

Curriculum Mapping: Integrating Magnet Theme with Ongoing Units  
 School: John Muir K-12 Magnet School for Global Citizenship

Jason Hundley    Grade level; Algebra 8<sup>th</sup> and 9<sup>th</sup>    Date: 4/15/09

|  |   |                                      |   |   |   |   |  |
|--|---|--------------------------------------|---|---|---|---|--|
| Essential questions: How do we become globally aware? How do we draw together as a community to use our collective knowledge to create positive change?<br>(Include infusion of Paideia, technology and our global theme. How does our curriculum look different?) |   |                                      |   |   |   |   |  |
| Subject:   | Unit 1<br>Connections to Algebra              | Unit 2<br>Properties of Real Numbers | Unit 3<br>Solving Linear equations and inequalities | Unit 4<br>Graphing and Writing linear equations and inequalities  | Unit 5<br>Properties of Exponents                                     | Unit 6<br>Graphing and writing quadratic equations and inequalities   | Unit 7<br>Polynomials and Factoring  |
| Process, product, and materials  | Students create tables and graphs using excel |                                      | Students use Winplot to check their work visually.  | Students draw a picture using 5 horizontal lines, 5 vertical lines and 10 non-vertical non-horizontal lines. To draw the lines they need to write the equations and input them into Winplot to graph the picture. | Students will use Equation editor to create problems using exponents. | Students draw a picture using lines and parabolas. To draw the lines and parabolas they need to write the equations and input them into Winplot to graph the picture. | Students setup a spreadsheet using Excel to help them with factoring polynomials |
| Paideia  | “Spider Legs” Problem                         |                                      |   | “Drug Doses and Weights” Problem  |   |   |  |
| Technology   | Excel   |                                      | Windows operating system, Winplot                   | Windows operating system, Winplot   | Equation Editor   | Windows operating system, Winplot   | Windows operating system and Excel   |