TEKS Cluster: Proportional Reasoning
TEKS Subcluster: Constant Rate of Change
Student Expectations: 7.4(A), 7.4(B), 7.4(C)
Activities Summary: Students formalize the proportional reasoning they have been doing since Grade 4. They learn that the constant that is multiplied by the input is called the constant rate of change and that, in a table, the rate of change must stay constant. They explore constant rate of change in verbal descriptions, tables, and graphs. They also connect constant rate of change to unit rate. Note that all of these activities contain high-interest topics and explorations to help provide a mathematical picture of the real world and in media. Activities may be organized and delivered in two topics: **Constant Rate of Change** and **Constant of Proportionality**.

Activity Title Student Expectations	**Activity Topic**	**Type**			**Delivery**		
		new learning	intervention	practice	teacher-facilitated	small groups	stations
Constant Rate of Change							
Traveling with Gulliver 7.4(A), 7.4(B)	**Understand and Explore Constant Rate of Change** Using the context of *Gulliver's Travels* and movies where people grow and shrink, students explore proportionality through tables, graphs, equations, and verbal descriptions, working from input to output and output to input.	✓	✓		✓		
Unusual Speeds 7.4(A), 7.4(B)	**Explore Constant Rate of Change** Using the context of the speed of a bee, shark, and rhinoceros, students explore constant rate of change in tables, graphs, equations, and verbal descriptions, and analyze tables and graphs to develop understanding.	✓	✓		✓		
Going the Distance 7.4(A), 7.4(B)	**Explore Constant Rate of Change** Students use tables and graphs to explore constant rate of change and speed. Contexts include why a student *wasn't* late to class and the Galapagos turtle.			✓		✓	
M-Athletes 7.4(A), 7.4(B)	**Understand, Calculate, and Represent Unit Rate** After performing three contests in one-minute increments, students use data from the contests to make tables, graphs, and learn the meaning of unit rate. Contests include jumping jacks, placing paper clips in a line, and writing a name as fast as possible.	✓			✓		
Zombie Attack 7.4(A), 7.4(B)	**Calculate and Represent Unit Rate** Using the context of collecting food during a zombie apocalypse, students use tables, graphs, and proportional reasoning to find unit rate and see if they can collect the food before the zombie catches them.			✓		✓	
Constant of Proportionality							
Heart Healthy? 7.4(A), 7.4(C)	**Understand Constant of Proportionality** Using the number of calories in a French fry order, students use ratios and tables to find constant of proportionality and analyze the tables to develop understanding.	✓			✓		
Soil Cleanup 7.4(A), 7.4(C)	**Constant of Proportionality** Using the context of environmental engineering, students use tables, graphs, equations, and verbal descriptions to find constant of proportionality and unit rate.	✓			✓		