# CCSS PrBL Curriculum Map: Geometry

The following sample Problem Based Learning (PrBL) curriculum map is modeled after the scope and sequence shown below. Each of the tasks are mapped to the [Common Core State Standards](http://www.corestandards.org/Math) and can be found online. Note that this curriculum map only outlines the problem progression and does NOT address student-centered scaffolding, which is a crucial aspect of an effective math classroom. For student-centered scaffolding ideas and sample tasks, go [here](http://emergentmath.com/2012/03/01/seven-sneaky-activities-to-get-your-students-talking-mathematically/).



Intro and Construction (12 days): G-CO 12,13

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| **Title** | **Common Core State Standards: Math Content** | **Days** |
| [Pizza Delivery Regions](http://illuminations.nctm.org/LessonDetail.aspx?id=L745) (NCTM Illuminations) | G-CO.12, 13 | 2 |
| [Security Camera Placement](http://illuminations.nctm.org/LessonDetail.aspx?id=L767) (NCTM Illuminations) | G-CO.12,13, A-CED.1, F-BF.1 | 2 |
| [Placing a Fire Hydrant](http://www.illustrativemathematics.org/illustrations/508) (Illustrative Mathematics) | G-CO 12 | 2 |
| [Pop Up Box Design](http://mrpiccmath.weebly.com/1/post/2012/02/3-acts-pop-box-design.html) (Timon) | G-CO.12 | 3 |
| [Roller Coaster](http://thescamdog.wordpress.com/2011/07/10/roller-coaster/) (John) | G-CO.12,13, 8-EE.5, G-CO.9,10 | 2 |
| [remediation, extension, assessment, skill practice] |  | 3 |

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| **UNIT: Basic Definitions and Rigid Motions**  | **G-CO 1,2,3,4,5,6,7,8** | **20** |
| [Transversals, Tape, and Stickies](http://mr-stadel.blogspot.com/2012/10/transversals-tape-and-stickies.html) (Andrew) | G-CO.1 | 2 |
| [Dog on a Lead](http://fivetriangles.blogspot.com/2012/12/40-dog-on-lead.html) (FiveTriangles) | G-CO.2,12,13,2 | 1 |
| [Winshield Wiper](http://jdevarona.wordpress.com/2012/07/13/let-the-random-problem-ideas-begin/) (Jeff) | G-CO.1,6,7 | 2 |
| [Complete the Quadrilateral](http://fawnnguyen.com/2013/02/08/don-stewards-complete-the-quadrilateral.aspx) (Fawn) | G.CO.3, 7,11 | 1 |
| [Isosceles Triangle Problem](http://fivetriangles.blogspot.com/2012/04/isosceles-triangles.html) (Fivetriangles) | G-CO.6,7 | 1 |
| [Bike Trail Task](http://musingmathematically.blogspot.ca/2012/07/bike-trail-task.html) (Nat) | G-GMD.1, G-CO.1,5 | 3 |
| [Edgier Brownie Pans](http://emergentmath.com/2012/01/07/can-we-make-an-even-edgier-brownie-pan-what-about-the-perfect-brownie-pan/) (Geoff) | G-CO.1,3 | 3 |
| [remediation, extension, assessment, skill practice] |  |  |

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| **UNIT: Geometry Relationships and Properties**  | **G-CO 9,10,11; G-C 3** | **15** |
| [Pew pew](http://function-of-time.blogspot.com/2012/10/hours-of-entertainment.html)! (Kate) | C-CO.9,10,12 | 1 |
| [Perplexing Parallelograms](http://illuminations.nctm.org/LessonDetail.aspx?id=L709) (NCTM Illuminations) | G-CO.3,7,11 | 1 |
| FAL: [Evaluating Statements About Length and Area](http://map.mathshell.org/materials/lessons.php?taskid=212&subpage=concept) (MARS) | C-CO.9 | 3 |
| [T.V. Space](http://mrpiccmath.weebly.com/1/post/2012/01/3-acts-tv-space.html) (Timon) | G-CO.10 | 2 |
| FAL: [Proofs of the Pythagorean Theorem](http://map.mathshell.org/materials/lessons.php?taskid=419&subpage=concept) (MARS) | C-CO.9,10 | 3 |
| [Paper Folding](http://fivetriangles.blogspot.com/2012/04/paper-folding.html) (FiveTriangles) | C-CO.9,10 | 1 |
| [remediation, extension, assessment, skill practice] |  | 4 |

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| **UNIT: Similarity** | **G-SRT 1,2.3,4,5** | **20** |
| [Pizza Casbah Eating Contest](http://emergentmath.com/2011/02/18/the-pizza-casbah-30-inch-pizza-challenge/) (Geoff) | G-SRT.1, G-C.1 | 2 |
| [Mmm Juice](http://mrpiccmath.weebly.com/1/post/2012/01/3-acts-mmm-juice.html) (Timon) | G-SRT.1,6 | 2 |
| FAL: [Analyzing Congruence Proofs](http://map.mathshell.org/materials/lessons.php?taskid=452&subpage=concept) (MARS) | G-CO.7,8, G-SRT.2 | 3 |
| [Pigs in a Blanket](http://emergentmath.com/2012/11/08/more-math-food-blogging-i-may-need-some-help-from-my-southern-friends/) (Geoff) | G-SRT.2,3,4,5 | 2 |
| FAL: [Solving Geometry Problems: Floodlights](http://map.mathshell.org/materials/lessons.php?taskid=429&subpage=problem) (MARS) | G-SRT.2,3,4,5, G-CO.7,8 | 3 |
| [New York Minute](http://illuminations.nctm.org/LessonDetail.aspx?id=L848) (NCTM Illuminations) | G-CO.8,G-SRT.2,5 | 2 |
| [remediation, extension, assessment, skill practice] |  | 1 |

\*\* Modeling Unit \*\* (4 days)

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| FAL: [Rolling Cups](http://map.mathshell.org/materials/lessons.php?taskid=428&subpage=problem) (MARS) | G-SRT, G-GMD, G-MG, F-BF | 4 |

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| **UNIT: Coordinate Geometry**  | **G-GPE 4,5,6,7\*** | **15** |
| [Map Distance and Midpoint](http://pamjwilson.wordpress.com/2012/08/27/distance-midpoint-on-a-map/) (Pam) | G-GPE.4,6,7 | 3 |
| [Is This a Rectangle](http://www.illustrativemathematics.org/illustrations/1302)? (Illustrative Mathematics) |  G-SRT.B.5, 8.G.A, 8.G.B, G-CO.B, G-GPE.B | 1 |
| FAL: [Finding Equations of Parallel and Perpendicular Lines](http://map.mathshell.org/materials/lessons.php?taskid=226&subpage=concept) (MARS) | G-GPE.5 | 3 |
| [Obscure Geometry](https://s3.amazonaws.com/threeacts/obscuregeometry.zip) (Dan) | G-GPE 7 | 3 |
| [remediation, extension, assessment, skill practice] |  | 5 |

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| **UNIT: Circles and Conics** | **G-C 1,2,5; G-GPE 1,2** | **20** |
| [Elmo’s Microwave Travel](http://mr-stadel.blogspot.com/2012/07/elmos-microwave-travel.html) (Andrew) | [G-C 1](https://echo.newtechnetwork.org/?q=ntlp/library/resource/view/215025041/215025286) | 1 |
| FAL: [Sectors of Circles](http://map.mathshell.org/materials/lessons.php?taskid=441&subpage=concept) (MARS) | G-C.2,5 | 3 |
| FAL: [Inscribing and Circumscribing Right Triangles](http://map.mathshell.org/materials/lessons.php?taskid=403&subpage=problem) (MARS) | A-CED.4, G-CO.12,13, G-SRT, G-C.3 | 3 |
| [Lucky Cow](http://threeacts.mrmeyer.com/luckycow/) (Dan)  | G-C.5 | 1 |
| FAL: [Equations of Circles](http://map.mathshell.org/materials/lessons.php?taskid=406&subpage=concept) (MARS) | G-GPE.1 | 3 |
| FAL: [Equations of Circles 2](http://map.mathshell.org/materials/lessons.php?taskid=425&subpage=concept) (MARS) | G-C.1, G-GPE.1 | 3 |
| [remediation, extension, assessment, skill practice] |  | 1 |

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| **UNIT: Geometric Measurement and Dimension** | **G-GMD.1,3,4** | **15** |
| [From Listerine to Fuji Water](http://fawnnguyen.com/2013/02/13/from-listerine-to-fuji-water.aspx) (Fawn) | G-SRT.5, G-GMD.3 | 2 |
| [You Pour, I Choose](http://mrmeyer.com/threeacts/youpourichoose/) (Dan) | G-GMD 4 | 2 |
| [Penny Wars](http://www.yummymath.com/2012/penny-wars/) (Yummymath) | 8.G.9 , G-GMD.3 , G-GMD.4 | 2 |
| FAL: [2D Representation of 3D Objects](http://map.mathshell.org/materials/lessons.php?taskid=439&subpage=concept) (MARS) | G-GMD.1,2,3,4 | 3 |
| FAL: [Calculating Volumes of Compound Objects](http://map.mathshell.org/materials/lessons.php?taskid=216&subpage=concept) (MARS) | G-SRT.6, G-GMD 1,2,3,4 | 3 |
| FAL: [Evaluating Statements about Enlargement 2D and 3D](http://map.mathshell.org/materials/lessons.php?taskid=213&subpage=concept) (MARS) | G-GMD.1,2,3,4 | 3 |
| [remediation, extension, assessment, skill practice] |  |  |

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| **UNIT: Trigonometric Ratios** | **G-SRT.6,7,8** | **15** |
| [The Giant Bat](http://jdevarona.wordpress.com/2013/02/18/random-problem-idea-the-giant-bat/) (Jeff) | G-SRT 6.7.8 | 3 |
| FAL: [Geometry Problems: Triangles and Circles](http://map.mathshell.org/materials/lessons.php?taskid=222&subpage=problem) (MARS) | G-SRT.2.6.7.8, G-C.2 | 3 |
| [Equilateral-er Triangles](http://mrhonner.com/2011/10/10/which-triangle-is-more-equilateral/) (Patrick) | G-SRT.6,7,8 | 2 |
| [remediation, extension, assessment, skill practice] |  | 3 |

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| **UNIT: Capstone Geometric Modeling Project**  | **G-MG 1\*,2\*,3\*** | **10** |
| [Sprinkler Task](http://musingmathematically.blogspot.ca/2012/07/sprinkler-task.html) (Nat) |  | 4 |
| [Constructing a Soccer Goal](http://emergentmath.com/2011/02/04/pythagoras-and-pele-gooooooooooooaaaaaaaa%E2%80%A6-to-be-continued/) (Geoff) |  | 6 |
| [remediation, extension, assessment, skill practice] |  | 3 |

\*\* Project \*\* (5 days)

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| [Gerrymandering](http://emergentmath.com/2011/06/19/how-can-we-measure-the-egregiousness-of-gerrymandering-geometry-perimeter-and-area/) (Geoff) |  | 5 |