

Revision of District Mathematics Curriculum

Directions

Revision of district-level curriculum to align to the 2017 Ohio Learning Standards for Mathematics is an ongoing process. The Ohio Department of Education (ODE) suggests the use of the Gap Analysis and Revision of District Mathematics Curriculum resources to support this process.

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These materials create a framework from the standards and model curriculum for planning units around big ideas/concepts, sequencing units to the school year, intradisciplinary and interdisciplinary connections, diverse learner considerations, technology integration, assessment practices (formative, summative and performance-based) and resources.

Please adhere to the following list of recommendations to guide this work.

1. Use the 2017 Ohio's Learning Standards for Mathematics and 2017 Model Curricula.
2. Use the ODE-developed Gap Analysis.
3. Use the appropriate ODE-developed Resource Filter and/or Quality Review Rubric.
4. Refer to the content-specific directions below for nuances specific to each content area.
5. Collaborate with other grade-level teachers or content-specific teams to engage in professional conversations.

Across all content areas, designing curriculum involves matching instructional strategies and resources with appropriate assessment practices to provide the opportunity for all students to meet the expectations of the content standards. The following categories, along with any content specific considerations, are essential components of a cohesive, articulated curriculum:

- Standards and Model Curriculum;
- Evidence of Understanding;
- Assessment Practices;
- District Time Frame for Implementation;
- Instructional Strategies and Resources;
- Technology Strategies;
- Strategies for Diverse Learners;
- Literacy Standards.

These components are described fully in the context of the content area below.

Curriculum Map - The Curriculum Map represents a year in a glance. In a one-page chart, units are articulated including names, sequence, approximate time frames, evidence of understanding, content standards and assessment practices. Often times, the curriculum map guides the planning of instruction across common content area grades or courses for a district.

Unit Organizer - The Unit Organizer addresses all of the above components and provides a framework from which lesson plans are developed. The information in the unit organizer should be a meaningful document for designing instruction that is applicable to the teaching and learning environments.

Templates for both the Curriculum Map and the Unit Organizer are provided in both Word and in Excel. Neither the format nor the software program used is as important as using the essential components to convey the intent of the instruction. Other formats which display the required information are acceptable.

Mathematics Directions

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- I. **Standards and Model Curriculum** - Specific reference to the content standards: Domains, Clusters and Standards.
- II. **Evidence of Understanding** – This section addresses what students are expected to learn as a result of an activity implemented to instruct the standards. Evidence of Understanding is the intended learning outcome; what students produce or demonstrate. It is not the exercise itself. This section transcends simply stating “I can…” before skills and procedures. The learning outcome should be deep and transferrable to novel situations. Evidence of Understanding should be reflected in the Assessment section.

What is the mathematical focus? What mathematical thinking are students expected to demonstrate? Evidence of Understanding reflects the progression of learning: development of understanding, creation of strategies, and evolution of efficient and effective usage of skills and procedures. It highlights the relationship of the Critical Areas (of Focus) with the content standards. The Evidence of Understanding should guide assessment.

- III. **Assessment Practices** - Specific ideas (projects, simulations, problems, writing prompts challenges) for using formative, performance-based, and summative assessment
- IV. **District Time Frame for Implementation** - Sequencing and pacing required for implementation of curriculum
- V. **Instructional Strategies and Resources** - Specific resources which utilize Instructional Strategies that build mathematical thinking, employ rich problems based in real-world or mathematical contexts and enhance mathematical and cross-curricular connections. Appropriate strategies actively engage students with the mathematics through hands-on/minds-on exploration and communication.
 - a. **Mathematical Practices:** An intentional plan of instructional strategies and activities that will develop the Mathematical Practices as student “habits of mind.”
 - b. **Technology Strategies** – Targeted use of technology tools and resources to enhance the teaching and learning of the intended outcomes.
 - c. **Strategies for Diverse Learners** – Evidence of how instruction will be differentiated (resources and strategies) to meet the diverse needs of students so that all students receive the same initial instruction, followed by appropriate support. That support will contain a variety of instructional methods designed to engage all students to help them gain deep understanding of content through exploration, problem-solving and technology.
 - d. **Literacy Standards** - Evidence of development of the appropriate literacy standards for grades 6-12.