8-16-2006

Calculating Slopes

Dave Iacchetta

The College at Brockport

Follow this and additional works at: http://digitalcommons.brockport.edu/cmst_lessonplans

Part of the Physical Sciences and Mathematics Commons, and the Science and Mathematics Education Commons

Repository Citation

http://digitalcommons.brockport.edu/cmst_lessonplans/115

This Lesson Plan is brought to you for free and open access by the CMST Institute at Digital Commons @Brockport. It has been accepted for inclusion in Lesson Plans by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmyers@brockport.edu.
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.