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| Class | 8th Grade Math |

Send as an attachment via email to [adlerml@scsk12.org](mailto:adlerml@scsk12.org). Save file as: LessonPlans\_Last NameFirstInitial\_MonthDay

Example: LessonPlans\_AdlerA\_Aug10

Boxes will expand as necessary when you type. Due by 11:59 Friday of week before scheduled plans.

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| Teacher | Teri Lindsey | | | | | |
|  | | **Date: 9-26** | **Date: 9-27** | **Date: 9-28** | **Date: 9-29** | **Date: 9-30** | |
| **Standard**  (Reference State, Common Core, ACT College Readiness Standards and/or State Competencies.) | | **N-Q.A.1** Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.  **N-Q.A.22** Define appropriate quantities for the purpose of descriptive modeling.  **N-Q.A.3** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. | | | | | |
| **Objective**  (Clear, Specific, and Measurable, student-friendly) | | I can understand the relationship between physical measurements and their representation on a graph. | I can represent and analyze the function of change over time using graphing software. | I can reason about graphs and justify my decisions. | I can reason about graphs and justify my decisions. | 9i | |
| **Connections to Prior Knowledge** | | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | |
| **Guiding Questions**  (Motivator / Hook  An Essential Question encourages students to put forth more effort when faced with complex, open-ended, challenging, meaningful and authentic questions.) | | How can graphs describe real-world situations, model predictions and solve problems? | How can graphs describe real-world situations, model predictions and solve problems? | How can graphs describe real-world situations, model predictions and solve problems? | How can graphs describe real-world situations, model predictions and solve problems? | How can graphs describe real-world situations, model predictions and solve problems? | |

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| **Instructional Strategies**  (Step-By-Step Procedures – Sequence  Discover / Explain – Direct Instruction  Modeling Expectations – “I Do”  Questioning / Encourages Higher Order Thinking  Grouping Strategies  Differentiated Instructional Strategies to Provide Intervention & Extension, **Literacy Task**) | TTW show a video of a man walking down stairs.  <http://www.mrmeyer.com/graphingstories1/graphingstories2.mov>  TTW facilitate a discussion about the change in elevation over time.  TTW guide students to create a graph to depict the man’s elevation from ground level over time.  TTW ask strategic questions to guide student’s understanding of the components of the graph. | TTW introduce a graphing simulator of an elevator to facilitate a discussion of phases of the graph and the physical action they represent.  TTW draw students’ attention to varying slopes and guide students to discover what causes each to happen. | TTW present a graph with 3 possible explanations and facilitate a discussion to determine which could be reasonable.  TTW annotate the parts of the graph to model the procedure for students. | TTW guide students to recall the work begun in the previous lesson to match graphs and explanations.  TTW model analyzing the graph to determine data points and make a table. | TTW show a video of a man climbing down a ladder.  TTW ask strategic questions to check for understanding.   1. **Draw your own graph for this graphing story. Use straight line segments in your graph to model the elevation of the man over different time intervals. Label your -axis and -axis appropriately, and give a title for your graph.  *[See video for one example of a graph of this story.]*** 2. **Your picture is an example of a graph of a piecewise linear function. Each linear function is defined over an interval of time, represented on the horizontal axis. List those time intervals.  *The intervals are*** [,]***,*** (,. ]***,*** (., ],***and*** (, ]***, with the understanding that the inclusion of the endpoints may vary. Students may use any notation they want to describe the intervals.*** 3. **In your graph in part (a), what does a horizontal line segment represent in the graphing story?  *It is a period of time when he is neither going up nor down.*** 4. **If you measured from the top of the man’s head instead (he is** . . **tall), how would your graph change? *The whole graph would be shifted up*** . **.** |
| **Differentiated Tasks**  (Activities based on students’ needs and learning styles, IEP modifications) | TSW sketch and label a graph depicting the man’s elevation over time. | TSW explore with a graphing simulator to experience the effects of various changes on the slope of the graph. | TSW work in small groups to match various graphs with the appropriate story. | TSW work in small groups to complete the matching activity from the previous lesson and will further develop the concept by analyzing and determining data points for each graph to be listed in a table. | TTW guide students through several examples and gradually release them to work independently. |
| **Assessment**  (Aligned with the Lesson Objective  Formative / Summative  Performance-Based/Rubric  Formal / Informal) | TSW label and interpret the graph “Journey to the Bus Stop” as a pre-assessment to determine students’ prior knowledge. | TTW present the following 3 stories and ask students to change the parameters on the graphs to produce the stated results.  Motion Story 1. The boy and girl start from the same position. The girl gets to the tree ahead of the boy.  Motion Story 2. The boy starts behind the girl. The boy gets to the tree before the girl.  Motion Story 3. The boy starts at the tree and the girl starts at the house. The boy gets to the house before the girl gets to the tree. | TSW annotate each graph to justify his/her reasoning for the chosen explanation. | TSW participate in a jigsaw activity to compare and justify their matches and come to a class consensus. | TSW complete an independent activity to match graphs with stories and label points of change. |
| **Closure**  (Reflection / Wrap-Up  Summarizing, Reminding, Reflecting, Restating, Connecting) | The student will complete an exit ticket in the following format:  3 Things I Learned About…  2 Ways I Contributed to Class Today…  1 Question I Still Have… | The student will complete an exit ticket in the following format:  3 Things I Learned About…  2 Ways I Contributed to Class Today…  1 Question I Still Have… | The student will complete an exit ticket in the following format:  3 Things I Learned About…  2 Ways I Contributed to Class Today…  1 Question I Still Have… | The student will complete an exit ticket in the following format:  3 Things I Learned About…  2 Ways I Contributed to Class Today…  1 Question I Still Have… | The student will complete an exit ticket in the following format:  3 Things I Learned About…  2 Ways I Contributed to Class Today…  1 Question I Still Have… |
| **Resources/Materials**  (Aligned with the Lesson Objective  Rigorous & Relevant)  **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Glencoe, Algebra I text  Section 0-2  **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Glencoe, Algebra I text  Section 0-2  **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Glencoe, Algebra I text, Section 1-3  **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Glencoe, Algebra I text, Section 1-3 **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Glencoe, Algebra I text, Section 1-3 **Additional Resource(s)**  [**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) |