



Switched-On
SCHOOLHOUSE® 2011 EDITION

Curriculum Catalog

Geometry

Welcome to Switched-On Schoolhouse!

We are excited that you are including Switched-On Schoolhouse as part of your program of instruction, and we look forward to serving you and your students.

Switched-On Schoolhouse comes complete with a full, multimedia-rich curriculum for grades 3-12 in five core subjects and electives.

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Geometry

UNIT 1: GEOMETRY: INTRODUCTION

Assignment Titles

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|--|-------------------------------------|
| 1. Geometry and the World | 12. Defined Terms: Definitions |
| 2. Nature of Mathematics | 13. Quiz 3: Defined Terms |
| 3. The History of Geometric Mathematics | 14. Geometric Postulates |
| 4. Geometry's Effect on Me | 15. Review of Algebraic Postulates |
| 5. Mathematic System: Set Theory Review | 16. Geometric Theorems |
| 6. Mathematic System: Operations with Sets | 17. Review of Properties of Algebra |
| 7. Quiz 1: History and Set Theory | 18. Quiz 4: Postulates and Theorems |
| 8. Geometry Undefined Terms: Points | 19. Special Project |
| 9. Geometry Undefined Terms: Lines | 20. TEST |
| 10. Geometry Undefined Terms: Planes | 21. ALTERNATE TEST |
| 11. Quiz 2: Undefined Terms | |

UNIT 2: GEOMETRY: LOGIC

Assignment Titles

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|--|--|
| 1. Logic and Reasoning | 13. Using Deductive Reasoning |
| 2. History and Logic of Reasoning | 14. Quiz 3: Inductive and Deductive Reasoning |
| 3. Quiz 1: Introduction | 15. Proof Formats: Statement of the Theorem |
| 4. Logic | 16. Proof Formats: The Figure |
| 5. Conjunctions | 17. Proof Formats: The Given Information |
| 6. Disjunctions | 18. Proof Formats: To Prove Statement |
| 7. Negation | 19. Proof Formats: The Plan of the Proof |
| 8. Conditional or Implication Statements | 20. Indirect Proof Format: The Paragraph Proof |
| 9. Converse, Inverse, Contrapositive | 21. Quiz 4: Proof Format |
| 10. Quiz 2: Logic | 22. Special Project |
| 11. Inductive Reasoning | 23. Test |
| 12. Deductive Reasoning | 24. ALTERNATE TEST |

UNIT 3: GEOMETRY: ANGLES AND PARALLELS

Assignment Titles

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|---|---|
| 1. Angle Definitions | 14. More Proofs for Postulates 9 and 10 |
| 2. Angle Measurement | 15. Quiz 3: Parallels and Transversals |
| 3. Quiz 1: Angles | 16. Construction: Perpendiculars |
| 4. Relationship Definitions | 17. Construction: Tangents to Circle |
| 5. Angle Relationship Theorems (1) | 18. Construction: Parallels |
| 6. Angle Relationship Theorems (2) | 19. Classifying Triangles by Sides and Angles |
| 7. Quiz 2: Angle Theorems | 20. Exterior/Remote Interior Angles of Triangle |
| 8. Construction: Copying Figures | 21. Proofs Involving Triangles |
| 9. Construction: Bisecting Figures | 22. Other Polygons |
| 10. Basic Properties of Parallels | 23. Quiz 4: Triangles, Polygons, and Acute Properties |
| 11. Transversals and Special Angles | 24. Special Project |
| 12. More Proofs: Transversals and Special Angles | 25. Test |
| 13. Continued Proofs: Transversals and Special Angles | 26. ALTERNATE TEST |

UNIT 4: GEOMETRY: CONGRUENT TRIANGLES AND QUADRILATERALS

Assignment Titles

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|--|--|
| 1. Defining Congruent Triangles | 15. Inequality Theorem in One Triangle Part 1 |
| 2. Proving Triangles Congruent (1) | 16. Inequality Theorem in One Triangle Part 2 |
| 3. Proving Triangles Congruent (2) | 17. Inequalities in Two Triangles |
| 4. Proving Right Triangles Congruent | 18. Quadrilateral Parallelograms Theorems Part 1 |
| 5. Quiz 1: Congruent Triangles and Quadrilaterals | 19. Quadrilateral Parallelograms Theorems Part 2 |
| 6. Independent Triangles (1) | 20. Quiz 3: Congruent Triangles and Quadrilaterals |
| 7. Independent Triangles (2) | 21. Triangles that Use Parallelograms in Proofs. |
| 8. Overlapping Triangles (1) | 22. Parallelograms: Rectangles |
| 9. Overlapping Triangles (2) | 23. Parallelograms: Rhombus |
| 10. Isosceles Triangles (1) | 24. Trapezoids-Definitions and Proofs |
| 11. Isosceles Triangles (2) | 25. Quiz 4: Congruent Triangles and Quadrilaterals |
| 12. Construction of Triangles 30-60-90 | 26. Special Project |
| 13. Construction of Triangles 45-45-90 | 27. TEST |
| 14. Quiz 2: Congruent Triangles and Quadrilaterals | 28. ALTERNATE TEST |

Geometry (cont.)

UNIT 5: GEOMETRY: SIMILAR POLYGONS

Assignment Titles

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|---|---|
| 1. Algebra and Ratios | 14. Quiz 2: Similar Polygons 2 |
| 2. Algebra Properties and Proportions | 15. Using Triangles in Rectangular Solids |
| 3. Properties of Proportions | 16. Using Triangles in a Regular Square Pyramid |
| 4. Quiz 1: Similar Polygons 1 | 17. Trigonometry-Sine Ratio |
| 5. Meaning of Similarity | 18. Trigonometry-Cosine Ratio |
| 6. Meaning of Similarity – Theorems | 19. Trigonometry-Tangent Ratio |
| 7. Meaning of Similarity – Proofs | 20. Using Similar Triangles in Indirect Measure |
| 8. Theorems about Similar Polygons | 21. Using Trigonometry in Indirect Measure |
| 9. Theorems about Special Segments in Triangles | 22. Quiz 3: Similar Polygons 3 |
| 10. Theorems about Similar Right Triangles | 23. Special Project |
| 11. Pythagorean Theorem | 24. Test |
| 12. Theorem about 30-60-90 Right Triangles | 25. ALTERNATE TEST |
| 13. Theorem about 45-45-90 Right Triangles | |

UNIT 6: GEOMETRY: CIRCLES

Assignment Title

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|---------------------------------------|----------------------------------|
| 1. Characteristics of Circles | 10. Special Angles Type 1 |
| 2. Characteristics of Spheres | 11. Special Angles Type 2 |
| 3. Quiz 1: Characteristics of Circles | 12. Special Angles Type 3 |
| 4. Tangents | 13. Special Segments |
| 5. Arcs | 14. Quiz 3: Special Angles Types |
| 6. Chords | 15. Construction: Circles |
| 7. Theorems (1) | 16. Special Project |
| 8. Theorems (2) | 17. TEST |
| 9. Quiz 2: Tangents | 18. ALTERNATE TEST |

UNIT 7: GEOMETRY: AREA AND VOLUME

Assignment Title

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|--------------------------------------|--|
| 1. Area Concepts of Polygons | 14. Quiz 2: Construction of Polygons |
| 2. Area of Rectangles | 15. Solids: Prisms |
| 3. Area of Parallelograms | 16. Solids: Pyramids |
| 4. Area of Triangles and Rhombuses | 17. Solids: Cylinders |
| 5. Area of Trapezoids | 18. Solids: Cones |
| 6. Area of Regular Polygons | 19. Solids: Spheres |
| 7. Area Comparison of Polygons | 20. Quiz 3: Solids |
| 8. Quiz 1: Area Concepts of Polygons | 21. Construction: Dividing a Segment |
| 9. Construction: Polygons | 22. Construction: 4 th Proportion |
| 10. Circles: Circumference and PI | 23. Construction: Geometric mean |
| 11. Circles: Area of Circles | 24. Special Project |
| 12. Circles: Area of Sectors | 25. TEST |
| 13. Circles: Area of Segments | 26. ALTERNATE TEST |

UNIT 8: GEOMETRY: COORDINATE GEOMETRY

Assignment Title

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|---|--|
| 1. Symmetry | 11. Equations of Lines |
| 2. Ordered Pairs: Points in a Plane | 12. Quiz 3: Lines; Slope |
| 3. Graphs of Algebraic Sentences | 13. Figures in the Coordinate Plane |
| 4. Quiz 1: Ordered Pairs: Points in a Plane | 14. Proofs with Coordinate Geometry (1) |
| 5. Distance Formula | 15. Proofs with Coordinate Geometry (2) |
| 6. Equation of a Circle | 16. Quiz 4: Proofs By Coordinate Method: Figures |
| 7. Midpoint Formula | 17. Special Project |
| 8. Quiz 2: Distance Formula | 18. TEST |
| 9. Slope | 19. ALTERNATE TEST |
| 10. Parallel and Perpendicular Lines | |

UNIT 9: GEOMETRY: TRANSFORMATIONS

Assignment Title

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|--|--|
| 1. Introduction: Rigid Motion, or Isometry | 8. Inverse and Identity Transformation |
| 2. Isometry: Reflection | 9. Symmetry Review |
| 3. Isometry: Translation | 10. Quiz 2: Transformations |
| 4. Isometry: Rotation | 11. Special Project |
| 5. Quiz 1: Isometry | 12. TEST |
| 6. Dilatation: Congruence and Similarity | 13. ALTERNATE TEST |
| 7. Product Transformation | |

Geometry (cont.)

UNIT 10: GEOMETRY REVIEW	
Assignment Title	
1. History of Geometry	9. Quiz 2: Congruent Triangles and Quadrilaterals
2. Geometry as a System	10. Area and Volume
3. Geometry Proofs	11. Coordinate Geometry
4. Angle Relationships and Parallels	12. Quiz 3: Area and Volume
5. Quiz 1: History of Geometry	13. Special Project
6. Congruent Triangles and Quadrilaterals	14. TEST
7. Similar Polygons	15. ALTERNATE TEST
8. Circles	