David Tobias Holcer

Kleiber's Law Applied to Link Population Size With City Growth Aspects

Défi: Information
Catégorie: Intermédiaire
Région: Greater Vancouver
Ville: Vancouver, BC
École: David Thompson Secondary
Sommaire: Kleibers's Law is a biological law, which states that an organism's mass to the three-fourths power is proportional to its basal metabolic rate. I compared characteristics of Kleiber's law with how growth aspects of a city scale with that city's population using computer programming, and found that Kleiber's Law applies to model city growth, in some cases with higher certainty than in others.

Biographie

David Holcer is a 15 year-old, grade 9 student at David Thompson. Math is his favourite subject, and hobby. This is shown through his keen interest in tackling difficult problems, and in math contests. Ever since he was little, he was interested and fascinated by the patterns he would find. This later inspired another hobby, lanyards, a type of string art. He is also very interested in computer science, and competitive programming contests which is closely related to his passion for math. These passions helped inspire him to choose a mathematics related project for last year's science fair, which led him to the Canada Wide Science Fair 2015. This year, David wanted to choose a project that would merge fields he enjoyed such as: mathematics, computer science, biology, and statistics, so he chose to look into Kleiber's Law. In the future, David would like to test more data sets with his project, and find more applications for his analyses. When David is not looking at math or science, you may find him playing soccer, running cross country, volunteering, looking at stocks in his school's business club, writing for his school's newsletter club, or solving Rubik's cubes of varying sizes.