



Cotton Science and Sustainability



Next Generation Science Standards*

GRADE 4	Activity 1	Activity 2	Activity 3
<p>4-ESS2-1 Earth's Systems</p> <p>Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</p>		•	
<p>GRADE 5</p>			
<p>5-PS1-3 Matter and Its Interactions</p> <p>Make observations and measurements to identify materials based on their properties.</p>	•		
<p>5-ESS3-1 Earth and Human Activity</p> <p>Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>			•
<p>GRADE 6-8</p>			
<p>MS-ESS3-3 Earth and Human Activity</p> <p>Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p>			•

*NGSS Lead States. 2013. *Next Generation Science Standards: For States, By States*. Washington, DC: The National Academies Press.

Common Core English Language Arts and Math Curriculum Standards**

GRADE 4	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS			
Comprehension and Collaboration CCSS.ELA-LITERACY.SL.4.1 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.	●	●	●
Text Types and Purposes CCSS.ELA-LITERACY.W.4.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	●	●	●
Key Ideas and Details CCSS.ELA-LITERACY.RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. CCSS.ELA-LITERACY.RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.	●	●	●
Research to Build and Present Knowledge CCSS.ELA-LITERACY.W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	●	●	●
Conventions of Standard English CCSS.ELA-LITERACY.L.4.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.ELA-LITERACY.L.4.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	●	●	●
Knowledge of Language CCSS.ELA-LITERACY.L.4.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.	●	●	●

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Common Core English Language Arts and Math Curriculum Standards

GRADE 4	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS, continued			
Craft and Structure CCSS.ELA-LITERACY.RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.	•	•	•
Integration of Knowledge and Ideas CCSS.ELA-LITERACY.RI.4.7 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.	•	•	•
MATH			
Represent and interpret data CCSS.MATH.CONTENT.4.MD.B.4 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. <i>For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</i>		•	
Use place value understanding and properties of operations to perform multi-digit arithmetic CCSS.MATH.CONTENT.4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.		•	

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Common Core English Language Arts and Math Curriculum Standards

GRADE 5	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS			
Comprehension and Collaboration CCSS.ELA-LITERACY.SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.	●	●	●
Text Types and Purposes CCSS.ELA-LITERACY.W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	●	●	●
Key Ideas and Details CCSS.ELA-LITERACY.RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. CCSS.ELA-LITERACY.RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.	●	●	●
Research to Build and Present Knowledge CCSS.ELA-LITERACY.W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.	●	●	●
Conventions of Standard English CCSS.ELA-LITERACY.L.5.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.ELA-LITERACY.L.5.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	●	●	●
Knowledge of Language CCSS.ELA-LITERACY.L.5.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.	●	●	●

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Common Core English Language Arts and Math Curriculum Standards

GRADE 5	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS, continued			
Craft and Structure CCSS.ELA-LITERACY.RI.5.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 5 topic or subject area.	•	•	•
Integration of Knowledge and Ideas CCSS.ELA-LITERACY.RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.	•	•	•
MATH			
Graph points on the coordinate plane to solve real-world and mathematical problems CCSS.MATH.CONTENT.5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.		•	

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Common Core English Language Arts and Math Curriculum Standards

GRADE 6	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS			
Key Ideas and Details CCSS.ELA-LITERACY.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	●	●	●
Integration of Knowledge and Ideas CCSS.ELA-LITERACY.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	●	●	●
Text Types and Purposes CCSS.ELA-LITERACY.W.6.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	●	●	●
Comprehension and Collaboration CCSS.ELA-LITERACY.SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.	●	●	●
Conventions of Standard English CCSS.ELA-LITERACY.L.6.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.ELA-LITERACY.L.6.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	●	●	●
Production and Distribution of Writing CCSS.ELA-LITERACY.W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	●	●	●

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Common Core English Language Arts and Math Curriculum Standards

GRADE 6	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS, continued			
<p>Research to Build and Present Knowledge</p> <p>CCSS.ELA-LITERACY.W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.</p> <p>CCSS.ELA-LITERACY.W.6.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.</p> <p>CCSS.ELA-LITERACY.W.6.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>
MATH			
<p>Apply and extend previous understandings of numbers to the system of rational numbers</p> <p>CCSS.MATH.CONTENT.6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</p>		<p>•</p>	
<p>Develop understanding of statistical variability</p> <p>CCSS.MATH.CONTENT.6.SP.A.2 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>•</p>	

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Common Core English Language Arts and Math Curriculum Standards

GRADE 7	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS			
Key Ideas and Details CCSS.ELA-LITERACY.RI.7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	●	●	●
Integration of Knowledge and Ideas CCSS.ELA-LITERACY.RI.7.8 Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.			●
Text Types and Purposes CCSS.ELA-LITERACY.W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	●	●	●
Comprehension and Collaboration CCSS.ELA-LITERACY.SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	●	●	●
Conventions of Standard English CCSS.ELA-LITERACY.L.7.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.ELA-LITERACY.L.7.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	●	●	●
Production and Distribution of Writing CCSS.ELA-LITERACY.W.7.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	●	●	●

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Common Core English Language Arts and Math Curriculum Standards

GRADE 7	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS, continued			
<p>Research to Build and Present Knowledge</p> <p>CCSS.ELA-LITERACY.W.7.7 Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.</p> <p>CCSS.ELA-LITERACY.W.7.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p> <p>CCSS.ELA-LITERACY.W.7.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>
MATH			
<p>Apply and extend previous understandings of operations with fractions</p> <p>CCSS.MATH.CONTENT.7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p>		<p>•</p>	

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Common Core English Language Arts and Math Curriculum Standards

GRADE 8	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS			
Key Ideas and Details CCSS.ELA-LITERACY.RI.8.1 Cite the textual evidence that most strongly supports analysis of what the text says explicitly as well as inferences drawn from the text.	●	●	●
Integration of Knowledge and Ideas CCSS.ELA-LITERACY.RI.8.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.			●
Text Types and Purposes CCSS.ELA-LITERACY.W.8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	●	●	●
Comprehension and Collaboration CCSS.ELA-LITERACY.SL.8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	●	●	●
Conventions of Standard English CCSS.ELA-LITERACY.L.8.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.ELA-LITERACY.L.8.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	●	●	●
Production and Distribution of Writing CCSS.ELA-LITERACY.W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	●	●	●

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Common Core English Language Arts and Math Curriculum Standards

GRADE 8	Activity 1	Activity 2	Activity 3
ENGLISH LANGUAGE ARTS, continued			
<p>Research to Build and Present Knowledge</p> <p>CCSS.ELA-LITERACY.W.8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.</p> <p>CCSS.ELA-LITERACY.W.8.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p> <p>CCSS.ELA-LITERACY.W.8.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>	<p>•</p> <p>•</p> <p>•</p>
MATH			
<p>Use functions to model relationships between quantities</p> <p>CCSS.MATH.CONTENT.8.F.B.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.</p>		<p>•</p>	