2017-2018 WCSD Algebra 2 Program Evaluation Rubric

Evaluator Number

20

Program Number

1

Name of Text

Envision Algebra 2

Publisher

Pearson

Rate This Text Overall

☐ **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)

Functions - Graphing Transformations

Translating, stretching, shrinking and reflecting the graphs
Absolute Value, Quadratics, Exponential, Rational, Radical, Piecewise and Step Functions

Quadratic Functions with Complex Solutions

Graph Vertex, Standard and Intercept Forms
Solve in Vertex, Standard (quadratic formula, complete square) and Intercept Form
Write equations in 3 unknowns to write a quadratic given three points

Polynomials and Polynomial Functions

Add, subtract, multiply and divide – include property of closure
Graph polynomial functions
Solve polynomial equations
Model using polynomial functions

Rational Functions

Add, subtract, multiply and divide – include property of closure
Graph rational functions
Solve rational equations (extraneous solutions)
Model using rational functions

Radical Functions (Rational Exponents)

Add, subtract, multiply and divide – include property of closure
Graph radical functions
Solve equations with radicals (extraneous solutions)
Model using radical functions

Inverse Functions

Explore inverse functions
Use composition to show two functions are inverses
Use function notation, graphs and solving to find inverses

Exponential Functions

Add, subtract, multiply and divide exponential expressions – use properties of exponents
Graph exponential functions
Solve equations with exponential expressions (extraneous solutions)
Model using exponential functions

Logarithmic Functions

Add, subtract, multiply and divide logarithmic expressions – use properties of logs
Graph logarithmic functions
Solve equations with logarithmic expressions (extraneous solutions)
Model using logarithms functions

Statistics

S.ID.A (1-4)

Systems of Equations

A.RET.C.5

3 variable linear
Quad/linear
Poly/linear
Rational/linear

Graphing Form of Functions

Transformations

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

Missing a lot of topics that are in our standards and not at the level of questioning that we need.

- ○ Less than 25%
- ○ Less than 50% but greater than 25%
- ● Less than 90% but greater than 50%
- ○ At least 90%

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

Not a lot of application and modeling that have students use the procedural skills that they learn.

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

There are problems at a level of sophistication appropriate to Algebra 2 (beyond the mere review of Algebra 1 course topics) that involve the application of knowledge and skills needed.
Comments?

Actually has matrices in it which I haven't seen in other textbooks but missing high level questions. This is a very low level book with no challenge or high level questions. The problems are not appropriate for Alg 2

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

Do the chapter/units provide for the opportunity to graph the functions, solve for the zeros of the functions and model using applications of the functions?
Comments?

There is graphing and solving but not a lot of modeling. There is a word problem or two in each section but this is a very low level book.

- ○ 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?

There are a few modeling and reasoning questions, but only in the homework problems. Example problems are really basic and do not challenge the students to think and challenge themselves.

- (●) 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?

No. There is no discussion and only a few reasoning questions. The questions are not high-quality and don't have any parallel or open tasks.

- (●) 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?

The book does a good job of writing out examples with all of the steps so students can follow, but they only ask procedural questions in the examples. The students are not pushed to think, reason, model or apply their knowledge of the 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?

No, they don't have application problems in the notes or guided examples.

- (●) 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?

Yes for the most part.

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

Mathematical Practices: Are the mathematical practices addressed in such a way to benefit instruction and expectation of students?
Comments?

This book does not reflect our expectations of our students. This book is at a very low level.

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

Standards: Does the instructors text reference the standards in the chapters/units?
Comments?

Yes in the ch overview and pacing. Also in the beginning of the student book

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

Does the textbook meet requirements/rigor for algebra 2 Honors, yet remain appropriate for Algebra 2?
Comments?

Not at all!!! This isn't even good enough for Algebra 2.

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

How do the supplemental materials reflect/extend the material in the textbook?
Comments?

Basic. Consumable book isn't very good and online resources are confusing to navigate.

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