Interact Middle School Library
Grades: 8, 9
States: Common Core State Standards

Interact Middle School Library: ALGEBRA MYSTERY MAZE: Solving Algebra Chains within a Maze Competition
Summary: In cooperative groups, students take turns as Measurer, Designer, and Recorder to quickly and accurately solve series of algebraic equations and word problems, as well as navigate and design mazes to earn the most centimeter lengths for their team. (9781573363815-INT936)

Common Core State Standards

Language Arts

Grade: **8** - Adopted **2010**

STRAND / DOMAIN	**CCSS.ELA-Literacy.W.8**	Writing Standards
CATEGORY / CLUSTER		Text Types and Purposes
STANDARD	**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.
EXPECTATION	**CCSS.ELA-Literacy.W.8.2b**	Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.8**	Writing Standards
CATEGORY / CLUSTER		Production and Distribution of Writing
STANDARD	**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. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.8**	Writing Standards
CATEGORY / CLUSTER		Research to Build and Present Knowledge
STANDARD	**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.
STANDARD	**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.
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.8**	Writing Standards
CATEGORY / CLUSTER		Range of Writing
STANDARD	**CCSS.ELA-Literacy.W.8.10**	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
STRAND /	**CCSS.ELA-Literacy.SL.8**	Speaking and Listening Standards

DOMAIN		
CATEGORY / CLUSTER		Comprehension and Collaboration
STANDARD	**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.
EXPECTATION	**CCSS.ELA-Literacy.SL.8.1a**	Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
EXPECTATION	**CCSS.ELA-Literacy.SL.8.1b**	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
EXPECTATION	**CCSS.ELA-Literacy.SL.8.1c**	Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
EXPECTATION	**CCSS.ELA-Literacy.SL.8.1d**	Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

Grade: **9** - Adopted **2010**

STRAND / DOMAIN	**CCSS.ELA-Literacy.RI.9-10**	Reading Standards for Informational Text
CATEGORY / CLUSTER		Integration of Knowledge and Ideas
STANDARD	**CCSS.ELA-Literacy.RI.9-10.9**	Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's ''Letter from Birmingham Jail''), including how they address related themes and concepts
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.9-10**	Writing Standards
CATEGORY / CLUSTER		Text Types and Purposes
STANDARD	**CCSS.ELA-Literacy.W.9-10.2**	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
EXPECTATION	**CCSS.ELA-Literacy.W.9-10.2b**	Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.9-10**	Writing Standards
CATEGORY / CLUSTER		Production and Distribution of Writing
STANDARD	**CCSS.ELA-Literacy.W.9-10.4**	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
STRAND / DOMAIN	**CCSS.ELA-Literacy.W.9-10**	Writing Standards
CATEGORY / CLUSTER		Research to Build and Present Knowledge
STANDARD	**CCSS.ELA-Literacy.W.9-10.7**	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
STANDARD	**CCSS.ELA-Literacy.W.9-10.8**	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

STRAND / DOMAIN	**CCSS.ELA-Literacy.W.9-10**	Writing Standards
CATEGORY / CLUSTER		Range of Writing
STANDARD	**CCSS.ELA-Literacy.W.9-10.10**	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
STRAND / DOMAIN	**CCSS.ELA-Literacy.SL.9-10**	Speaking and Listening Standards
CATEGORY / CLUSTER		Comprehension and Collaboration
STANDARD	**CCSS.ELA-Literacy.SL.9-10.1**	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
EXPECTATION	**CCSS.ELA-Literacy.SL.9-10.1a**	Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
EXPECTATION	**CCSS.ELA-Literacy.SL.9-10.1b**	Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
EXPECTATION	**CCSS.ELA-Literacy.SL.9-10.1c**	Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
EXPECTATION	**CCSS.ELA-Literacy.SL.9-10.1d**	Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

Mathematics

Grade: **8** - Adopted **2010**

STRAND / DOMAIN	**CCSS.Math.Practice**	Mathematical Practices
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP1**	Make sense of problems and persevere in solving them.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP2**	Reason abstractly and quantitatively.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP3**	Construct viable arguments and critique the reasoning of others.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP5**	Use appropriate tools strategically.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP6**	Attend to precision.
STRAND / DOMAIN	**CCSS.Math.Content.8.EE**	Expressions and Equations
CATEGORY / CLUSTER	**CCSS.Math.Content.8.EE.B**	Understand the connections between proportional relationships, lines, and linear equations.
STANDARD	**CCSS.Math.Content.8.EE.B.5**	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
STRAND / DOMAIN	**CCSS.Math.Content.8.EE**	Expressions and Equations
CATEGORY / CLUSTER	**CCSS.Math.Content.8.EE.C**	Analyze and solve linear equations and pairs of simultaneous linear equations.
STANDARD	**CCSS.Math.Content.8.EE.C.7**	Solve linear equations in one variable.
EXPECTATION	**CCSS.Math.Content.8.EE.C.7a**	Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show

		which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).
EXPECTATION	**CCSS.Math.Content.8.EE.C.7b**	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

Grade: **9** - Adopted **2010**

STRAND / DOMAIN	**CCSS.Math.Practice**	Mathematical Practices
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP1**	Make sense of problems and persevere in solving them.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP2**	Reason abstractly and quantitatively.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP3**	Construct viable arguments and critique the reasoning of others.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP5**	Use appropriate tools strategically.
CATEGORY / CLUSTER	**CCSS.Math.Practice.MP6**	Attend to precision.
STRAND / DOMAIN	**CCSS.Math.Content.HSA**	Algebra
CATEGORY / CLUSTER	**CCSS.Math.Content.HSA-CED**	Creating Equations
STANDARD	**CCSS.Math.Content.HSA-CED.A**	Create equations that describe numbers or relationships.
EXPECTATION	**CCSS.Math.Content.HSA-CED.A.1**	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
EXPECTATION	**CCSS.Math.Content.HSA-CED.A.2**	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
EXPECTATION	**CCSS.Math.Content.HSA-CED.A.3**	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
STRAND / DOMAIN	**CCSS.Math.Content.HSA**	Algebra
CATEGORY / CLUSTER	**CCSS.Math.Content.HSA-REI**	Reasoning with Equations and Inequalities
STANDARD	**CCSS.Math.Content.HSA-REI.A**	Understand solving equations as a process of reasoning and explain the reasoning.
EXPECTATION	**CCSS.Math.Content.HSA-REI.A.1**	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
STRAND / DOMAIN	**CCSS.Math.Content.HSA**	Algebra
CATEGORY / CLUSTER	**CCSS.Math.Content.HSA-REI**	Reasoning with Equations and Inequalities
STANDARD	**CCSS.Math.Content.HSA-REI.B**	Solve equations and inequalities in one variable.
EXPECTATION	**CCSS.Math.Content.HSA-REI.B.3**	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
STRAND / DOMAIN	**CCSS.Math.Content.HSF**	Functions
CATEGORY / CLUSTER	**CCSS.Math.Content.HSF-BF**	Building Functions

STANDARD	**CCSS.Math.Content.HSF-BF.A**	Build a function that models a relationship between two quantities.
EXPECTATION	CCSS.Math.Content.HSF-BF.A.1	Write a function that describes a relationship between two quantities.
GRADE EXPECTATION	**CCSS.Math.Content.HSF-BF.A.1a**	Determine an explicit expression, a recursive process, or steps for calculation from a context.
STRAND / DOMAIN	**CCSS.Math.Content.HSF**	Functions
CATEGORY / CLUSTER	**CCSS.Math.Content.HSF-BF**	Building Functions
STANDARD	**CCSS.Math.Content.HSF-BF.B**	Build new functions from existing functions.
EXPECTATION	CCSS.Math.Content.HSF-BF.B.4	Find inverse functions.
GRADE EXPECTATION	**CCSS.Math.Content.HSF-BF.B.4a**	Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. For example, f(x) =2 x^3 for x > 0 or f(x) = (x+1)/(x-1) for x ≠ 1.