

Roller Coaster Stats: Riding All Semester
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MATH 102: Introduction to Statistics is a general education mathematics class at Shippensburg University that many students take simply to fulfill the math requirements of the general education curriculum, while others take it as a statistics class to prepare them for a second more focused statistics class within their discipline.

School Science and Math once devoted an entire issue to the effectiveness of using thematic units in mathematics and science classes. In order to engage a larger number of students in this class, a *thematic approach*, which infused a particular topic into the teaching, activities, and assessments throughout the semester, was used. Given the personal liking for roller coasters, I choose to use roller coasters a theme.

- Teaching...all of the lessons revolved around roller coaster statistics for amusement parks around the region...for example...to study the t-statistic...we examined advertising claims about the coasters;
- Activities...students engaged in group activities in class that used the statistics from real and K'Nex model roller coasters;
- Assessment...all of the assessments revolved around one set of data for the coasters at an amusement park;
- Technology Portfolio...students collected a set of data about the roller coasters at a particular park of their choice and used EXCEL to explore the statistics about their particular park.

Why did this seem to work?

- Students were enthusiastic about working with coasters;
- Students were engaged by the data and were actually working with it;
- The material was something they could relate to and make the statistics content more clear;
- Students clearly knew