.1</b> Identify and investigate the properties of minerals. Identify and classify a variety of rocks based on physical characteristics from their origin, and explain how they are related using the rock cycle. (i.e. Sedimentary, igneous, and metamorphic rocks)</p>				
<p><b>7.ESS.2</b> Construct a model or scale drawing (digitally or on paper), based on evidence from rock strata and fossil records, for how the geologic time scale is used to organize Earth's 4.6 billion-year-old history.</p>				
<p><b>7.ESS.3</b> Using simulations or demonstrations, explain continental drift theory and how lithospheric (tectonic) plates have been and still are in constant motion resulting in the creation of landforms on the Earth's surface over time.</p>				
<p><b>7.ESS.4</b> Construct an explanation, based on evidence found in and around Indiana, for how large scale physical processes, such as Karst topography and glaciation, have shaped the land.</p>				
<p><b>7.ESS.5</b> Construct a model, diagram, or scale drawing of the interior layers of the Earth. Identify and compare the compositional (chemical) layers to the mechanical (physical) layers of the Earth's interior including magnetic properties.</p>				

















# Seventh Grade Science Standards

<p><b>7.ESS.6</b> Research common synthetic materials (i.e. plastics, composites, polyester, and alloys) to gain an understanding that synthetic materials do come from natural resources and have an impact on society.</p>				
<p><b>7.ESS.7</b> Describe the positive and negative environmental impacts of obtaining and utilizing various renewable and nonrenewable energy resources in Indiana. Determine which energy resources are the most beneficial and efficient.</p>				
<b>Life Science (LS)</b>				
<p><b>7.LS.1</b> Investigate and observe cells in living organisms and collect evidence showing that living things are made of cells. Compare and provide examples of prokaryotic and eukaryotic organisms. Identify the characteristics of living things.</p>				
<p><b>7.LS.2</b> Create a model to show how the cells in multicellular organisms repeatedly divide to make more cells for growth and repair as a result of mitosis. Explain how mitosis is related to cancer.</p>				
<p><b>7.LS.3</b> Explain how cells develop through differentiation into specialized tissues and organs in multicellular organisms.</p>				
<p><b>7.LS.4</b> Research and describe the functions and relationships between various cell types, tissues, and organs in the immune system, circulatory system and digestive system of the human body.</p>				
<p><b>7.LS.5</b> Compare and contrast the form and function of the organelles found in plant and animal cells.</p>				
<b>Engineering (E)</b>				

# Seventh Grade Science Standards


<b>6-8.E.1</b> Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.				
<b>6-8.E.2</b> Evaluate competing design solutions using a systematic process to identify how well they meet the criteria and constraints of the problem.				
<b>6-8.E.3</b> Analyze data from investigations to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.				
<b>6-8.E.4</b> Develop a prototype to generate data for repeated investigations and modify a proposed object, tool, or process such that an optimal design can be achieved.				

# Seventh Grade Science Standards





<b>Reading: Foundations</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>Reading Literature</b>				
7.RL.1 Read a variety of literature within a range of complexity appropriate for grades 6-8. By the end of grade 7, students interact with texts proficiently and independently at the middle of the range and with scaffolding as needed for texts at the high end of the range.				
<b>Reading Nonfiction</b>				
7.RN.1 Read a variety of nonfiction within a range of complexity appropriate for grades 6-8. By the end of grade 7, students interact with texts proficiently and independently at the middle of the range and with scaffolding as needed for texts at the high end of the range.				
<b>Reading Vocabulary</b>				
7.RV.1 Acquire and use accurately grade-appropriate general academic and content-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.				
<b>Writing</b>				
7.W.1 Write routinely over a variety of time frames for a range of tasks, purposes, and audiences; apply reading standards to support analysis, reflection, and research by drawing evidence from literature and nonfiction texts.				
<b>Speaking and Listening</b>				
7.SL.1 Listen actively and adjust the use of spoken language (e.g., <i>conventions, style, vocabulary</i> ) to communicate effectively with a variety of audiences and for different purposes.				
<b>Media Literacy</b>				

# Seventh Grade Science Standards





<b>7.ML.1</b> Critically analyze information found in electronic, print, and mass media used to inform, persuade, entertain, and transmit culture.				
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<b>Mathematics</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>Number Sense</b>				
<b>7.NS.1</b> Find the prime factorization of whole numbers and write the results using exponents.				
<b>7.NS.2</b> Understand the inverse relationship between squaring and finding the square root of a perfect square whole number. Find square roots of perfect square whole numbers.				
<b>7.NS.3</b> Know there are rational and irrational numbers. Identify, compare, and order rational and irrational numbers (e.g. $\sqrt{2}$ , $\sqrt{3}$ , $\sqrt{5}$ , $\pi$ ) and plot them on a number line.				
<b>Computation</b>				
<b>7.C.1</b> Understand $p + q$ as the number located a distance $ q $ from $p$ , in the positive or negative direction, depending on whether $q$ is positive or negative. Show on a number line that a number and its opposite have a sum of 0 (are additive inverses). Find and interpret sums of rational numbers in real-world contexts.				
<b>7.C.2</b> Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.				
<b>7.C.3</b> Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the				











# Seventh Grade Science Standards

properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers.				
<b>7.C.4</b> Understand that integers can be divided, provided that the divisor is not zero. Understand that if $p$ and $q$ are integers, then $-(p/q) = (-p)/q = p/(-q)$ .				
<b>7.C.5</b> Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.				
<b>7.C.6</b> Use proportional relationships to solve ratio and percent problems with multiple operations (e.g. simple interest, tax, markups, markdowns, gratuities, conversions within and across measurement systems, and percent increase and decrease).				
<b>7.C.7</b> Compute fluently with rational numbers using an algorithmic approach.				
<b>7.C.8</b> Solve real-world problems with rational numbers by using one or two operations.				
<b>Algebra and Functions</b>				
<b>7.AF.1</b> Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions, including situations that involve factoring out a common number (e.g., given $2x - 10$ , create an equivalent expression $2(x - 5)$ ). Justify each step in the process.				
<b>7.AF.2</b> Solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently, where $p$ , $q$ , and $r$ are specific rational numbers. Represent real-world problems using equations of these forms and solve such problems.				
<b>7.AF.3</b> Solve inequalities of the form $px + q (> \text{ or } \geq) r$ or $px + q (< \text{ or } \leq) r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Represent real-world problems using inequalities of these forms and solve such problems. Graph the solution set of the inequality and interpret it in the context of the problem.				

# Seventh Grade Science Standards





<p><b>7.AF.4</b> Define slope as vertical change for each unit of horizontal change and recognize that a constant rate of change or constant slope describes a linear function. Identify and describe situations with constant or varying rates of change.</p>				
<p><b>7.AF.5</b> Graph a line given its slope and a point on the line. Find the slope of a line given its graph.</p>				
<p><b>7.AF.6</b> Decide whether two quantities are in a proportional relationship (e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin).</p>				
<p><b>7.AF.7</b> Identify the unit rate or constant of proportionality in tables, graphs, equations, and verbal descriptions of proportional relationships.</p>				
<p><b>7.AF.8</b> Explain what the coordinates of a point on the graph of a proportional relationship mean in terms of the situation, with special attention to the points (0, 0) and (1,r), where r is the unit rate.</p>				
<p><b>7.AF.9</b> Represent real-world and other mathematical situations that involve proportional relationships. Write equations and draw graphs to represent these proportional relationships. Recognize that these situations are described by a linear function in the form <math>y = mx</math>, where the unit rate, <math>m</math>, is the slope of the line.</p>				
<b>Geometry and Measurement</b>				
<p><b>7.GM.1</b> Explore triangles with given conditions from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p>				
<p><b>7.GM.2</b> Identify and describe similarity relationships of polygons including the angle-angle criterion for similar triangles, and solve problems involving similarity.</p>				
<p><b>7.GM.3</b> Solve real-world and other mathematical problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing. Create a scale drawing by using proportional reasoning.</p>				

# Seventh Grade Science Standards





<p><b>7.GM.4</b> Solve real-world and other mathematical problems using facts about vertical, adjacent, complementary, and supplementary angles.</p>				
<p><b>7.GM.5</b> Understand the formulas for area and circumference of a circle and use them to solve real-world and other mathematical problems; give an informal derivation of the relationship between circumference and area of a circle.</p>				
<p><b>7.GM.6</b> Solve real-world and other mathematical problems involving volume of cylinders and three-dimensional objects composed of right rectangular prisms.</p>				
<p><b>7.GM.7</b> Construct nets for right rectangular prisms and cylinders and use the nets to compute the surface area; apply this technique to solve real-world and other mathematical problems.</p>				
<b>Data Analysis, Statistics, and Probability</b>				
<p><b>7.DSP.1</b> Understand that statistics can be used to gain information about a population by examining a sample of the population. Understand that conclusions and generalizations about a population from a sample are valid only if the sample is representative of that population and that random sampling tends to produce representative samples and support valid inferences.</p>				
<p><b>7.DSP.2</b> Use data from a random sample to draw inferences about a population. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.</p>				
<p><b>7.DSP.3</b> Find, use, and interpret measures of center (mean and median) and measures of spread (range, interquartile range, and mean absolute deviation) for numerical data from random samples to draw comparative inferences about two populations.</p>				
<p><b>7.DSP.4</b> Make observations about the degree of visual overlap of two numerical data distributions represented in line plots or box plots. Describe how data, particularly outliers, added to a data set may affect the mean and/or median.</p>				
<p><b>7.DSP.5</b> Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Understand that a probability near 0 indicates an unlikely event, a</p>				

# Seventh Grade Science Standards











probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. Understand that a probability of 1 indicates an event certain to occur and a probability of 0 indicates an event impossible to occur. Identify probabilities of events as impossible, unlikely, equally likely, likely, or certain.				
<b>7.DSP.6</b> Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its relative frequency from a large sample.				
<b>7.DSP.7</b> Develop probability models that include the sample space and probabilities of outcomes to represent simple events with equally likely outcomes. Predict the approximate relative frequency of the event based on the model. Compare probabilities from the model to observed frequencies; evaluate the level of agreement and explain possible sources of discrepancy.				

<b>Social Studies Standards</b>	<b>The Pig Adventure</b>	<b>The Pig Adventure Resources</b>	<b>The Crop Adventure</b>	<b>The Crop Adventure Resources</b>
<b>History</b>				
<b>Standard 1:</b> Students examine the major movements, events and figures that contributed to the development of Africa, Asia and the Southwest Pacific from ancient civilizations to modern times by examining religious institutions, trade and cultural interactions, political institutions, and technological developments.				
<b>Civics and Government</b>				
<b>Standard 2:</b> Students trace the development of different forms of government in different historical eras and compare various contemporary political structures in Africa, Asia and the Southwest				









# Seventh Grade Science Standards

Pacific in terms of power, approach to human rights, and the roles of citizens.				
<b>Geography</b>				
<b>Standard 3:</b> Students use technology and grid systems to identify and categorize places (physical, cultural, countries, large cities), major geographic characteristics (human and physical), and regions in Africa, Asia, and the Southwest Pacific. They use geographic skills, perspectives, and technologies to analyze relationships within and between these regions and the rest of the world.				
<b>Economics</b>				
<b>Standard 4:</b> Students explain how people in the local community make choices about using goods, services and productive resources; how they engage in trade to satisfy their economic wants and needs; how they use a variety of sources to gather and apply information about economic changes in the community; and how they compare costs and benefits in economic decision making.				




















# Eighth Grade Standard Alignment

Science Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Physical Science (PS)</b>				
<p><b>8.PS.1</b> Create models to represent the arrangement and charges of subatomic particles in an atom (protons, neutrons and electrons). Understand the significance that the currently 118 known chemical elements combine to form all the matter in the universe.</p>				
<p><b>8.PS.2</b> Illustrate with diagrams (drawings) how atoms are arranged in simple molecules. Distinguish between atoms, elements, molecules, and compounds.</p>				
<p><b>8.PS.3</b> Use basic information provided for an element (atomic mass, atomic number, symbol, and name) to determine its place on the Periodic Table. Use this information to find the number of protons, neutrons, and electrons in an atom.</p>				
<p><b>8.PS.4</b> Identify organizational patterns (radius, atomic number, atomic mass, properties and radioactivity) on the Periodic Table.</p>				
<p><b>8.PS.5</b> Investigate the property of density and provide evidence that properties, such as density, do not change for a pure substance.</p>				
<p><b>8.PS.6</b> Compare and contrast physical change vs. chemical change. Analyze the properties of substances before and after substances interact to determine if a chemical reaction has occurred.</p>				







# Eighth Grade Standard Alignment

<p><b>8.PS.7</b> Balance chemical equations to show how the total number of atoms for each element does not change in chemical reactions and as a result, mass is always conserved in a closed system. (Law of Conservation of Mass.)</p>				
<b>Earth and Space Science (ESS)</b>				
<p><b>8.ESS.1</b> Research global temperatures over the past century. Compare and contrast data in relation to the theory of climate change.</p>				
<p><b>8.ESS.2</b> Create a diagram or carry out a simulation to describe how water is cycled through the earth's crust, atmosphere and oceans. Explain how the water cycle is driven by energy from the sun and the force of gravity.</p>				
<p><b>8.ESS.3</b> Research how human consumption of finite natural resources (i.e. coal, oil, natural gas, and clean water) and human activities have had an impact on the environment (i.e. causes of air, water, soil, light, and noise pollution).</p>				
<b>Life Science (LS)</b>				
<p><b>8.LS.1</b> Compare and contrast the transmission of genetic information in sexual and asexual reproduction. Research organisms that undergo these two types of reproduction.</p>				
<p><b>8.LS.2</b> Demonstrate how genetic information is transmitted from parent to offspring through chromosomes via the process of meiosis. Explain how living things grow and develop.</p>				
<p><b>8.LS.3</b> Create and analyze Punnett squares to calculate the probability of specific traits being passed from parents to offspring using different patterns of inheritance.</p>				





















# Eighth Grade Standard Alignment

<p><b>8.LS.4</b> Differentiate between and provide examples of acquired and genetically inherited traits.</p>				
<p><b>8.LS.5</b> Explain how factors affecting natural selection (competition, genetic variations, environmental changes, and overproduction) increase or decrease a species' ability to survive and reproduce.</p>				
<p><b>8.LS.6</b> Create models to show how the structures of chromatin, chromosomes, chromatids, genes, alleles and deoxyribonucleic acid (DNA) molecules are related and differ.</p>				
<p><b>8.LS.7</b> Recognize organisms are classified into taxonomic levels according to shared characteristics. Explain how an organism's scientific name correlates to these shared characteristics.</p>				
<p><b>8.LS.8</b> Explore and predict the evolutionary relationships between species looking at the anatomical differences among modern organisms and fossil organisms.</p>				
<p><b>8.LS.9</b> Examine traits of individuals within a species that may give them an advantage or disadvantage to survive and reproduce in stable or changing environment.</p>				
<p><b>8.LS.10</b> Gather and synthesize information about how humans alter organisms genetically through a variety of methods.</p>				
<p><b>8.LS.11</b> Investigate how viruses and bacteria affect the human body.</p>				
<p><b>Engineering (E)</b></p>				




# Eighth Grade Standard Alignment

<b>6-8.E.1</b> Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.				
<b>6-8.E.2</b> Evaluate competing design solutions using a systematic process to identify how well they meet the criteria and constraints of the problem.				
<b>6-8.E.3</b> Analyze data from investigations to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.				
<b>6-8.E.4</b> Develop a prototype to generate data for repeated investigations and modify a proposed object, tool, or process such that an optimal design can be achieved.				



# Eighth Grade Standard Alignment

English Language Arts	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Reading Literature</b>				
<b>8.RL.1</b> Read a variety of literature within a range of complexity appropriate for grades 6-8. By the end of grade 8, students interact with texts proficiently and independently.				
<b>Reading Nonfiction</b>				
<b>8.RN.1</b> Read a variety of nonfiction within a range of complexity appropriate for grades 6-8. By the end of grade 8, students interact with texts proficiently and independently.				
<b>Reading Vocabulary</b>				
<b>8.RV.1</b> Acquire and use accurately grade-appropriate general academic and content-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.				
<b>Writing</b>				
<b>8.W.1</b> Write routinely over a variety of time frames for a range of tasks, purposes, and audiences; apply reading standards to support analysis, reflection, and research by drawing evidence from literature and nonfiction texts.				
<b>Speaking and Listening</b>				
<b>8.SL.1</b> Listen actively and adjust the use of spoken language (e.g., <i>conventions, style, vocabulary</i> ) to communicate effectively with a variety of audiences and for different purposes.				
<b>Media Literacy</b>				
<b>8.ML.1</b> Critically analyze information found in electronic, print, and mass media used to inform, persuade, entertain, and transmit culture.				





# Eighth Grade Standard Alignment

Mathematics	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>Number Sense</b>				
<b>8.NS.1</b> Give examples of rational and irrational numbers and explain the difference between them. Understand that every number has a decimal equivalent. For rational numbers, show that the decimal equivalent terminates or repeats, and convert a repeating decimal into a rational number.				
<b>8.NS.2</b> Use rational approximations of irrational numbers to compare the size of irrational numbers, plot them approximately on a number line, and estimate the value of expressions involving irrational numbers.				
<b>8.NS.3</b> Given a numeric expression with common rational number bases and integer exponents, apply the properties of exponents to generate equivalent expressions.				
<b>8.NS.4</b> Use square root symbols to represent solutions to equations of the form $x^2 = p$ , where $p$ is a positive rational number.				
<b>Computation</b>				
<b>8.C.1</b> Solve real-world problems with rational numbers by using multiple operations.				
<b>8.C.2</b> Solve real-world and other mathematical problems involving numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Interpret scientific notation that has been generated by technology, such as a scientific calculator, graphing calculator, or excel spreadsheet.				
<b>Algebra and Functions</b>				



# Eighth Grade Standard Alignment

<p><b>8.AF.1</b> Solve linear equations and inequalities with rational number coefficients fluently, including those whose solutions require expanding expressions using the distributive property and collecting like terms. Represent real-world problems using linear equations and inequalities in one variable and solve such problems.</p>				
<p><b>8.AF.2</b> Generate linear equations in one variable with one solution, infinitely many solutions, or no solutions. Justify the classification given.</p>				
<p><b>8.AF.3</b> Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x,y).</p>				
<p><b>8.AF.4</b> Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described.</p>				
<p><b>8.AF.5</b> Interpret the equation <math>y = mx + b</math> as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. Describe similarities and differences between linear and nonlinear functions from tables, graphs, verbal descriptions, and equation</p>				
<p><b>8.AF.6</b> Construct a function to model a linear relationship between two quantities given a verbal description, table of values, or graph. Recognize in <math>y = mx + b</math> that <math>m</math> is the slope (rate of change) and <math>b</math> is the y-intercept of the graph, and describe the meaning of each in the context of a problem.</p>				
<p><b>8.AF.7</b> Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).</p>				
<p><b>8.AF.8</b> Understand that solutions to a system of two linear equations correspond to points of intersection of their graphs because points of intersection satisfy both equations simultaneously. Approximate the</p>				









# Eighth Grade Standard Alignment

<p>solution of a system of equations by graphing and interpreting the reasonableness of the approximation.</p>				
<b>Geometry and Measurement</b>				
<p><b>8.GM.1</b> Identify, define, and describe attributes of three-dimensional geometric objects (right rectangular prisms, cylinders, cones, spheres, and pyramids). Explore the effects of slicing these objects using appropriate technology and describe the two-dimensional figure that results.</p>				
<p><b>8.GM.2</b> Solve real-world and other mathematical problems involving volume of cones, spheres, and pyramids and surface area of spheres.</p>				
<p><b>8.GM.3</b> Verify experimentally the properties of rotations, reflections, and translations, including: lines are mapped to lines, and line segments to line segments of the same length; angles are mapped to angles of the same measure; and parallel lines are mapped to parallel lines.</p>				
<p><b>8.GM.4</b> Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations. Describe a sequence that exhibits the congruence between two given congruent figures.</p>				
<p><b>8.GM.5</b> Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations. Describe a sequence that exhibits the similarity between two given similar figures.</p>				
<p><b>8.GM.6</b> Explore dilations, translations, rotations, and reflections on two-dimensional figures in the coordinate plane.</p>				
<p><b>8.GM.7</b> Use inductive reasoning to explain the Pythagorean relationship.</p>				
<p><b>8.GM.8</b> Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and other mathematical problems in two dimensions.</p>				

# Eighth Grade Standard Alignment

<p><b>8.GM.9</b> Apply the Pythagorean Theorem to find the distance between two points in a coordinate plane.</p>				
<b>Data Analysis, Statistics, and Probability</b>				
<p><b>8.DSP.1</b> Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantitative variables. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</p>				
<p><b>8.DSP.2</b> Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and describe the model fit by judging the closeness of the data points to the line.</p>				
<p><b>8.DSP.3</b> Write and use equations that model linear relationships to make predictions, including interpolation and extrapolation, in real-world situations involving bivariate measurement data. Interpret the slope and y-intercept in context.</p>				
<p><b>8.DSP.4</b> Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. Understand and use appropriate terminology to describe independent, dependent, complementary, and mutually exclusive events.</p>				
<p><b>8.DSP.5</b> Represent sample spaces and find probabilities of compound events (independent and dependent) using organized lists, tables, and tree diagrams.</p>				
<p><b>8.DSP.6</b> For events with a large number of outcomes, understand the use of the multiplication counting principle. Develop the multiplication counting principle and apply it to situations with a large number of outcomes.</p>				

# Eighth Grade Standard Alignment

Social Studies Standards	The Pig Adventure	The Pig Adventure Resources	The Crop Adventure	The Crop Adventure Resources
<b>History</b>				
<p><b>Standard 1:</b> Students examine the relationship and significance of themes, concepts, and movements in the development of United States history, including the review of key ideas related to the colonization of America and the revolution and Founding Era. This will be followed by emphasis on social reform, national development and westward expansion, and the Civil War and Reconstruction period.</p>				
<b>Civics and Government</b>				
<p><b>Standard 2:</b> Students explain the major principles, values and institutions of constitutional government and citizenship, which are based on the founding documents of the United States and how the three branches of government share and check power within our federal system of government.</p>				
<b>Geography</b>				
<p><b>Standard 3:</b> Students identify the major geographic characteristics of the United States and its regions. They name and locate the major physical features of the United States, as well as demonstrate a broad understanding of the states, capitals and major cities, and use geographic skills and technology to examine the influence of geographic factors on national development.</p>				
<b>Economics</b>				
<p><b>Standard 4:</b> Students identify, describe, and evaluate the influence of economic factors on national development from the founding of the nation to the end of Reconstruction.</p>	