

DATE: Thursday, May 4, 2017

TO: Jim Gibbons, Principal, Churchill
Dan Willenborg, Principal, Franklin
Gary Harper, Principal, Stevenson

FROM: Ben Hillard
Math and Science Curriculum Coordinator

SUBJECT: **Textbook Recommendation for Geometry**

Committee Members

Smita Joshi, Churchill
Martha Ptashnik, Churchill
Kim Ross, Emerson
Dave Bjorklund, Franklin
Danielle McDonagh, Franklin
Jen Abler, Stevenson
Lisa Lee, Stevenson

Lynda Melcher, Churchill
Michelle Schnurstein, Churchill
Stephanie Ammar, Franklin
Julie Cosgrove, Franklin
Michelle Chaffin, Frost
Julie Bjorklund, Stevenson
Sherri Smith, Stevenson

Recommended Textbook:

enVision Geometry, 2018, Pearson Education, Inc.

Lakisha Flowers, Account General Manager

Pearson Education, Inc.

Office: 586-357-0134

Lakisha.Flowers@pearson.com

Supplemental Materials

- Student Companion + Digital Courseware 7 year license.
- Teacher Resource Package
- Assessment Readiness Workbook

Cost proposal is attached.

Distribution of textbooks

Churchill: 315

Franklin: 310

Stevenson: 395

Summary of Course

The emphasis of this course is on geometric figures (including lines, angles, triangles, quadrilaterals, polygons, and circles) and their properties. Relationships between two- and three-dimensional representations, congruence, similarity, transformations, proof, and logic are also studied in this course. Algebraic concepts are applied and expanded throughout the course.

Overview

We currently do not use the same Geometry textbook at all high schools in our Geometry course. This has inhibited collaboration and created inconsistencies between buildings. In addition, our Geometry textbooks are outdated and do not fully address the Michigan Math Standards. Because of these issues, we are recommending the adoption of a new textbook for Geometry. Our committee has come to the decision that the best possible choice would be enVision Geometry (2018). This book best met the evaluation criteria and coherently developed the mathematical concepts we deemed as priorities during our analysis. The enVision series provided engaging tasks to deepen conceptual understanding as well as opportunities to strengthen and apply procedural skills.

In addition, the enVision series provides additional resources for teachers and students to view tutorials, gather data, and work through questions. After reviewing several choices, we felt that the enVision textbook was the strongest option and would provide a valuable resource for our teachers and students of Geometry.

Evaluation Process

Both Geometry and Algebra 1 teachers met together to review materials. It was agreed upon that the best situation would be one in which we adopted a series, thereby the concepts would flow coherently and we would anticipate fewer gaps in content coverage. Geometry teachers rated and discussed their materials while Algebra 1 teachers did the same. We then had whole group discussions about the entire series.

Needs Assessment Summary

We concluded that our ideal materials would meet the following criteria

- Well aligned to Michigan Math Standards/Common Core State Standards.
- Engage students in meaningful problem solving.
- Lead to a deeper understanding of important math concepts.
- Include authentic applications of mathematical concepts and procedures.
- Challenge students and support teachers in providing these challenges.
- Must provide online textbook access.
- Organized in a coherent manner (logically sequenced).
- Provide opportunities to develop procedural competency and fluency.

Evaluation Criteria

We evaluated the textbooks on three main categories: Focus and Coherence, Rigor and Balance, and Instructional Support. Within each of these categories, were several indicators related to that domain. This rubric was developed using our needs assessment, IMET evaluation tool, edReports rubric, and principles of Five Dimensions of Teaching and Learning. The full evaluation rubric is attached.

Topics Evaluated

Large Slice

- Similarity and Transformations
- Trigonometry

Small Slice

- Reflections

Textbooks Evaluated

- Big Ideas Math Geometry, 2015
- Carnegie Learning Geometry, 2016
- Core Plus Mathematics (Integrated), 2015
- CPM Core Connections Geometry, 2013
- Discovery Math Techbook Geometry, 2018
- enVision Geometry, 2018
- Eureka Math Geometry, 2015
- Glencoe-McGraw Hill Geometry, 2018
- Houghton Mifflin Harcourt Geometry, 2015

Evaluation Rubric Outcome

Using our evaluation criteria, we rated our top six of the above listed series. Of the 21 indicators, enVision ranked first in 13. There were no indicators where enVision ranked worse than third. Carnegie Learning was the next highest rated on our rubric finishing first in five categories.

In the overall recommendation rating, enVision has the highest score as well with a rating of 2.43. Carnegie is the next highest at 2.0.

Student Rating

282 Geometry students throughout the district participated in the evaluation process. These students read and discussed a section on reflections of shapes.

They then answered eight questions relating to the texts and had an opportunity to write a comment. When asked which book they preferred, 62.1% of the students selected enVision. enVision was the top choice for all questions except “Which book has more of a variety of practice problems?” For this question, students selected HMH Geometry. Teachers rated enVision higher for this indicator on their rubric.

Student Comment Samples

- “It (enVision) makes math seem more applicable and interesting.”
- “It (enVision) was simpler without taking away from the learning and had good examples and problems to help you learn from.”
- “The green book (enVision) is more visual and interesting.”
- “I chose the green book (enVision) because it has more varieties of explanations to help understand the concept.”

Professional Development Needs

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

C

Theresa O'Brien

Steve Archibald

Math Department Chairs