



# **Evolver Multiplayer Pack**

## **Alignment to NCTM Standards**

Meltdown

Swarm

Obstacle Course

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Topics for Meltdown	NCTM Correlations
Meltdown: Estimating Linear Relationships	<p><u>Numbers and Operations Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Use the associative and commutative properties of addition and multiplication and the distributive property of multiplication over addition to simplify computations with integers, fractions and decimals</li> <li>Develop and use strategies to estimate the results of rational-number computations and judge the reasonableness of the results</li> </ul> <p><u>Algebra Standard Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Identify functions as linear or nonlinear and contrast their properties from tables, graphs or equations</li> <li>Use symbolic algebra to represent situations and to solve problems, especially those that involve linear relationships</li> </ul> <p><u>Problem Solving Standard Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Build new mathematical knowledge through problem solving</li> <li>Solve problems that arise in mathematics and in other contexts</li> </ul> <p><u>Reasoning and Proof Standard Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Make and investigate mathematical conjectures</li> </ul>
Topics For Swarm	NCTM Correlations
Identifying Prime Numbers	<p><u>Numbers and Operations Standards Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Use factors, multiples, prime factorization, and relatively prime numbers to solve problems.</li> </ul>
Solving Square Roots	<p><u>Numbers and Operations Standards Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Use factors, multiples, prime factorization, and relatively prime numbers to solve problems.</li> </ul>
Identifying Least Common Multiples	<p><u>Number and Operations Standard for Grades 6-8:</u> Use factors, multiples, prime factorization, and relatively prime numbers to solve problems.</p> <p><u>Problem Solving Standards for Grades 6-8:</u> Solve problems that arise in mathematics and in other contexts.</p>
Order of Operations	<p><u>Number and Operations Standard for Grades 6-8:</u> Understand the meaning and effects of arithmetic operations with fractions, decimals, and integers.</p> <p><u>Communication Standard for Grades 6-8:</u> Use the language of mathematics to express mathematical ideas precisely.</p>
Identifying Greatest Common Factors	<p><u>Numbers and Operations Standards Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Use factors, multiples, prime factorization, and relatively prime numbers to solve problems.</li> </ul>
Adding and Subtracting Integers	<p><u>Numbers and Operations Standards Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Develop and analyze algorithms for computing with fractions, decimals, and integers and develop fluency in their use.</li> </ul> <p><u>Problem Solving Standard Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Build new mathematical knowledge through problem solving.</li> </ul> <p><u>Representation Standard Grades 6-8:</u></p> <ul style="list-style-type: none"> <li>Create and use representations to organize, record, and communicate mathematical ideas.</li> </ul>

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Topics for Obstacle Course	NCTM Correlations
Level 1: Platforms  Adding Positive and Negative Integers	<u>Numbers and Operations Standards Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Develop meaning for integers and represent and compare quantities with them.</li> <li>• Develop and analyze algorithms for computing with fractions, decimals, and integers and develop fluency in their use.</li> </ul> <u>Problem Solving Standard Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Build new mathematical knowledge through problem solving.</li> </ul> <u>Representation Standard Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Create and use representations to organize, record, and communicate mathematical ideas</li> </ul>
Level 2: Staircase  Multiples	<u>Numbers and Operations Standards Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Use factors, multiples, prime factorization, and relatively prime numbers to solve problems.</li> </ul>
Level 3: Ball Throwing  Converting Fractions and Percentages to Decimals	<u>Numbers and Operations Standard Grade 6-8:</u> <ul style="list-style-type: none"> <li>• Work flexibly with fractions, decimal, and percents to solve problems.</li> <li>• Compare and order fractions, decimals and percents efficiently and find their approximate locations on a number line.</li> <li>• Develop meaning for percents greater than 100 and less than 1.</li> </ul> <u>Problem Solving Standard Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Build new mathematical knowledge through problem solving.</li> </ul> <u>Representations Standard Grades 6-8:</u> <ul style="list-style-type: none"> <li>• Create and use representations to organize, record, and communicate mathematical ideas.</li> </ul>
Level 4: Maze  Solving One-step Equations  and  Converting Fractions and Percentages to Decimals (see above)	<u>Algebra Standard for Grades 6–8:</u> Recognize and generate equivalent forms for simple algebraic expressions and solve linear equations.  <u>Problem Solving Standard for Grades 6–8:</u> Solve problems that arise in mathematics and in other contexts.  <u>Communication Standard for Grades 6–8:</u> Use the language of mathematics to express mathematical ideas precisely.  <u>Connection Standard for Grades 6–8:</u> Recognize and use connections among mathematical ideas.  <u>Representation Standard for Grades 6–8:</u> Create and use representations to organize, record, and communicate mathematical ideas.

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Level 5: Quiz  Translating Word Expressions to Equations	<p><u>Numbers and Operations Standard Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Understand the meaning and effects of arithmetic operations with fractions, decimals, and integers.</li></ul> <p><u>Algebra Standard Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Develop an initial conceptual understanding of different uses of variables.</li></ul> <p><u>Problem Solving Standard Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Solve problems that arise in mathematics and in other contexts.</li></ul> <p><u>Communication Standard Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Use the language of mathematics to express mathematical ideas precisely.</li></ul> <p><u>Connection Standard Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Recognize and use connections among mathematical ideas.</li></ul> <p><u>Representation for Grades 6-8:</u></p> <ul style="list-style-type: none"><li>• Create and use representations to organize, record, and communicate mathematical ideas.</li></ul>
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