

**Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT**

Big Idea	GEOMETRY			
Academic Expectations	2.8 Students understand various mathematical procedures and use them appropriately and accurately. 2.9 Students understand space and dimensionality concepts and use them appropriately and accurately.			
POS Understandings	MA-4-G-U-1 Students will understand that characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.		9 Weeks Taught	1 2 3 4
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
MA-4-G-S-SR1 Students will analyze structures of geometric figures (e.g., points, rays, lines, segments, perpendicular lines, parallel lines, intersecting lines, angles). MA-4-G-S-SR2 Students will investigate geometric relationships (e.g., similarity, congruence) through manipulatives and drawings. MA-4-G-S-SR3 Students will analyze attributes of two-dimensional figures (e.g., circle, triangles, squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons) and apply these attributes to solve real-world problems. MA-4-G-S-SR4 Students will analyze attributes of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply these attributes to solve real-world problems. MA-4-G-S-TS2 Students will identify basic two-dimensional figures in different orientations using 90° rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane		MA-04-3.1.1 Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices] and will apply these elements to solve real-world and mathematical problems. <p style="text-align: right;">DOK 2</p> MA-04-3.1.2 Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems. <p style="text-align: right;">DOK 2</p> MA-04-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply the attributes to solve real-world and mathematical problems. <p style="text-align: right;">DOK 2</p> <i>MA-04-3.1.4</i> <i>Students will explore two-dimensional representations of three-dimensional objects (nets).</i> <i>MA-04-3.1.5</i> <i>Students will identify and describe congruent and similar figures in real-world and mathematical problems.</i>	I can describe and provide examples of points, segments, lines (perpendicular, parallel, intersecting) rays, angles (acute, right, obtuse), sides, edges, faces, bases and vertices. I can use the geometric elements [points, segments, lines (perpendicular, parallel, intersection), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices] to solve real-world and mathematical problems. I can describe and provide examples of two-dimensional shapes such as circles, triangles (right, equilateral), squares, rectangles, trapezoids, rhombuses, pentagons, hexagons and octagons. I can use these shapes to solve real-world and mathematical problems. I can describe and provide examples of basic three-dimensional objects such as	Point Segment Line (perpendicular, parallel, intersection) Ray Angle (acute, right, obtuse) Side Edge Face Base Vertex (vertices) Two-dimensional Circle Triangle (right, equilateral) Square Rectangle Trapezoid Rhombus Pentagon Hexagon Octagon Parallelogram Quadrilateral Plane Three-dimensional Sphere Cone Cylinder Pyramid (triangular, rectangular) Cube Prism (triangular, rectangular)

Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT

			<p>spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms.</p> <p>I can use the properties of three-dimensional objects.</p> <p>I can identify the difference between congruent and similar figures.</p>	<p>Net</p> <p>Congruent</p> <p>Similar-*</p>
--	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------

**Hardin County Schools Combined Curriculum Guide
 Mathematics -- Fourth Grade – Geometry
 DRAFT**

Strategies & Activities	Resources	Common Assessments			
	<table border="1"> <thead> <tr> <th data-bbox="785 440 1381 472">Essential Questions</th> <th data-bbox="1381 440 2003 472">Higher Order Questions</th> </tr> </thead> <tbody> <tr> <td data-bbox="785 472 1381 594"></td> <td data-bbox="1381 472 2003 594"></td> </tr> </tbody> </table>	Essential Questions	Higher Order Questions		
Essential Questions	Higher Order Questions				

**Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT**

POS Understandings	MA-4-G-U-2 Students will understand that representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.		9 Weeks Taught	1 2 3 4	
POS Skills & Concepts		Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
MA-4-G-S-CG1 Students will identify and graph ordered pairs on a positive coordinate system. MA-4-G-S-CG2 Students will locate points on a grid.			MA-04-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system scaled by ones or locate points on a grid. <div style="text-align: right;">DOK 2</div>	I can identify and graph ordered pairs on a positive coordinate grid.	Ordered pair Coordinate grid Axis (x and y) Plot Origin
Strategies & Activities		Resources		Common Assessments	
		Essential Questions <td colspan="2" style="background-color: #cccccc;">Higher Order Questions</td>		Higher Order Questions	

**Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT**

POS Understandings	MA-4-G-U-3 Students will understand that transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration). MA-4-G-U-4 Students will understand shape and area are conserved during mathematical transformations (flips, slides and turns).		9 Weeks Taught	1 2 3 4
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
MA-4-G-S-TS1 Students will describe and provide examples of line symmetry in real-world situations; apply one or two lines of symmetry to construct a simple geometric design. MA-4-G-S-TS2 Students will identify basic two-dimensional figures in different orientations using 90° rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane.		MA-04-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one or two lines of symmetry to construct a simple geometric design. DOK 2 <i>MA-04-3.2.2</i> <i>Students will identify basic two-dimensional shapes in different orientations using 90 rotations (turns) around a point of rotation, reflections (flips) and translations (slides) within a plane.</i>	I can identify objects that have line symmetry in real-world and mathematical problems. I can construct a simple geometric design using one or two lines of symmetry. I can identify flip (reflection), slide (translation), and turn (rotation).	Line symmetry Symmetrical Asymmetrical Flip (reflection) Slide (translation) Turn (rotation)
Strategies & Activities		Resources	Common Assessments	
		Essential Questions	Higher Order Questions	

**Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT**

POS Understandings	MA-4-G-U-5 Students will understand that visualization, spatial reasoning and geometric relationships model real-world situations.		9 Weeks Taught	1	2	3	4
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary			
<p>MA-4-G-S-SR3 Students will analyze attributes of two-dimensional figures (e.g., circle, triangles, squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons) and apply these attributes to solve real-world problems.</p> <p>MA-4-G-S-SR4 Students will analyze attributes of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply these attributes to solve real-world problems.</p> <p>MA-4-G-S-TS1 Students will describe and provide examples of line symmetry in real-world situations; apply one or two lines of symmetry to construct a simple geometric design.</p>		<p>MA-04-3.1.1 Students will describe and provide examples of basic geometric elements and terms [points, segments, lines (perpendicular, parallel, intersecting), rays, angles (acute, right, obtuse), sides, edges, faces, bases, vertices] and will apply these elements to solve real-world and mathematical problems. DOK 2</p> <p>MA-04-3.1.2 Students will describe and provide examples of basic two-dimensional shapes [circles, triangles (right, equilateral), squares, rectangles, trapezoids, rhombuses, pentagons, hexagons, octagons] and will apply these shapes to solve real-world and mathematical problems. DOK 2</p> <p>MA-04-3.1.3 Students will describe and provide examples of basic three-dimensional objects (spheres, cones, cylinders, pyramids, cubes, triangular and rectangular prisms) and will apply the attributes to solve real-world and mathematical problems. DOK 2</p> <p>MA-04-3.2.1 Students will describe and provide examples of line symmetry in real-world and mathematical problems or will apply one or two lines of symmetry to construct a simple geometric design. DOK 2</p> <p>MA-04-3.3.1 Students will identify and graph ordered pairs on a positive coordinate system scaled by ones or locate points on a grid. DOK 2</p>	See U-1	See U-1			

**Hardin County Schools Combined Curriculum Guide
Mathematics -- Fourth Grade – Geometry
DRAFT**

Strategies & Activities	Resources	Common Assessments
	Essential Questions	Higher Order Questions