2017-2018 WCSD Geometry/Formal Geometry Program Evaluation Rubric

Evaluator Number

19

Program Number

22

Name of Text

Geometry

Publisher

Glencoe

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)

- ⇨ Basic Terms and Constructions (G.CO.1, G.CO.12)
- ⇨ The Distance Formula (G.GPE.7)
- ⇨ The Midpoint Formula (G.GPE.7)
- ⇨ Angle Measure
- ⇨ Angles (G.CO.1, G.CO.12)
- ⇨ Inductive Reasoning and Conjecture
- ⇨ Conditional Statements
- ⇨ Deductive Reasoning
- ⇨ Postulates
- ⇨ Algebraic
- ⇨ Segment Addition Postulate
- ⇨ Proving Angle Relationships
- ⇨ Parallel and Perpendicular Lines (G.CO.1, G.CO.12)
- ⇨ Partitioning a Segment (G.GPE.6)
- ⇨ Slope and Parallel Lines (G.GPE.5)
- ⇨ Slope and Perpendicular Lines (G.GPE.5)
- ⇨ Proofs About Line Segments and Angles (G.CO.9)
- ⇨ Proofs About Parallel and Perpendicular Lines (G.CO.9)
- ⇨ Perpendiculars and Distance (G.CO.1)
- ⇨ Transformations and Rigid Motions (G.CO.2)
- ⇨ Reflections (G.CO.2, G.CO.4, **G.CO.5,** G.CO.6)
- ⇨ Translations (G.CO.2, G.CO.4, **G.CO.5**, G.CO.6)
- ⇨ Rotations (G.CO.2, G.CO.4, **G.CO.5**, G.CO.6)
- ⇨ Compositions of transformations (G.CO.6)
- ⇨ Introduce basic dilations
- ⇨ Congruence and Triangles (**G.CO.5**, G.CO.6, G.CO.7)
- ⇨ Developing Congruence Criteria (G.CO.7, G.CO.8)
- ⇨ Using Congruence Criteria in Proofs (**G.SRT.5**)
- ⇨ The Triangle Sum Theorem (**G.CO.10**)
- ⇨ The Isosceles Triangle Theorem (**G.CO.10**)
- ⇨ Congruence (Proofs involving triangle congruence, corresponding parts of triangles) (**G.CO.5,** G.CO.6)
- ⇨ Angle Bisectors (G.CO.2, G.CO.9, **G.C.3**) – (construct Angle Bisectors of triangle, Incenter and Circle)
- ⇨ Perpendicular Bisectors (G.CO.2, G.CO.9, **G.C.3**) – (construct Perpendicular Bisectors of Triangle, Circumcenter & Circle)

- Medians of a Triangle (G.CO.10, G.GPE.4) – (no need for centroid and orthocenter)
- Indirect Proofs
- Triangle Inequality
- Inequalities in Two Triangles
- Ratios, Proportions, and Similarity (**G.SRT.2**, G.C.1)
- Similarity and Triangles (**G.SRT.2**, G.SRT.3)
- Solving Problems Using Similarity (**G.SRT.5**)
- Properties of Dilations - positive and negative dilations (G.SRT.1, G.CO.2)
- Drawing Dilations (G.CO.2)
- A line parallel to one side of a triangle divides the other two proportionally, and conversely (G.SRT.4, **G.SRT.5**)
- Midsegment of a Triangle (G.CO.10)
- Geometric Mean - (**G.SRT.5**) (derive formulas-no shortcuts)
- Proving the Pythagorean Theorem (G.SRT.4, **G.SRT.5**)
- Similarity (proofs throughout unit)
- Understand Triangle Similarity lead to definitions of the Trig Ratios (**G.SRT.6, G.SRT.7**)
- Through the use of similar triangles derive the Special Right Triangles (G.SRT.4, **G.SRT.5**)
- Solving Right Triangles (**G.SRT.8**)
- The Law of Sines and Cosines (G.SRT.10+, G.SRT.11+)
- Symmetry (**G.CO.3**)
- Sides and Angles of Parallelograms (**G.CO.3**, **G.CO.11**)
- Diagonals of Parallelograms (**G.CO.11**)
- Criteria for Parallelograms -Parallelograms (proofs throughout unit) (**G.CO.11**)
- Special Parallelograms (**G.CO.11**, G.CO.13, **G.SRT.5**)
- Kites and Trapezoids
- Derive area of the equilateral triangle (inscribed in a circle) (G.CO.13)
- Derive areas of polygons (inscribed in a circle) – solve for apothem (**G.SRT.8,** G.CO.13)
  (Use trig ratios and the Pythagorean Theorem to solve right triangles in applied problems)
- Coordinate Proofs - Distance, midpoint, slope, polygons, area (**G.CO.10**, G.GPE.4, G.GPE.7)
- Give an informal argument for the formulas for the circumference and area of a circle. (G.GMD.1)
- Central Angles and Inscribed Angles (**G.C.2**)
- Prove properties of angles for a quadrilateral inscribed in a circle. (**G.C.3**)
- Segments in circles (**G.C.2,** G.C.4+)
- Inscribed and Circumscribed Circles of triangles (Examine the relationships in the circle) (G.C.3)
- Circumference and Arc Length (G.CO.1, G.C.5)
- Area of Circles and Sectors (G.C.5)
- Visualizing Three-Dimensional Figures (G.GMD.4)
- Surface Area (use nets and find surface area of figures with regular polygonal bases) (7.G.6, **G.SRT.8**)
- Volume of Prisms and Cylinders (7.G.6, 8.G.9, **G.GMD.1, G.GMD.3**)
- Volumes of Pyramids and Cones (8.G.9, **G.GMD.1, G.GMD.3**)
- Volume of Spheres (8.G.9, G.GMD.2+, **G.GMD.3**)
- Solving Design Problems (**G.GMD.3**, G.MG.3)
- Probability and Set Theory (S.CP.1)
- Mutually Exclusive and Overlapping Events (**S.CP.7**)
- Understand the conditional probability of A given B (**S.CP.3**)
- Construct and interpret two-way frequency tables of data (**S.CP.4**)
- Independent Events (**S.CP.2, S.CP.3, S.CP.4,** S.CP.5)

100% of the standards are in the textbook.
Formal

It has all of them and more

- ○ Less than 25%
- ○ Less than 85% but greater than 50%
- ○ Less than 100% but greater than 85%
- ● 100%

100% of the standards are in the textbook.
Regular

It has them all and more.

- ○ Less than 25%
- ○ Less than 85% but greater than 50%
- ○ Less than 100% but greater than 85%
- ● 100%

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

The level of work would be right on grade level for Formal

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

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

The three levels of worksheets as well as the problems in the book are really solid. They will allow teachers to vary the level of rigor for students.

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

There are problems at a level of sophistication appropriate to high school (beyond mere review of previous course standards) that involve the application of knowledge and skills from grades 6-8.
Formal

Absolutely. However, the level of proofs really do dry up in the second semester.

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

There are problems at a level of sophistication appropriate to high school (beyond mere review of previous course standards) that involve the application of knowledge and skills from grades 6-8.
Regular

Absolutely.

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

Assessment: Do assessment tasks reveal whether student comprehend at all levels of rigor?
Formal

They are solid. Could probably use a few more proofs. A teacher would definitely need to supplement.

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

Assessment: Do assessment tasks reveal whether student comprehend at all levels of rigor?
Regular

Absolutely! I think they are right on the mark

- ○ 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?
Formal

Yes - the problems at the end of each sections truly hit all 8.

- ○ 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?
Regular

Yes - the problems at the end are a little saucy for the regular geometry kiddos - but I think it does hit all 8. I think they need more for students at a regular geometry level.

- ○ 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, daily routines, and homework assignments for evidence in the development of fluency and procedural skill supported by conceptual understanding.
Formal

Solid - more proofs needed

- ○ 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, daily routines, and homework assignments for evidence in the development of fluency and procedural skill supported by conceptual understanding.
Regular

Right on the Mark

- ○ 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, including single- and multi-step contextual problems to afford student opportunities for practice, and engage them in problem solving?
Formal

Absolutely!

- ○ 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, including single- and multi-step contextual problems to afford student opportunities for practice, and engage them in problem solving?
Regular

Yes

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

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

For a formal class - the Algebraic examples are right on the money. The proofs are lacking in quantity and quality.

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

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

Perfect

- ○ 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?
Formal

Yeah - the teacher edition does a great job setting up each lesson

- ○ 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?
Regular

Yes!

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

Additional Comments (overall impression of the text)

This is the next edition of the book we use currently. That is both a strength and a weakness. The have added some quality pieces and enhanced some illustrations to help students. However the sections like Partitioning a Segment are still not spectacular.