2024-2025

Rapid City
Stevens High School

Probability & Statistics

RCAS Policies/Procedures:

Students will be required to follow all RCAS policies and procedures. To view the RCAS High School Student Handbook, click handbook.

Course Description:

Students will study the three major topics in statistics: descriptive statistics (the basic tools of the statistician: mean, standard deviation, etc.), inferential statistics (tools that ensure valid experimental design and results), and probability (the mathematics of chance, randomness, and games of chance). They will also learn to critically evaluate statistics in their daily lives in order to become more informed consumers and citizens.

Textbook:

The Practice of Statistics 7th Edition (BFW)

Required Resources:

"Limited Choice" Resources: (students will be asked to choose at least one title from this list)

Student Choice:

Will student be asked to choose additional reading material from the classroom or school library?

No

Essential Questions:

1. How can we determine whether differences between measures represent random variation or meaningful distinctions?
2. How do statistical tools allow us to represent and describe patterns in data and to
classify departures from patterns?
3. How can data collected by random sampling or randomized experimental design
be generalized to the part of the population from which the selection was made?

Essential Learning Intentions:

1.A Identify the question to be answered or problem to be solved (not assessed).
1.B Identify key and relevant information to answer a question or solve a problem.
1.C Describe an appropriate method for gathering and representing data.

2.A Describe data presented numerically or graphically.
2.B Construct numerical or graphical representations of distributions.
2.C Calculate summary statistics, relative positions of points within a distribution,
correlation, and predicted response.
2.D Compare distributions or relative positions of points within a distribution.

3.A Determine relative frequencies, proportions, or probabilities using simulation
or calculations.
3.B Determine parameters for probability distributions.
3.C Describe probability distributions.

4.A Make an appropriate claim or draw an appropriate conclusion.
4.B Interpret statistical calculations and findings to assign meaning or assess a claim.