PROBABILITY AND STATISTICS LESSON PLAN

TITLE: Normal Distribution as an Approximation for a Binomial Probability

DATE: September 3, 2002

TEACHER'S NAME: John W. Wheeler   **COUNTY:** Marshall

GRADE LEVEL / SUBJECT: Grades 11 & 12 / Probability and Statistics

WV CSO'S & NCTM Standards:
　　WV CSO'S - from the WV Department of Education's Web Page
　　　　PS.4
　　　　PS.5
　　　　PS.8

　　NCTM Standards - from the NCTM Web Page
　　　　* judge the reasonableness of numerical computations and their
　　　　 results
　　　　* understand how basic statistical techniques are used to monitor
　　　　 process characteristics in the workplace
　　　　* understand how to compute the probability of a compound event
　　　　* monitor and reflect on the process of mathematical problem solving
　　　　* use the language of mathematics to express mathematical ideas
　　　　 precisely
　　　　* recognize and use connections among mathematical ideas
　　　　* recognize and apply mathematics in contexts outside mathematics

SPECIFIC UNIT PLAN OBJECTIVES:
　　1) The student will be able to determine when the Normal Distribution can
　　　　be used as an approximation for a Binomial probability 80+% of the time.
　　　　(measured by worksheets and/or tests)
　　2) The student will be able to state the correct "continuity correction"
　　　　statement for a Binomial probability problem to be solved using a Normal
　　　　approximation 80+% of the time. (measured by worksheets and/or tests)
　　3) The student will be able to calculate the Normal approximation to a
　　　　"suitable" Binomial probability problem 80+% of the time.
　　　　(measured by worksheets and/or tests)

MATERIALS:
　　1) Calculator ("scientific" or better / graphing calculator not necessary)
　　2) Standard Normal (Z) Tables

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