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Montessori benchmarks

Meeting standards by putting Montessori first



BY **KATY MATTIS**
AND **NCMPS STAFF**

Montessorians working in the public sector have been faced with the challenge of meeting standards and preparing students for standardized testing for decades. In the early 2000s, No Child Left Behind increased the pressure on public schools as schools began being measured through "high stakes" summative testing. In response to this added pressure, individual Montessori schools as well as larger Montessori organizations began "aligning," "mapping," or "cross-walking" the Montessori curriculum to the Common Core State Standards or to individual state standards.

Through our work in the field, we have found that the practice of aligning and/or "cross-walking" Montessori curricular elements with those outlined by standards' developers tends to degrade the integrity of the Montessori program and to negatively affect overall outcomes. While we, as Montessorians, feel confident that the Montessori curriculum when fully implemented surpasses nearly all of the expectations set by Common Core and other state standards, we have seen schools respond to the pressures of standards and assessments by "supplementing" the Montessori curriculum with worksheets or district textbooks to teach students how to take the test, as well as rushing to abstraction or holding a student back because the work they want to do is not a standard of their grade and they have grade-level standards that they have not yet met.

To that end, we advise against aligning the Montessori "scope and sequence" to any other curricular framework. The Montessori program is larger, more complex, more integrated and, perhaps most important, nonlinear. That is to say, there's a very wide scope, but the idea of sequence just doesn't map to what we do very well. Particularly at the elementary level, there are many paths to attainment supported by multiple materials, lessons, and extensions. Indeed, a signal strength of the program is its personalization, which includes not just differentiation in terms of place, path and pace but a course of study that by design is ceiling-less.

Furthermore, when we align Montessori to the standard, there's a danger of twisting and distorting the Montessori in order to fit the Procrustean bed of the standards. Why not put Montessori "in the left-hand column," in an order and organization that makes sense for Montessori, and let the standards be out of order on the right?

So we set to work on our own set of benchmarks, drawing on our own trainings as well as the Montessori National Curriculum, developed in partnership with AMI and adopted by Australia in 2011. As a first step, we developed Skills Inventories for each level of Montessori education (which can be found in Chapter 5 of our Assessment Playbook). The Skills Inventories are benchmarking documents which give a clear, detailed statement of what a child can be expected to know and do *after three full years at a given level*.

For example, the Early Childhood Skills Inventory covers executive function and social learning domains as well as language and math (and more), and includes elements such as "manages transitions" and "completes multi-step sequences" as well as "reads with purpose and understanding" and "understands numbers 1–100". Lower Elementary and Upper Elementary Skills Inventories work the same way. The Inventories capture key outcomes that can be measured via observation or through specific tasks, and can be used to show accountability to schools, districts, and other authorizers. And of course they are used well before the end of a three-year period to help teachers stay on track and to identify children who may need additional support along the way.

The Inventories capture key outcomes that can be measured via observation or through specific tasks

Now, based on feedback from the field, we are working on a set of Montessori Benchmark Guidelines to expand and improve the Inventories. You can see a draft of this work on page 3, in green. The Guidelines are organized generally by album, and within that by chapter title (such as "Lines" or "Polygons" in Geometry). We know there's a range of organizational structures for

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albums emerging from different trainings, but we've done our best to create something we think most Montessorians can work with.

Within each album, we've stated a Benchmark for each chapter and identified the Montessori lessons which teach the relevant concepts, providing examples of student work to meet the skills inventory as well as evidence that could be used in a digital or paper portfolio as evidence of progression towards mastery. We include information about what students might be asked to show on summative assessments. Finally, on the far right we include the Common Core State Standards are covered by each Montessori benchmark.

It's important to note that the lessons, work, and standards map to the whole benchmark, preserving the integrity of the Montessori approach. We don't think of it as teaching an individual lesson to meet an individual standard. What we're saying is, if you present all the lessons in the chapter, and your students are doing the kind of work we're describing, that's how you meet the standard.

We hope these documents can serve as a tool for teachers to make sure they are covering required curriculum, rather than being primarily a compliance document. At the same time, we expect that the tool will help demonstrate the richness, complexity, coherence, and completeness of the Montessori "curriculum" to outside observers who may not speak our language.

The Montessori program is larger, more complex, more integrated and, perhaps most important, nonlinear

Currently, we are working on completing this work for Math and English Language Arts for Lower and Upper Elementary followed by Primary. We look forward to sharing this project with you as it evolves over the coming months.

Katy Mattis is Director of Tools and Assets at the National Center for Montessori in the Public Sector, and a former public Montessori elementary teacher and school principal.

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Geometry: Polygons

[Draft version of the Montessori Benchmarks Guide]

Montessori Benchmark	Associated Lessons	Student Work (Examples)	Portfolio Evidence (Examples)	Assessment Considerations	Common Core Standards
Recognizes, names and classifies plane geometry shapes: triangle, square, circle, types of triangles, types of quadrilaterals, regular polygons pentagon, hexagon, heptagon, octagon, nonagon, decagon, curved figures, compound and curvilinear figures.	Types of Plane Geometric Figures Types of Regular Polygons According to the Number of Sides Types of Planar Simple Closed Curves Parts of a Triangle Triangles According to Sides Triangles According to Angles Triangles According to Sides and Angles Types of quadrilaterals Parts of a Quadrilateral Parts of a Parallelogram and Rhombus Parts of a Trapezoid The Family Tree of Quadrilaterals Types of Polygons	Sorting shapes and replacing in frames Labelling images and shapes Tracing, cutting, gluing, drawing, labeling and writing activities Creating charts and booklets Researching shapes and plane figures in the environment Using pairs of triangles to construct a variety of triangles and quadrilaterals Discovering more shapes by sliding, pivoting and flipping triangles Using sets of triangles to construct hexagons, pinwheels and related complex shapes Constructing, manipulating, comparing and labelling plane figures using concrete material Building and reading definitions	Drawings of plane geometric shapes: curved figures (circle, ellipse, oval) compound and curvilinear figures (curvilinear triangle, 'flowers') Observation notes of students recognizing and naming constructed shapes Drawings of constructed shapes Classifying quadrilaterals (common quadrilateral, rectangle, square, parallelogram, rhombus, kite, trapezium) Classifying regular polygons (pentagon, hexagon, heptagon, octagon, nonagon, decagon) Classifying plane figures (closed curves-polygons, concave-convex) Classifying types of polygons (irregular-regular, the seven types of triangles, polygons with more than four sides) Identifying and labeling the parts of polygons (surface, perimeter, sides, angles, vertices, base, height, diagonal)	Students can understand and tell about the parts that make different shapes unique. Students can build and draw shapes that have certain parts. Students can create two-dimensiona l shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter-circles). Students can name and draw shapes. (triangles, quadrilaterals, pentagons, hexagons and cubes.) Students can place shapes into categories depending upon their attributes (parts) Students can name a category of many shapes by looking at their attributes (parts).	**1.G.A.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.A.2** Compose Two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape and compose new shapes from the composite shape. **2.G.A.1** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. **3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.