

# WHALES GIANTS OF THE OCEAN

## English Language Arts Standards Alignment

### Common Core

	How Much Water	Animal Classification	Whale vs Fish	How Big are Whales?	Create a Critter	Adaptation: Blubber	Adaptation: Feeding	Sound Waves	Echolocation	What Sounds Do Whales Make?
<b>Foundational</b>										
<b>CCSS.ELA-Literacy.RF.4.4</b>										
<b>Reading Informational Text</b>										
<b>CCSS.ELA-LITERACY.RI.4.1</b>										
<b>CCSS.ELA-LITERACY.RI.4.2</b>										
<b>CCSS.ELA-LITERACY.RI.4.3</b>										
<b>CCSS.ELA-LITERACY.RI.4.4</b> Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.	X	X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.RI.4.5</b>										
<b>CCSS.ELA-LITERACY.RI.4.6</b>										
<b>CCSS.ELA-LITERACY.RI.4.7</b> Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.				X	X	X	X	X	X	
<b>CCSS.ELA-LITERACY.RI.4.8</b>										
<b>CCSS.ELA-LITERACY.RI.4.9</b>										
<b>CCSS.ELA-LITERACY.RI.4.10</b>										
<b>Reading Literature</b>										
<b>CCSS.ELA-LITERACY.RL.4.1</b>										
<b>CCSS.ELA-LITERACY.RL.4.2</b>										
<b>CCSS.ELA-LITERACY.RL.4.3</b>										
<b>CCSS.ELA-LITERACY.RL.4.4</b>										
<b>CCSS.ELA-LITERACY.RL.4.5</b>										
<b>CCSS.ELA-LITERACY.RL.4.6</b>										
<b>CCSS.ELA-LITERACY.RL.4.7</b> Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text				X		X	X	X	X	X
<b>CCSS.ELA-LITERACY.RL.4.8</b>										
<b>CCSS.ELA-LITERACY.RL.4.9</b>										
<b>CCSS.ELA-LITERACY.RL.4.10</b>										
<b>Speaking &amp; Listening</b>										
<b>CCSS.ELA-LITERACY.SL.4.1</b> Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.	X	X	X	X	X	X	X	X	X	X

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<b>CCSS.ELA-LITERACY.SL.4.2</b> Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	X	X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.SL.4.4</b> Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.		X								
<b>CCSS.ELA-LITERACY.SL.4.6</b>										
<b>Writing</b>										
<b>CCSS.ELA-LITERACY.W.4.1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.		X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.W.4.2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.		X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.W.4.3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.		X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.W.4.4</b> Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)		X	X	X	X	X	X	X	X	X
<b>CCSS.ELA-LITERACY.W.4.5</b>										
<b>CCSS.ELA-LITERACY.W.4.6</b>										

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## Math Standards Alignment Common Core

	How Much Water	Animal Classification	Whale vs Fish	How Big are Whales?	Create a Critter	Adaptation: Blubber	Adaptation: Feeding	Sound Waves	Echolocation	What Sounds Do Whales Make?
<b>Mathematics Standards</b>										
<b>CCSS.MATH.CONTENT.4.OA.A.3</b> Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	X			X		X			X	
<b>CCSS.MATH.CONTENT.4.NBT.A.2</b> Read and write multi-digit whole numbers using base ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	X			X		X			X	
<b>CCSS.MATH.CONTENT.4.NBT.A.3</b> Use place value understanding to round multi-digit whole numbers to any place.	X			X		X			X	
<b>CCSS.MATH.CONTENT.4.NBT.B.4</b> Fluently add and subtract multi-digit whole numbers using the standard algorithm.	X			X		X			X	
<b>CCSS.MATH.CONTENT.4.NBT.B.5</b>										
<b>CCSS.MATH.CONTENT.4.NBT.B.6</b>										
<b>CCSS.MATH.CONTENT.4.NF.A.1</b> Explain why a fraction $a/b$ is equivalent to a fraction 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.	X									
<b>CCSS.MATH.CONTENT.4.NF.B.3.D</b> Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	X									
<b>CCSS.MATH.CONTENT.4.NF.C.5</b> Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express $3/10$ as $30/100$ , and add $3/10 + 4/100 = 34/100$ .	X									
<b>CCSS.MATH.CONTENT.4.NF.C.6</b> Use decimal notation for fractions with denominators 10 or 100. For example, rewrite $0.62$ as $62/100$ ; describe a length as $0.62$ meters; locate $0.62$ on a number line diagram.	X									
<b>CCSS.MATH.CONTENT.4.NF.C.7</b> Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual model.	X									

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<p><b>CCSS.MATH.CONTENT.4.MD.A.1</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. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</p>					X		X				X	
<p><b>CCSS.MATH.CONTENT.4.MD.A.2</b>                      Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</p>					X		X				X	
<p><b>CCSS.MATH.CONTENT.4.MD.B.4</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 information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</p>					X		X				X	
<b>Mathematical Practices</b>												
Make sense of problems and persevere in solving them.	X				X		X				X	
Reason abstractly and quantitatively	X				X		X			X	X	
Construct viable arguments and critique the reasoning of others.	X				X		X				X	
Model with mathematics												
Use appropriate tools strategically	X				X		X	X	X	X	X	
Attend to precision	X				X		X	X	X	X	X	
Look for and make use of structure												
Look for and express regularity in repeated reasoning												

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## NGSS Alignment

State frameworks in parentheses within each DCI

	How Much Water	Animal Classification	Whales vs Fish	How Big Are Whales?	Create a Critter	Adaptation: Blubber	Adaptation: Feeding	Sound Waves	Echolocation	What Sounds Whales
<b>Disciplinary Core Ideas</b>										
<b>LS1.A</b> Structure and function: Organisms have both internal and external macroscopic structures that allow for growth, survival, behavior, and reproduction. (4-LS1-1)		X	X	X	X	X	X			
<b>LS1.D</b> Information Processing: Different sense receptors are specialized for different kinds of information, which may then be processed by the animal's brain. Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)									X	X
<b>PS3.A</b> Definitions of Energy: Energy can be moved from place to place by sound, light, heat, or electric currents (4-PS3-2)								X	X	
<b>PS3.B</b> Conservation of Energy and Energy Transfer: Energy is present whenever there are moving objects, sound, light, or heat. When objects collide, energy can be transferred from one object to another, thereby changing their motion. (4-PS3-3)								X	X	
<b>PS4.A</b> Wave Properties: Sound can make matter vibrate, and vibrating matter can make sound. Waves, which are regular patterns of motion, can be made in water by disturbing the surface. (4-PS4-1, 4-PS4-3)								X	X	
<b>Cross Cutting Concepts</b>										
Cause and effect: Mechanism and explanation					X	X	X		X	
Scale, proportion, and quantity	X			X						
Systems and system models		X			X					
Energy and matter: Flows, cycles, and conservation.								X	X	
Structure and function		X	X		X	X	X		X	X
Stability and change										
<b>Science and Engineering Practices</b>										
Asking questions and defining problems		X	X		X	X	X	X	X	
Developing and Using Models						X	X	X	X	
Planning and Carrying Out Investigations						X	X			
Analyzing and Interpreting Data	X			X		X	X	X	X	
Using Mathematics and Computational Thinking	X			X		X	X			
Constructing Explanations and Designing Solutions					X					
Engaging in Argument from Evidence										
Obtaining, Evaluating, and Communicating Information										