

DATE: Monday, May 14, 2018

TO: Kevin Etue, Principal, Churchill
Andrew Pesci, Principal, Franklin
Gary Harper, Principal, Stevenson

FROM: Ben Hillard
Math and Science Curriculum Coordinator

SUBJECT: **Statistics Textbook Recommendation**

Committee Members

Doug Coates, Churchill
Martha Ptashnik, Churchill
Lisa Lee, Stevenson

Recommended Textbook:

Stats: Modeling the World, AP Edition, 5e, 2019, Pearson Education, Inc.

Lakisha Flowers, Account General Manager
Pearson Education, Inc.
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Supplemental Materials

- MyMathLab 6 year license
- Printed test bank and resource guide

Cost proposal is attached.

Summary of Course

This textbook would be used in our Statistics course as well as our Advanced Topics in Mathematics class in the MSC program.

Statistics: In this course, students collect, tabulate, and analyze data using numerical computations in order to make the data manageable and meaningful. Real world applications are emphasized as students learn course content.

Advanced Topics: Students in this course learn statistics and discrete mathematics, and are provided an introduction to three-dimensional calculus. The statistics part of the course follows the Advanced Placement guidelines, which prepares students for the AP Statistics exam.

Overview

In the 2017-18 school year, Statistics was only offered at Churchill High School. Two years ago, Stevenson also offered a Statistics course, but was unable to offer the course in 2017-18. Statistics in Livonia Public Schools is currently a one-semester course which uses a textbook published in 1995. Statistics has also been taught in our MSC program within the MSC Advanced Topics course. The statistics textbook used in MSC was published in 2002.

In our committee, we determined that it would be appropriate to adopt a textbook that fulfills the needs of both our Statistics course and our MSC Advanced Topics course. To this end, we leaned towards AP textbooks since that was a requirement for our MSC course. This would also provide flexibility for our current Statistics course to evolve into an AP course in the future, if there was adequate student interest. Even without the change to Advanced Placement for school year 2018-19, Churchill has decided to offer Statistics as a two-semester course and cover additional topics, as well as greater depth on current course content.

We felt the Stats: Modeling the World was the best textbook fit for both courses. It covered all AP required topics and presented material in an engaging and easy-to-read manner. In addition, it contains a great deal of real-world application problems and integrates current technology designed to make statistical analysis more efficient.

Evaluation Process

Our statistics committee met together to review materials. We first created a shared vision to create a foundational piece we could reflect back upon when discussing materials.

Shared Vision of Committee Members

We concluded that our ideal materials would include the following:

- Authentic, real world problems
- Integration of current technology
- Activities and project-based lessons
- Quality application problems aligned to content

Evaluation Criteria

We evaluated the textbooks with a rubric that had four main categories: Purpose, Student Engagement, Curriculum and Pedagogy, and Assessment for Learning. These categories have indicators which align with the 5 Dimensions of Teaching and Learning used for teacher evaluations. Within each of these categories, were several indicators related to that domain. This rubric was developed using our curricular textbook adoption template and including any components from our shared vision that was previously missing.

Textbooks Evaluated

- Advanced High School Statistics, 1e, OpenIntro, 2017
- Introduction to Statistical Investigations, Wiley Publishing, 2016
- Statistics: Unlocking the Power of Data, Wiley Publishing, 2017
- Understanding Basic Statistics, Cengage, 2019
- Stats in Your World, 2e, Pearson, 2016
- Stats: Modeling the World, 5e, Pearson, 2019

Evaluation Rubric Outcome

Using our evaluation criteria, we rated the above listed series. Stats: Modeling the World had the highest overall rating as well as the highest amount of indicators rated in the highest category. The next closest text was Advanced High School Statistics scored much lower than Stats: Modeling the World.

Pilot Outcome

We decided to only pilot the Stats: Modeling the World book. The other text books were rated much lower and the committee felt that Stats: Modeling the World would be the text we wanted to use with students. We taught using the text in our Statistics course and our MSC Advanced Topics course. In both courses, we piloted this textbook for 3-4 weeks. The two teachers piloting the textbook had favorable opinions of the book and feel it would be a very positive enhancement to their course. Teachers had classroom discussions to gather student feedback. When compared to the current book they are using, students had favorable opinions of the materials. It was shared and approved by Department Chairs.

Professional Development Needs

- Training of all online components
- Overview of print resources
- Time for collaboration and planning

C

Theresa O'Brien

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Math Department Chairs