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| **Common Core Mathematics Standards** | **Aquatic WILD****K-12 Curriculum & Activity Guide** |
| **KINDERGARTEN** |  |
| **Counting and Cardinality K.CC** |  |
| 1. Know number names and the count sequence.
 |  |
| 1. Count to tell the number of objects.
 |  |
| 1. Compare numbers.
 |  |
| **Operations and Algebraic Thinking K.OA** |  |
| 1. Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
 |  |
| **Numbers and Operations in Base Ten K.NBT** |  |
| 1. Work with numbers 11–19 to gain foundations for place value.
 |  |
| **Measurement and Data K.MD** |  |
| 1. Describe and compare measurable attributes.
 |  |
| 1. Classify objects and count the number of objects in each category.
 |  |
| **Geometry K.G** |  |
| 1. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
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| 1. Analyze, compare, create, and compose shapes.
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| **Common Core Mathematics Standards**  |  |
| **GRADE 1**  |  |
| **Operations and Algebraic Thinking 1.OA** |  |
| 1. Represent and solve problems involving addition and subtraction.
 |  |
| 1. Understand and apply properties of operations and the relationship between addition and subtraction.
 |  |
| 1. Add and subtract within 20.
 |  |
| 1. Work with addition and subtraction equations.
 |  |
| **Numbers and Operations in Base Ten 1.NBT** |  |
| 1. Extend the counting sequence.
 |  |
| 1. Understand place value.
 |  |
| 1. Use place value understanding and properties of operations to add and subtract.
 |  |
| **Measurement and Data 1.MD** |  |
| 1. Measure lengths indirectly and by iterating length units.
 |  |
| 1. Tell and write time.
 |  |
| 1. Represent and interpret data.
 |  |
| **Geometry 1.G** |  |
| 1. Reason with shapes and their attributes.
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| **Common Core Mathematics Standards**  |  |
| **GRADE 2**  |  |
| **Operations and Algebraic Thinking 2.OA**  |  |
| 1. Represent and solve problems involving addition and subtraction.
 | Got Water?; Plastic Voyages |
| 1. Add and subtract within 20.
 | Got Water?; Plastic Voyages |
| 1. Work with equal groups of objects to gain foundations for multiplication.
 | Plastic Voyages |
| **Numbers and Operations in Base Ten 2.NBT**  |  |
| 1. Understand place value.
 | Got Water?; Plastic Voyages |
| 1. Use place value understanding and properties of operations to add and subtract.
 | Got Water?; Plastic Voyages |
| **Measurement and Data 2.MD**  |  |
| 1. Measure and estimate lengths in standard units.
 | Got Water? |
| 1. Relate addition and subtraction to length.
 | Got Water? |
| 1. Work with time and money.
 |  |
| 1. Represent and interpret data.
 | Got Water? |
| **Geometry 2.G**  |  |
| 1. Reason with shapes and their attributes.
 | Got Water?; Plastic Voyages |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 3**  |  |
| **Operations and Algebraic Thinking 3.OA**  |  |
| 1. Represent and solve problems involving multiplication and division.
 | Got Water?; Plastic Voyages |
| 1. Understand properties of multiplication and the relationship between multiplication and division.
 | Got Water? |
| 1. Multiply and divide within 100.
 | Got Water?; Plastic Voyages |
| 1. Solve problems involving the four operations, and identify and explain patterns in arithmetic.
 | Got Water?;Plastic Voyages |
| **Numbers and Operations in Base Ten 3.NBT**  |  |
| 1. Use place value understanding and properties of operations to perform multi-digit arithmetic.
 | Got Water?; Plastic Voyages |
| **Number and Operations—Fractions 3.NF**  |  |
| 1. Develop understanding of fractions as numbers.
 | Got Water? |
| **Measurement and Data 3.MD**  |  |
| 1. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
 | Alice in Waterland |
| 1. Represent and interpret data.
 | Got Water?; Plastic Voyages |
| 1. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
 | Got Water? |
| 1. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
 | Got Water? |
| **Geometry 3.G**  |  |
| 1. Reason with shapes and their attributes.
 | Got Water?; Plastic Voyages |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 4**  |  |
| **Operations and Algebraic Thinking 4.OA**  |  |
| 1. Use the four operations with whole numbers to solve problems.
 | Got Water?; Plastic Voyages |
| 1. Gain familiarity with factors and multiples.
 |  |
| 1. Generate and analyze patterns.
 | Got Water?; Plastic Voyages |
| **Numbers and Operations in Base Ten 4.NBT**  |  |
| 1. Generalize place value understanding for multi-digit whole numbers.
 | Got Water?; Plastic Voyages |
| 1. Use place value understanding and properties of operations to perform multi-digit arithmetic.
 | Got Water?; Plastic Voyages |
| **Number and Operations—Fractions 4.NF**  |  |
| 1. Extend understanding of fraction equivalence and ordering.
 | Got Water? |
| 1. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
 | Got Water? |
| 1. Understand decimal notation for fractions, and compare decimal fractions.
 | Got Water? |
| **Measurement and Data 4.MD**  |  |
| 1. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
 | Got Water?; Plastic Voyages |
| 1. Represent and interpret data.
 | Alice in Waterland; Got Water?; Plastic Voyages |
| 1. Geometric measurement: understand concepts of angle and measure angles.
 | Got Water? |
| **Geometry 4.G**  |  |
| 1. Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
 | Got Water?; Plastic Voyages |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 5**  |  |
| **Operations and Algebraic Thinking 5.OA**  |  |
| 1. Write and interpret numerical expressions.
 |  |
| 1. Analyze patterns and relationships.
 | Got Water?; Plastic Voyages; What’s in the Water? |
| **Numbers and Operations in Base Ten 5.NBT**  |  |
| 1. Understand the place value system.
 | Got Water?; Plastic Voyages |
| 1. Perform operations with multi-digit whole numbers and with decimals to hundredths.
 | Got Water?; Plastic Voyages |
| **Number and Operations—Fractions 5.NF**  |  |
| 1. Use equivalent fractions as a strategy to add and subtract fractions.
 |  |
| 1. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
 | Got Water? |
| **Measurement and Data 5.MD**  |  |
| 1. Convert like measurement units within a given measurement system.
 | Got Water?; Plastic Voyages |
| 1. Represent and interpret data.
 | Alice in Waterland; Got Water?; Plastic Voyages; What’s in the Water? |
| 1. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
 |  |
| **Geometry 5.G**  |  |
| 1. Graph points on the coordinate plane to solve real-world and mathematical problems.
 | Got Water? |
| 1. Classify two-dimensional figures into categories based on their properties.
 | Got Water?; Plastic Voyages |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 6**  |  |
| **Ratios and Proportional Relationships 6.RP**  |  |
| 1. Understand ratio concepts and use ratio reasoning to solve problems.
 | How Wet is Our Planet?; Net Gain, Net Effect; What’s in the Air?; What’s in the Water?; Where Does Water Run? |
| **The Number System 6.NS**  |  |
| 1. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
 | Watershed; Where Does Water Run? |
| 1. Compute fluently with multi-digit numbers and find common factors and multiples.
 | How Wet is Our Planet?; Where Does Water Run? |
| 1. Apply and extend previous understandings of numbers to the system of rational numbers.
 | Watershed |
| **Expressions and Equations 6.EE**  |  |
| 1. Apply and extend previous understandings of arithmetic to algebraic expressions.
 | Watershed |
| 1. Reason about and solve one-variable equations and inequalities.
 | Net Gain, Net Effect; Watershed |
| 1. Represent and analyze quantitative relationships between dependent and independent variables.
 | Net Gain, Net Effect; Where Does Water Run?; Where Have All the Salmon Gone? |
| **Geometry 6.G**  |  |
| 1. Solve real-world and mathematical problems involving area, surface area, and volume.
 | How Wet is Our Planet?; Net Gain, Net Effect; Puddle Wonders; Watershed; Where Does Water Run? |
| **Statistics and Probability 6. SP**  |  |
| 1. Develop understanding of statistical variability.
 | Net Gain, Net Effect; What’s in the Air?; Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Summarize and describe distributions.
 | Alice in Waterland; Net Gain, Net Effect; What’s in the Air?; Where Does Water Run?; Where Have All the Salmon Gone? |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 7**  |  |
| **Ratios and Proportional Relationships 7.RP**  |  |
| 1. Analyze proportional relationships and use them to solve real-world and mathematical problems.
 | How Wet is Our Planet?; Alice in Waterland; Net Gain, Net Effect; What’s in the Air?; Where Does Water Run? |
| **The Number System 7.NS**  |  |
| 1. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
 | How Wet is Our Planet?; Where Does Water Run? |
| **Expressions and Equations 7.EE**  |  |
| 1. Use properties of operations to generate equivalent expressions.
 |  |
| 1. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
 | How Wet is Our Planet?; Alice in Waterland; Watershed |
| **Geometry 7.G**  |  |
| 1. Draw, construct, and describe geometrical figures and describe the relationships between them.
 | Net Gain, Net Effect; Puddle Wonders; Watershed; Where Does Water Run? |
| 1. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
 | How Wet is Our Planet?; Net Gain, Net Effect; Puddle Wonders; Watershed; Where Does Water Run? |
| **Statistics and Probability 7.SP**  |  |
| 1. Use random sampling to draw inferences about a population.
 | Alice in Waterland; Net Gain, Net effect; Puddle Wonders; What’s in the Water?; Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Draw informal comparative inferences about two populations.
 | Net Gain, Net Effect; Puddle Wonders; What’s in the Air?; What’s in the Water?; Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Investigate chance processes and develop, use, and evaluate probability models.
 | Net Gain, Net Effect; Where Does Water Run? |

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| **Common Core Mathematics Standards**  |  |
| **GRADE 8**  |  |
| **The Number System 8.NS**  |  |
| 1. Know that there are numbers that are not rational, and approximate them by rational numbers.
 |  |
| **Expressions and Equations 8.EE**  |  |
| 1. Work with radicals and integer exponents.
 |  |
| 1. Understand the connections between proportional relationships, lines, and linear equations.
 | Alice in Waterland |
| 1. Analyze and solve linear equations and pairs of simultaneous linear equations.
 | Watershed |
| **Functions 8.F**  |  |
| 1. Define, evaluate, and compare functions.
 |  |
| 1. Use functions to model relationships between quantities.
 | Net Gain, Net Effect |
| **Geometry 8.G**  |  |
| 1. Understand congruence and similarity using physical models, transparencies, or geometry software.
 | Watershed |
| 1. Understand and apply the Pythagorean Theorem.
 | Watershed |
| 1. Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.
 | How Wet is Our Planet?; Net Gain, Net Effect; Puddle Wonders |
| **Statistics and Probability 8.SP**  |  |
| 1. Investigate patterns of association in bivariate data.
 | Alice in Waterland; Net Gain, Net Effect; Puddle Wonders; What’s in the Air?; What’s in the Water?; Where Does Water Run?; Where Have All the Salmon Gone? |

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| **High School** |  |
| **Number and Quantity** |  |
| **The Real Number System N-RN** |  |
| 1. Extend the properties of exponents to rational exponents.
 |  |
| 1. Use properties of rational and irrational numbers.
 |  |
| **Quantities N-Q** |  |
| 1. Reason quantitatively and use units to solve problems.
 | Eat and Glow; Watershed |
| **The Complex Number System N-CN** |  |
| 1. Perform arithmetic operations with complex numbers.
 |  |
| 1. Represent complex numbers and their operations on the complex plane.
 |  |
| 1. Use complex numbers in polynomial identities and equations.
 |  |
| **Vector and Matrix Quantities N-VM** |  |
| 1. Represent and model with vector quantities.
 |  |
| 1. Perform operations on vectors.
 |  |
| 1. Perform operations on matrices and use matrices in applications.
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| **High School** |  |
| **Algebra** |  |
| **Seeing Structure in Expressions A-SSE** |  |
| 1. Interpret the structure of expressions.
 |  |
| 1. Write expressions in equivalent forms to solve problems.
 |  |
| **Arithmetic with Polynomials and Rational Expressions A-APR** |  |
| 1. Perform arithmetic operations on polynomials.
 |  |
| 1. Understand the relationship between zeros and factors of polynomials
 |  |
| 1. Use polynomial identities to solve problems.
 |  |
| 1. Rewrite rational expressions.
 |  |
| **Creating Equations A-CED** |  |
| 1. Create equations that describe numbers or relationships.
 |  |
| **Reasoning with Equations and Inequalities A-REI** |  |
| 1. Understand solving equations as a process of reasoning and explain the reasoning.
 |  |
| 1. Solve equations and inequalities in one variable.
 | Watershed |
| 1. Solve systems of equations.
 |  |
| 1. Represent and solve equations and inequalities graphically.
 | Where Have All the Salmon Gone? |

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| **High School** |  |
| **Functions** |  |
| **Interpreting Functions F-IF** |  |
| 1. Understand the concept of a function and use function notation.
 |  |
| 1. Interpret functions that arise in applications in terms of the context.
 | Eat and Glow; Where Have All the Salmon Gone? |
| 1. Analyze functions using different representations.
 | Where Have All the Salmon Gone? |
| **Building Functions F-BF** |  |
| 1. Build a function that models a relationship between two quantities.
 |  |
| 1. Build new functions from existing functions.
 |  |
| **Linear, Quadratic, and Exponential Models F-LE** |  |
| 1. Construct and compare linear, quadratic, and exponential models and solve problems.
 | Eat and Glow |
| 1. Interpret expressions for functions in terms of the situation they model.
 | Eat and Glow; Where Have All the Salmon Gone? |
| **Trigonometric Functions F-TF** |  |
| 1. Extend the domain of trigonometric functions using the unit circle.
 |  |
| 1. Model periodic phenomena with trigonometric functions.
 |  |
| 1. Prove and apply trigonometric identities.
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| **High School** |  |
| **Geometry** |  |
| **Congruence G-CO** |  |
| 1. Experiment with transformations in the plane.
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| 1. Understand congruence in terms of rigid motions.
 |  |
| 1. Prove geometric theorems.
 |  |
| 1. Make geometric constructions.
 | Where Does Water Run? |
| **Similarity, Right Triangles, and Trigonometry G-SRT** |  |
| 1. Understand similarity in terms of similarity transformations.
 |  |
| 1. Prove theorems involving similarity.
 |  |
| 1. Define trigonometric ratios and solve problems involving right triangles.
 |  |
| 1. Apply trigonometry to general triangles.
 | Watershed |
| **Circles G-C** |  |
| 1. Understand and apply theorems about circles.
 |  |
| 1. Find arc lengths and areas of sectors of circles.
 |  |
| **Expressing Geometric Properties with Equations G-GPE** |  |
| 1. Translate between the geometric description and the equation for a conic section.
 |  |
| 1. Use coordinates to prove simple geometric theorems algebraically.
 |  |
| **Geometric Measurement and Dimension G-GMD** |  |
| 1. Explain volume formulas and use them to solve problems.
 | Watershed |
| 1. Visualize relationships between two-dimensional and three-dimensional objects.
 | Watershed |
| **Modeling with Geometry G-MG** |  |
| 1. Apply geometric concepts in modeling situations.
 | Watershed; Where Does Water Run? |

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| **High School** |  |
| **Statistics and Probability** |  |
| **Interpreting Categorical and Quantitative Data S-ID** |  |
| 1. Summarize, represent, and interpret data on a single count or measurement variable.
 | Eat and Glow; Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Summarize, represent, and interpret data on two categorical and quantitative variables.
 | Eat and Glow; Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Interpret linear models.
 | Eat and Glow; Where Have All the Salmon Gone? |
| **Making Inferences and Justifying Conclusions S-IC** |  |
| 1. Understand and evaluate random processes underlying statistical experiments.
 | Where Does Water Run?; Where Have All the Salmon Gone? |
| 1. Make inferences and justify conclusions from sample surveys, experiments, and observational studies.
 | Eat and Glow; Where Does Water Run?; Where Have All the Salmon Gone? |
| **Conditional Probability and the Rules of Probability S-CP** |  |
| 1. Understand independence and conditional probability and use them to interpret data.
 | Eat and Glow; Where Have All the Salmon Gone? |
| 1. Use the rules of probability to compute probabilities of compound events in a uniform probability model.
 |  |
| **Using Probability to Make Decisions S-MD** |  |
| 1. Calculate expected values and use them to solve problems.
 | Eat and Glow |
| 1. Use probability to evaluate outcomes of decisions.
 | Eat and Glow; Where Does Water Run?; Where Have All the Salmon Gone? |