Unit Organizer

Name _____

Date _____

Bigger Picture:

Geometry: I can draw, measure, and reason about the size and shape of polygons.

Last Unit	CURRENT UNIT	Next Unit
Data About Us	Shapes & Designs	Accentuate the Negative

Is about...
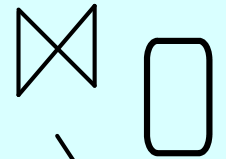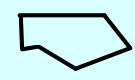
Polygons

Problems involving angle measures.

Designing Quadrilaterals

Key characteristics of polygons: side and angle amounts and measures

The sum of the three shortest sides must be greater than the longest side.

What makes a polygon...
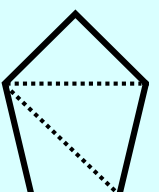
1. 2-dimensional & closed

2. no curves

3. no intersecting lines

Angle Sums

The sum of the interior angles of a triangle is $180°$

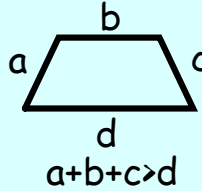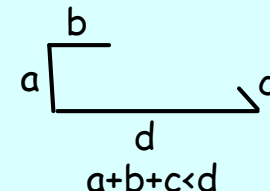The sum of the interior angles of an n-sided polygon is $(n - 2)180°$

polygons	non-polygons

5 sides

5 - 2 = 3 triangles

sum of interior angles =
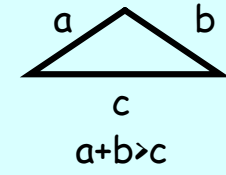
$3(180°) = 540°$

$a+b+c>d$

$a+b+c<d$
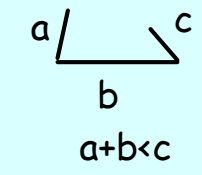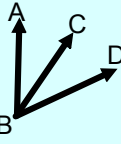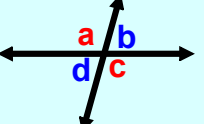
Designing Triangles

The sum of the two shortest sides must be greater than the longest side.

$a+b>c$

$a+b<c$

Learning Targets	• I understand the properties of polygons that affect their shape and size. • I understand the special relationships among angles. • I can draw geometric shapes (with a ruler, protractor, and technology, and by freehand) with given conditions. • I can use facts about angles to write and solve simple equations for unknown angles.	

Unit Vocabulary

1. Degree a unit used to describe the measure of an angle or a rotation	8. Tiling/Tessellation the covering of a plane surface with geometric shapes without gaps or overlaps "beehive"	
2. Right Angle • one-quarter rotation • commonly marked with a small square	9. Convex Polygon polygon with all interior angles measure less than 180°	10. Concave Polygon polygon with at least one interior angle that measures greater than 180°
3. Complementary Angles two angles that have a sum of 90°	11. Interior Angle angle inside a polygon formed by two adjacent sides	12. Exterior Angle angle which forms a linear pair with the interior angle
4. Supplementary Angles two angles that have a sum of 180°	13. Parallelogram a quadrilateral where the pairs of opposite sides are parallel	14. Rectangle a parallelogram with four right angles
5. Adjacent Angles two angles that share a common vertex and common side but do not overlap <ABC is adjacent to <CBD	15. Parallel Lines lines in a plane that remain the same distance apart and never meet ex/ railroad tracks, lines on notebook paper	
6. Regular Polygon a polygon where all sides are the same length AND all angles have the same measure	16. Transversal a line that intersects two other lines	
7. Irregular Polygon sides are not the same length OR angles are not the same measure	17. Vertical Angles opposite pairs of angles	