8-16-2006

Calculating Slopes

Dave Iacchetta
The College at Brockport

Name: Dave Iacchetta
Grade level(s)/Subject taught: Algebra A, 9th grade
Objectives: To teach students the importance of slope in the real world and how it is calculated and utilized in the real world (i.e. ski slopes, soap box derby locations, residential / commercial / agricultural development. This could also extend into inequalities. For example slopes |m| > .25 and slopes |m| < 1.95 are ideal for ski resorts. Slopes |m| > .1 and < 1 are ideal for skateboarding. Slopes |m| > .45 and < 1.2 are ideal for the X-games.

Please provide a rich **one-page, single-spaced**, description or a *vision* of your best thinking on a way or ways you might teach the planned lesson. (approximately ½ page for the teacher role, ½ page for the student role). Also, construct a tentative rubric that you might use with your students (see example)

Items to include in your lesson plan: (Choose your discipline/concepts from your own area).

1. *Write* the Mathematical Concept or "key idea" that modeling will be used to teach: (e.g. Students use mathematical modeling/ multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships)

Calculations and Computations Modeling and multiple representations Real World applications

and/or…

RUBRIC
3pts- students will be able to collect and navigate GIS data and make predictions or suggestions as to best locations for skiing/boarding/etc.
2pts- students will be able to collect some data and navigate GIS data and make some predictions or suggestions as to best locations for skiing/boarding/etc.
1pts- students collect and navigate little GIS data and make no predictions or suggestions as to best locations for skiing/boarding/etc.
0pts- students unable to collect or navigate GIS data, unable to make predictions or suggestions as to best locations for skiing/boarding/etc.