Scope of lesson plan: Lessons 1-5	Teacher name:	Grade: 9	Subject: Algebra I	Period(s) this lesson will be taught:
MONDAY				
EngageNY module #/ lesson # / lesson title	Module 1 / Lesson 1: Graphs of Piecewise Linear Functions			
Long-term Targets: (Common Core standards addressed)	N-Q.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; and choose and interpret the scale and the origin in graphs and data displays. N-Q.2 Define appropriate quantities for the purpose of descriptive modeling. N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.			
Supporting target(s) (These are daily targets. What will students know and be able to do as a result of this lesson?)	Daily Objective: Students define appropriate quantities from a situation (a "graphing story"), choose and interpret the scale and the origin for the graph, and graph the piecewise linear function described in the video. They understand the relationship between physical measurements and their representation on a graph.			
Agenda (Activities / Tasks)	1. Classwork A. Example 1 (20 minutes) B. Example 2 (15 minutes) 2. Closing and Assessment A. Closing (5 minutes) B. Exit ticket (5 minutes) = 45 minutes instruction			
Resources/ Materials: (What texts, digital resources, & materials will be used in this lesson?)	Worksheets Exit ticket.			

Relevance/Rationale: (How do the strategies employed meet students' needs?)	Students explore the main functions that they will work with in Grade 9: linear, quadratic, and exponential. The goal is to introduce students to these functions by having them make graphs of a situation (usually based upon time) in which these functions naturally arise. As they graph, they reason quantitatively and use units to solve problems related to the graphs they create.
TUESDAY	
EngageNY module #/ lesson # / lesson title	Module 1 / Lesson 2: Graphs of Quadratic Functions
Long-term Targets: (Common Core standards addressed)	N-Q.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; and choose and interpret the scale and the origin in graphs and data displays. N-Q.2 Define appropriate quantities for the purpose of descriptive modeling. N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
Supporting target(s) (These are daily targets. What will students know and be able to do as a result of this lesson?)	Daily Objective : Students represent graphically a non-linear relationship between two quantities and interpret features of the graph. They will understand the relationship between physical quantities via the graph.
Agenda (Activities / Tasks)	1. Classwork A. Example 1 (8 minutes) B. Example 2 (25 minutes) C. Example 3 (5 minutes) 2. Closing and Assessment A. Closing (3 minutes) B. Exit ticket (4 minutes) = 45 minutes instruction
Resources/ Materials: (What texts, digital resources, & materials will be used in this lesson?)	Worksheets Exit ticket.
Relevance/Rationale:	Students explore the main functions that they will work with in Grade 9: linear, quadratic, and

(How do the strategies employed meet students' needs?)	exponential. The goal is to introduce students to these functions by having them make graphs of a situation (usually based upon time) in which these functions naturally arise. As they graph, they reason quantitatively and use units to solve problems related to the graphs they create.

WEDNESDAY	
EngageNY module #/ lesson # / lesson title	Module 1 / Lesson 3: Graphs of Exponential Functions
Long-term Targets: (Common Core standards addressed)	N-Q.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; and choose and interpret the scale and the origin in graphs and data displays. N-Q.2 Define appropriate quantities for the purpose of descriptive modeling. N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
Supporting target(s) (These are daily targets. What will students know and be able to do as a result of this lesson?)	Daily Objective: Students choose and interpret the scale on a graph to appropriately represent an exponential function. Students plot points representing number of bacteria over time, given that the bacteria grows by a constant factor over evenly spaced time intervals.
Agenda (Activities / Tasks)	1. Classwork A. Example 1 (10 minutes) B. Example 2 (25 minutes) 2. Closing and Assessment A. Closing (5 minutes) B. Exit ticket (5 minutes) = 45 minutes instruction
Resources/ Materials: (What texts, digital resources, & materials will be used in this lesson?)	Worksheets Exit ticket
Relevance/Rationale: (How do the strategies employed meet students' needs?)	In Lesson 3 they watch a 20-second video that shows bacteria subdividing every few seconds. The narrator of the video states these bacteria are actually subdividing every 20 minutes. After counting the initial number of bacteria and analyzing the video, students are asked to create the graph to describe the number of bacteria with respect to actual time (not the sped-up time in the

video) and use the graph to approximate the number of bacteria shown at the end of the video.

THURSDAY	
EngageNY module #/ lesson # / lesson title	Module 1 / Lesson 4: Analyzing Graphs—Water Usage During a Typical Day at School
Long-term Targets: (Common Core standards addressed)	N-Q.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; and choose and interpret the scale and the origin in graphs and data displays. N-Q.2 Define appropriate quantities for the purpose of descriptive modeling. N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
Supporting target(s) (These are daily targets. What will students know and be able to do as a result of this lesson?)	Daily Objectives: Students develop the tools necessary to discern units for quantities in real-world situations and choose levels of accuracy appropriate to limitations on measurement. They refine their skills in interpreting the meaning of features appearing in graphs.
Agenda (Activities / Tasks)	1. Classwork (27 minutes) A. Example 1 B. Example 2 C. Exercise 3 (15 minutes) 2. Assessment A. Exit ticket (3 minutes) = 45 minutes instruction
Resources/ Materials: (What texts, digital resources, & materials will be used in this lesson?)	Worksheets Exit ticket
Relevance/Rationale: (How do the strategies employed meet students' needs?)	In Lesson 4. Students are shown a graph (without labels) of the water usage rate of a high school. The rate jumps every hour for five minutes and then drops back down, supposedly during the bell breaks between classes. As students interpret the graph, they are asked to choose and interpret the scale, and decide on the level of accuracy of the measurements needed to capture the behavior in the graph.
FRIDAY	

EngageNY module #/ lesson # / lesson title	Module 1 / Lesson 5: Two Graphing Stories
Long-term Targets: (Common Core standards addressed)	N-Q.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; and choose and interpret the scale and the origin in graphs and data displays. N-Q.2 Define appropriate quantities for the purpose of descriptive modeling. N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
Supporting target(s) (These are daily targets. What will students know and be able to do as a result of this lesson?)	Daily Objective: Students interpret the meaning of the point of intersection of two graphs and use analytic tools to find its coordinates.
Agenda (Activities / Tasks)	1. Classwork A. Example 1 (7 minutes) B. Example 2 (20 minutes) 2. Closing and Assessment A. Closing (13 minutes) B. Exit ticket (5 minutes) = 45 minutes instruction
Resources/ Materials: (What texts, digital resources, & materials will be used in this lesson?)	Worksheets Exit ticket
Relevance/Rationale: (How do the strategies employed meet students' needs?)	The topic ends with a lesson that introduces the next two topics on expressions and equations. Students are asked to graph two stories on the same coordinate plane that intersect in one point. After students and teachers form linear equations to represent both graphs and use those equations to find the intersection point (a Grade 8 standard, 8.EE.8), the question is posed to students: How can we use algebra in general to solve problems like this one but for non-linear equations? Topics B and C set the stage for students understanding the general procedure for solving equations.