2017-2018 WCSD AP Statistics Program Evaluation Rubric

Evaluator Number

11

Program Number

4

Name of Text

Practice of Statistics

Publisher

BFW Freeman

Rate This Text Overall

- [x] **High**
- [ ] **Mid**
- [ ] **Low**

Focus: Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons. (Both student and teacher materials)

Exploring Data

Defining variables
Constructing and interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot)!Summarizing distributions of univariate data Comparing distribution of univariate data (dotplots, back-to-back stemplots, parallel boxplots) Exploring bivariate data
Exploring categorical data

Sampling and Experimentation: Planning and conducting a study

Overview of methods of data collection
Planning and conducting surveys
Planning and conducting experiments
Generalizability of results and types of conclusions that can be drawn from observational studies, experiments and surveys
Simulation modeling

Anticipating Patterns: Exploring random phenomena using probability and simulation

Probability
Random variables
Binomial distributions/geometric
Normal distribution
Sampling distributions

Statistical inference: Estimating population parameters and testing hypotheses

Estimation
Confidence intervals
Hypothesis tests including chi-square and regression slope

At least 90% of the topics are in the textbook.
Comments?

All topics are represented, along with additional material for post exam if desired.

- ○ Less than 25%
- ○ Less than 60% but greater than 25%
- ○ Less than 90% but greater than 60%
- ◉ At least 90%

Student work involves significant work with applications/modeling and problems that use algebra skills
Comments?

Most problems include the use of real world applications, a few are presented out of context for the purpose of concreting the concept of the section.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

There are problems at a level of sophistication appropriate to the course (beyond mere review of previous course topics) that involve the application of knowledge and skills from Algebra.
Comments?

Problems are designed to have students working on an AP level all year round. Included are multiple topic specific practice exams that include both MC and FRQ type questions that parallel the exam.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Rigor: Examine the instructional materials, student practice and assessments. Look for evidence of where the topics explicitly require students to understand concepts, do the assignments that students work on build that understanding, and do assessment tasks reveal whether students understand the mathematics in question?
Comments?

The exams are designed in an AP fashion, part MC, part FRQ in order to prep students for that type of exam. The assignments and assessments to lead toward the understanding of concepts, and the assessments do reveal if the student understands the topics.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Rigor: Do the materials feature high-quality conceptual problems and conceptual discussion questions? Do they provide opportunities for multiple representations?
Comments?

The questions are embedded with real world data, making discussions highly conceptual. Problems can be approached from multiple ways, including technological as well as algebraic.

- ○ Does not occur
- ○ Sometimes occurs
- ● Frequently occurs
- ○ Consistently occurs

Rigor: Are the materials designed so that students attain the fluency and procedural skills required? Evaluate the lessons, chapter/unit assessments, daily routines, and homework assignments for evidence in the development of fluency and procedural skill supported by conceptual understanding.
Comments?

At the end of each unit there is an AP style practice test for students to participate in. Also included in many sections there are problems that will take them back to previous content.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ○ Consistently occurs

Rigor: Are the materials designed so that teachers and students spend sufficient time working with applications, without losing focus on the topics defined for the course? Are there single- and multi-step contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving?
Comments?

Most problems are real world application problems using real data, so much of the course is spent working with these types of problems. And as the course is designed to be analyzing these types of problems it does not detract from the topics that are being covered.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ● Consistently occurs

Coherence: Are the materials coherent in their content, do the topics build on each other in a way that is beneficial to the instruction, student practice and assessments?
Comments?

The topics do build on each other in a way that is beneficial for instruction, along with alternative sequencing to allow for surveys and experiments to come first in the year.

- ○ Does not occur
- ○ Sometimes occurs
- ● Frequently occurs
- ○ Consistently occurs