ONLINE LESSON PLAN Inclusive Best Practices Project: Co-Teaching

Respondents:

Susan Higley, Mathematics Teacher Fred Springman, Special Education Teacher

Hughesville High School East Lycoming School District

Date of lesson to be observed/taped: February 5, 2009

1. Lesson Title:

Introduction to Probability

- 2. Teacher(s) Name(s): Teacher 1: Sue Higley, Mathematics Teacher Teacher 2: Fred Springman, Special Education Teacher
- 3. Grade Level(s): 10-12
- 4. Content Area: Mathematics/Algebra II/Geometry
- 5. Description/Abstract of Lesson:

This lesson will be an introduction to probability. Students will define key vocabulary used in identifying probability, solve basic probability problems and describe "real world" situations in which probability is used in making predictions or decisions.

- 6. Primary Lesson Objectives:
 - Students will define probability and identify examples of how probability is used by people in making predictions/decisions.
 - Students will understand the likelihood of an event being between 0-100%.
 - Students will be able to calculate basic probability and apply the concept to "real world" situations
- 7. Cognitive Level:
 - Knowledge Comprehension Application Analysis

8. Standards and Anchors Addressed:

Analysis and Probability M11.e.4.1.2; M11.e.3.1.1

9. Guiding questions for this lesson:

How is the concept of probability used in today's world? What is the definition of a Sample Space? How can we calculate basic probability, and apply the concept to our daily lives?

10. Assessment Tools:

Student responses to guided practice problems Teacher questioning Teacher observation Quiz/Test

11. Learning Connections:

Students have received prior instruction on mathematical calculations used to determine probability (fractions, decimals, percentages, etc.) They will be using number cubes, spinners, heads/tails, as examples.

12. Instructional strategies used in this lesson. (Check all that apply.)

Cooperative Learning Groups Guided Practice Instructional Technology Note-taking

13. Learning Activities or Tasks:

- Bell ringer activity: Identify examples of probability and solve 3 sample problems (Transparency: Probability 1B)
- Review of conversion of fractions to decimals and percents and solutions to simple probability calculations
- View streaming video: Examples of probability in real world situations
- Teachers will model processes for calculating probability using whiteboard illustrations.
- Guided practice: Heterogeneous cooperative learning group work on solving probability problems (Transparency/Probability 3)
- Teachers will monitor student group work and provide individual assistance as appropriate.
- Teachers will checks for understanding and ask questions of students for clarification.
- Teachers will review solutions to guided practice problems on whiteboard.
- Assessment: Probability "Exit Quiz" near end of class period.
- Closure: Review objectives and assign independent practice problems for homework.

14. Classroom Organization and Learning Environment:

Grouped heterogeneously Teacher support Scaffolding Peer tutoring: Group/individual

15. How and where will your students work?

Cooperative learning groups

16. Materials and Resources:

Lap top computer with projector Sample video (United Streaming or other video content) Manipulatives Overhead projector and transparencies Whiteboard Student packets to be used for group work

17. Lesson Evaluation/Teacher Reflection: To be completed following lesson