Introduction to Data Science - North Salem High School

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Unit	Modeling in Data Science
Lesson	**Topic:** Introduction to Linear Regression **Content:** Linear Regression
Learning Target(s)	I understand what linear regression is and how it is valuable. I am aware of the limitations of linear regression.
Standard(s)	*9-12.CT.1 Computational Thinking, Modeling and Simulation* *9-12.CT.2 Computational Thinking, Data Analysis and Visualization* *9-12.CT.3 Computational Thinking, Data Analysis and Visualization*
Accompanying Documents	Lesson Slides Datasets WS
Homework	Linear Regression in R

Lesson Plan	
Warm Up	**5 mins**
Given the following data on the height and weight of different babies, can you predict the weight of a 30lb baby?	
Lesson Body	**30 mins**
Notes: What is linear regression? The teacher will go over what linear regression is and how it is connected to y = mx + b in math. The teacher will explain how, on the simplest of levels, linear regression simply uses the slope and y-intercept of a best-fit line to help numerically explain the data in a dataset. **Student Practice:** Students practice using regression on math problems. Students will practice creating linear regression lines with Google Sheets on several sets of pre-collected data. Students will then practice making predictions based on the linear regression lines they've created.	

Exit Ticket	**5 mins**
What limitations do you think exist when using linear regression for our warm up question? Explain your response.	