Exploring Equations

Grade/Subject:

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| 8th grade math and Algebra 1 |

Goals:

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| Students use properties of equality and order of operations to write and solve linear equations in one variable |

Standards

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| Common Core Standard: CCSS: 8.EE.7b:  Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. |

Timing:

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| One block period (75 minutes) |

Materials:

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| Chromebooks (one per student or pairs), Activity sheet, paper, pencil, calculator |

Lesson Plan

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| Timing | Activity |
| 15 - 20 minutes | Students get chromebooks and access PhET Equality Explorer – Operations  Teacher hands out Activity Sheet and allows students time to investigate sim and to complete problem 1 on sheet  Have students share out what they have discovered about how the sim works.  Students continue with problems 2 – 7 on Activity sheet  Have students share out how they were able to create the equations. |
| 25 - 30 minutes | Students access PhET Equality Explorer – Solve It  Call on students to lead class review of solving linear equations by using sim  to solve one to two problems from each level |
| 25 - 30 minutes | Students access PhET Equality Explorer – Solve It and complete exit ticket |