

GEOMETRY DEVELOPMENTAL PROGRESSION

Overall Goal:

Students will be able to apply geometric properties to make informed decisions and understand the world around them.

Common Themes:

- Student-derived formulas give meaning to abstract symbols and variables found in formulas, create opportunities for manipulating symbols within their own work, and allow for discovery of connections among various formulas, like the area of a rectangle, square, and triangle.
- Contextualized equations and formulas can strengthen foundational comprehension for more abstract concepts.
- Connecting geometry to everyday experiences and hands-on tools makes math more relevant and applicable while also building a foundation for more abstract understanding.
- Constructing meaning of concepts before or while learning the vocabulary for those concepts improves understanding.

Unit / Lesson / Context	Notes
U1.L1 (exploring area and perimeter of rectangles)	
U1.L2 (area model for multiplication; decomposing numbers; distributive property; writing simple equations)	
U1.L3 (finding formulas for areas of rectangles and squares; writing expressions using exponents)	
U1.L4 (finding formulas for perimeter of rectangles; writing simple equations)	
U1.L5 (making scale drawings; beginning proportional reasoning)	
U1.L6 (exploring area of right triangles)	
U1.L7 (applying area, perimeter, and scale to a backyard makeover)	
U2.L1 (converting length units)	
U2.L2 (thinking proportionally; converting square units)	
U2.L3 (similar figures)	
U11.L1 (similarities and differences among shapes and angles)	
U11.L2 (estimating angles; measuring with a protractor)	
U11.L3 (exploring relationships between angles; similar triangles; reasoning algebraically about angle sums)	
U11.L4 (Pythagorean Theorem)	

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U11.L5 (discovering area and properties of parallelograms)	
U11.L6 (discovering area and properties of trapezoids)	
U11.L7 (applying the Pythagorean Theorem to carpentry)	
U12.L1 (circle patterns; relationship of circumference, area, diameter, radius, pi)	
U12.L2 (using circumference to find area of a circle; using area of rectangles and circles to make decisions)	
U12.L3 (applying properties of circles and rectangles with consumer math)	
U13.L1 (surface area of rectangular solids)	
U13.L2 (volume of rectangular solids and cubes)	
U13.L3 (applying surface area and volume of rectangular solids and cubes to marketing)	
U14.L1 (properties of cylinders)	
U14.L2 (volume of cylinders)	
U14.L3 (applying surface area and volume of cylinders to product design)	

Notes to Teachers:

- The entire curriculum is a complete progression. This two-page progression highlights selected lessons related to geometry.
- Each CALM lesson builds into the next. Keep this in mind as you seek to use this modified progression. Be sure to read (just below the title of each lesson plan) how this specific lesson connects to previous work in CALM. Recognize that some students may need some additional support to make those connections more concrete, i.e. you may find it useful to review what was previously taught before deciding on how to move forward. Additional practice from other resources in your classroom also may be used.
- You may need to provide your own transitions or segues between nonconsecutive lessons and units.
- Workforce Application Assessments and Unit Final Assessment Questions are excellent resources for evaluating if your students are ready to move on to the next unit. Even if these materials are not listed in the above progression, we encourage you to incorporate them into your class and/or homework time on a regular basis.
- Don't forget CALM's motto - Slow down to speed up. Recognize that teaching conceptually takes time to teach and learn but ultimately builds a solid foundation for advancing students through greater content than pure repetition and memorization techniques.