|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Class** | Geometry | **Topic** | U3 – Write and Graph Equations of Lines | **Lesson** | 5 | **Of** | 6 |

|  |  |
| --- | --- |
| **Objective** | Students will:   * Students will understand that the slope or steepness of the line represents the unit rate of change as it applies to the data that generates the graph. * Students will apply Common Core Mathematical Practices to slope, rates, unit rates, linear equations, and linear graphs. Students will also see how the concept of slope can be connected to real world applications. * Students will be able to write and graph equations of lines using Standard Form, Slope Intercept Form, and Point Slope Form. |
|  |  |
| **“I Can” Statement** | I can find and use slopes of lines to solve mathematical problems as well as identify their uses in the real world.  I can write equations of lines given their graph on the coordinate plane. |

|  |  |
| --- | --- |
| **Common Core Standards** | [CCSS.MATH.CONTENT.8.EE.B.5](http://www.corestandards.org/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.  [CCSS.MATH.CONTENT.8.EE.B.6](http://www.corestandards.org/Math/Content/8/EE/B/6/) Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation *y* = *mx* + *b* for a line intercepting the vertical axis at*b*.  *[CCSS.MATH.CONTENT.HSG.GPE.B.5](http://www.corestandards.org/Math/Content/HSG/GPE/B/5/)* Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point). |
|  |  |

|  |  |
| --- | --- |
| **Bell Work** | See 3-5 Bell Work |

|  |  |
| --- | --- |
| **Procedures** | 1. Start and lead student discussion related to the bell work.  2. Distribute the Guided Notes  3. Present lesson or play a video lesson.  4. Use an Online Activity if time permitted.  5. Distribute Lesson Assignment. |

|  |  |
| --- | --- |
| **Assessment** | Bell Work 3-5  Assignment 3-5  Exit Slip 3-5 |

|  |  |
| --- | --- |
| **Additional Resources** | See Online Activities |