

Blue Ribbon Probability Course
"Toto, We're not in WV anymore!"
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Specific State Content Standard and Objectives:

Math 8

Standard 5: Data Analysis and Probability (MA.S.5)

- MA.8.5.2 investigate the experimental and theoretical probability, including compound probability of an event.
- MA.8.5.3 create and extrapolate information from multiple-bar graphs, box and whisker plots, and other data displays using appropriate technology.

Algebra – Geometry Prep

Standard 5: Data Analysis and Probability (MA.S.5)

- AGP.5.1 read, interpret, and construct graphs to solve problems.
- AGP.5.2 use data to determine mean, median, mode, and range.

Algebra 1

Standard 2: Algebra (MA.S.2)

- A1.2.18 collect, organize, interpret data and predict outcomes using the mean, mode, median, and range.
- A1.2.20 predict the outcomes of simple events using the rules of probability.

Conceptual Math

Standard 5: Data Analysis and Probability (MA.S.5)

- CM.5.2 integrate other disciplines into the study of mathematics through simulations, research, and projects
- CM.5.4 apply the basic probability rules in expressing the chances of events occurring using technology when appropriate.
- CM.5.5 create and interpret data using various methods of displaying numerical data, including frequency distributions, graphs, histograms, stem-and-leaf plots, and box-and-whiskers plots, using technology when appropriate.

Probability and Statistics

Standard 5: Data Analysis and Probability (MA.S.5)

- PS.5.1 distinguish between experimental and theoretical probability.
- PS.5.2 create and interpret data using various methods of displaying circle graphs, histograms, and frequency curves, and make predictions about outlier
- PS.5.4 express the chances of events occurring either in terms of a probability or odds.
- PS.5.6 interpret and calculate measures of central tendency (mean, median, and mode) from data presented in a variety of forms such as charts, tables, and graphs or from data created through experimentation.

Technology

Eighth Grade

Standard 3: Technology Productivity Tools (TEC.S.3)

Students will:

TEC.8.3.1 integrate two or more productivity tools into a document including, but not limited to tables, charts, graphs, inserting hyperlinks, and graphics.

Standard 5: Technology Research Tools (TEC.S.5)

Students will:

TEC.8.5.1 produce a product using online sources combined with other resources.

TEC.8.5.2 conduct online research and evaluate the information found as to the validity, appropriateness, content and usefulness.

High School

Standard 3: Technology Productivity Tools (TEC.S.3)

TEC.9-12.3.1 integrate advanced technology application skills in the use of the word processor, database and spreadsheet.

TEC.9-12.3.2 select and use appropriate technology tools to efficiently collect, analyze and display data that is relevant to class assignments.

Standard 5: Technology Research Tools (TEC.S.5)

TEC.9-12.5.1 use a variety of strategies to acquire information from electronic resources.

TEC.9-12.5.2 conduct online research and evaluate the information found as to the validity, appropriateness, content and usefulness.

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Time for activity: 2 days – Block Scheduling
3.5 days – 45 minute Period

Assessment of the activity:

Assessment includes student participation as well as cooperation with his/her partner. Assessment of student work includes (1) all questions are complete and correct (including rounding), essay questions are written in sentence form, (2) graphs are complete, correct, show labels on the axes and a title for the graph.

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