

# Virginia Grade K-12 Mathematics Walkthrough Protocol



The Virginia Grade K-12 Mathematics Walkthrough Protocol reflects a vision for mathematics teaching and learning, grounded in the guiding principles of the 2023 Mathematics *Standards of Learning*: ensuring every student builds strong foundational skills by building automaticity and procedural fluency; mastering critical content through the application of skills and conceptual understanding; fostering the application of the five mathematics process goals (reasoning, communication, problem solving, connections, and representation) to set students up to recognize and see mathematics in real-world situations; and, coherently integrating mathematics within and across content areas.

## Frequency Definitions

Yes	Consistent and purposeful demonstration of this indicator.
Mostly	Consistent evidence of this indicator.
Somewhat	Inconsistent evidence of this indicator.
Not Yet	No evidence of this indicator.

## Core Action 1

**Culture of Learning:** *How does the learning environment support positive student outcomes?*

A	<p><b>Culture of learning promotes student learning through positive relationships.</b></p> <p><b>Teacher Actions:</b> Responds to student needs and preferences  <b>Student Actions:</b> Applies strategies and discourse skills as an active member of a collaborative classroom community</p>	<p>Yes Mostly Somewhat Not Yet</p>	Notes:
	<p><b>High-quality instructional materials are used to support teaching and learning.</b></p> <p><b>Teacher Actions:</b> Provides core instruction as well as IEP-aligned, 504-aligned, or EL-aligned supports that eliminate barriers for students to access and engage with grade-level high-quality instructional materials. Provides enrichment and extension for students that have demonstrated mastery of grade level standard expectations.  <b>Student Actions:</b> Uses and applies grade-level high-quality instructional materials as intended. Advanced learners are using extension and enrichment materials as intended.</p>	<p>Yes Mostly Somewhat Not Yet</p>	
	<p><b>Evidence based strategies can support conceptual understanding and connections within and across content.</b></p> <p><b>Teacher Actions:</b> Builds upon prior knowledge to relate concepts and procedures from different topics. Instruction includes the use of models, representations, and ideas to facilitate connections between concepts.  <b>Student Actions:</b> Uses models, skills, representations, and other strategies to make connections to previous knowledge or concepts.</p>	<p>Yes Mostly Somewhat Not Yet</p>	

## Core Action 2

**Skills in Practice:** *How are the discipline content and skills in practice reflected in the lesson?*

A	<p><b>Instruction includes standards-aligned concepts, relevant objectives, and purposeful assessment using high-quality instructional materials.</b></p> <p><b>Teacher Actions:</b> Lesson implementation supports the use of high-quality resources and models that support students' learning.  <b>Student Actions:</b> Explains or models the concepts, objectives, and goals using instructional materials.</p>	<p>Yes Mostly Somewhat Not Yet</p>	Notes:
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B	<p><b>Problem-solving is facilitated through high-quality instructional materials that promote reasoning, high-level thinking, and application of mathematical concepts and skills.</b></p> <p><b>Teacher Actions:</b> Uses problems or tasks that allow multiple entry points and solution paths; provides opportunities to solve increasingly complex problems; strengthens all students' understanding by strategically selecting and sequencing students' representations and/or solution methods.</p> <p><b>Student Actions:</b> Understands the meaning of the problem or task and looks for entry points to its solution; develops and uses a variety of strategies to solve problems of varying complexities; applies mathematics concepts to complete problems or tasks.</p>	<p>Yes Mostly Somewhat Not Yet</p>	
C	<p><b>Reasoning and justifying solutions provide opportunities to demonstrate mathematical understanding.</b></p> <p><b>Teacher Actions:</b> Provides opportunities for students to reason and justify mathematical ideas; models reasoning skills to build on and extend students' mathematical understanding.</p> <p><b>Student Actions:</b> Looks for patterns and structures; uses quantities and relationships through a variety of approaches and flexible thinking strategies; uses reasoning to construct or analyze an argument to determine whether conclusions are valid.</p>	<p>Yes Mostly Somewhat Not Yet</p>	
D	<p><b>Representations of mathematical ideas are evident as an essential part of learning, doing, and communicating mathematics.</b></p> <p><b>Teacher Actions:</b> Uses visual models when discussing mathematical ideas and demonstrating skills and concepts; ensures manipulatives and tools are readily available for students' use; encourages students to choose representations that allow them to make sense of mathematics.</p> <p><b>Student Actions:</b> Represents and describes mathematical ideas, generalizations, and relationships using a variety of manipulatives, tools, and models; makes connections among different representations (e.g., physical, visual, symbolic, verbal, contextual); chooses representations that assist with developing and demonstrating mathematical understanding.</p>	<p>Yes Mostly Somewhat Not Yet</p>	

### Core Action 3

**Engagement and Progress:** *How is student progress monitored, and instruction adjusted responsively?*

A	<p><b>Structures are designed to elicit student engagement.</b></p> <p><b>Teacher Actions:</b> Implements intentional use of instructional time; uses a variety of strategies to engage students; consistently reinforces classroom expectations.</p> <p><b>Student Actions:</b> Engages in lesson; applies understanding of the classroom expectations.</p>	<p>Yes Mostly Somewhat Not Yet</p>	<p><b>Notes:</b></p>
B	<p><b>Questions and discourse build understanding and connections within and across content.</b></p> <p><b>Teacher Actions:</b> Facilitates questions that ask students to do the majority of the reasoning; provides tasks that allow for connections within and across content; adjusts instruction to address student misconceptions; uses content-specific language.</p> <p><b>Student Actions:</b> Uses evidence, within and across content, in grade appropriate ways to respond to questions and tasks; communicates thinking and reasoning using content-specific language (when appropriate); discusses ideas and asks questions about the thinking of others in order to clarify or improve their own understanding.</p>	<p>Yes Mostly Somewhat Not Yet</p>	
C	<p><b>Multiple means of assessment are used to determine and elicit understanding.</b></p> <p><b>Teacher Actions:</b> Uses multiple modes of assessment to allow for student voice and choice; adjusts instruction to address students' misconceptions, gaps in learning, or necessary extensions as based on assessment data.</p> <p><b>Student Actions:</b> Engages in multiple modes of assessment when demonstrating understanding of the standard; adjusts learning goals and performance based on teacher feedback.</p>	<p>Yes Mostly Somewhat Not Yet</p>	