
Curricular and Instructional Resources for Mathematics

Curriculum Adoption Tools

EdReports. Provides curriculum adoption protocols and comparisons for instructional materials
<https://www.edreports.org/>

Instructional Materials Evaluation Tool. Designed by some of the lead writers of the Common Core, the IMET is a free tool that states and districts are using to evaluate the alignment of instructional materials to the Common Core <https://achievethecore.org/aligned/intro-to-the-imet/>

Educators Evaluating the Quality of Instructional Products (EQulP). The EquIP suite of tools can help educators evaluate materials so that they can ensure only materials of high quality are used in the classroom. <https://www.achieve.org/our-initiatives/equip/equip>

Evidence-Based Resources for Evaluating Curriculum

Recommended Instructional Materials System (RIMS): Searchable Database. The Utah State Board of Education provides state recommendation of instructional materials to provide the stakeholders with reviews core-related materials and to eliminate instructional materials that violate Utah Administrative Code or Utah State Board Rules. <https://delleat.schools.utah.gov/>

What Works Clearinghouse. Provides reviews of the existing research on different *programs, products, practices, and policies* in education to support educators with the information they need to make evidence-based decisions. <https://ies.ed.gov/ncee/wwc/FWW>

Best Evidence Encyclopedia. Provides reviews of evidence for curricular programs
<http://www.bestevidence.org/>

Evidence for ESSA. Provides clear and authoritative information on programs that meet the ESSA evidence standards and enable educators and communities to select effective educational tools to improve student success. <https://www.evidenceforessa.org/>

National Center for Intensive Intervention The academic interventions tools chart presents information about academic intervention programs including information and ratings on the technical rigor of the studies such as quality, results, intensity, and additional research.
<https://charts.intensiveintervention.org/chart/instructional-intervention-tools>

Resources for Best Practices

High Leverage Practices. High-leverage practices are the basic fundamentals of teaching. These practices are used constantly, critical to helping students learn important content, and useful for supporting students' social and emotional development. These high-leverage practices are used across subject areas, grade levels, and contexts. <http://www.teachingworks.org/work-of-teaching/high-leverage-practices>

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High Leverage Practices in Special Education. In partnership with the Collaboration for Effective Educator Development, Accountability and Reform (CEEDAR), the Council for Exceptional Children has developed a set of High Leverage Practices (HLPs) for special educators and teacher candidates. The HLPs are organized around four aspects of practice: collaboration, assessment, social/emotional/behavioral, and instruction. <https://highleveragepractices.org/>

High-Leverage and Evidence-Based Practices: A Promising Pair for All Learners. An article on how to integrate high-leverage practices and evidence-based practices. <http://www.readingrockets.org/article/high-leverage-and-evidence-based-practices-promising-pair-all-learners>

National Council of Teachers of Mathematics (NCTM) Effective Teaching Practices. NCTM's landmark publication connects research with practice. Specific, research-based teaching practices that are essential for a high-quality mathematics education for each and every student are combined with core principles to build a successful mathematics program at all levels. <https://www.nctm.org/PtA/>

Instructional Practice Guide. Observe high-quality, standards-aligned instruction in action. The Instructional Practice Guide (IPG) is designed around Core Actions that encompass the Shifts in instructional practice required by the college- and career-ready (CCR) standards. <https://achievethecore.org/page/1119/instructional-practice-guide>

Utah Multi-Tiered System of Support. The Utah Multi-Tiered System of Support (UMTSS) is designed to address student learning in mathematics encompassing these critical components: High-quality Instruction, Team-based Problem Solving, and Data-based Decision Making. <https://www.schools.utah.gov/file/ff0a8f0c-66ce-486d-b51e-0509ff33f533>

College- and Career-Ready Shifts in Mathematics. A summary of the Shifts in mathematics that make college- and career-ready (CCR) standards different from other standards. There are resources to help build and apply understanding for each of the Shifts. <https://achievethecore.org/page/900/college-and-career-ready-shifts-in-mathematics>

Mathematics Instructional Practice Toolkit. Professional learning module to support understanding of planning and instruction aligned to college- and career-ready (CCR) standards for mathematics through the observation of a lesson and analysis of a lesson plan and student work samples. <https://achievethecore.org/category/1194/mathematics-instructional-practice-toolkit>

Technology Integration

Triple E Framework. A framework for educators to measure how well technology tools integrated into lessons are helping students engage in, enhance and extend learning goals. <https://www.tripleeframework.com/>

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Integrating Technology with Student-Centered Learning. A report to the Nellie Mae Education Foundation for the intent of expanding education beyond traditional boundaries. Student-centered learning focuses on educational practices and principles that: provide all students equitable access to the knowledge and skills necessary for college and career readiness in the 21st century, focus on mastery of skills and knowledge, and align with current research on how people learn.

<https://www.nmefoundation.org/getmedia/befa9751-d8ad-47e9-949d-bd649f7c0044/Integrating-Technology-with-Student-Centered-Learning>

National Council of Teachers of Mathematics (NCTM) Strategic Use of Technology in Teaching and Learning Mathematics. NCTM's position on the use of technologies that support and advance mathematical sense making, reasoning, problem solving, and communication.

<https://www.nctm.org/Standards-and-Positions/Position-Statements/Strategic-Use-of-Technology-in-Teaching-and-Learning-Mathematics/>

Recommended Reading

Principles to Actions: Ensuring Mathematical Success for All by National Council of Teachers of Mathematics. NCTM's landmark publication connects research with practice. Specific, research-based teaching practices that are essential for a high-quality mathematics education for each and every student are combined with core principles to build a successful mathematics program at all levels.

<https://www.nctm.org/store/Products/Principles-to-Actions--Ensuring-Mathematical-Success-for-All/>

Enhancing Classroom Practice with Research behind Principles to Actions. For many mathematics educators, research might seem remote from their day-to-day activities. This book makes research about the big ideas in Principles to Actions concrete by offering examples from classroom practice, of best practices in action. The book summarizes and synthesizes the research behind the guiding principles and essential elements that form the heart of Principles to Actions, NCTM's statement on best practices in the teaching and learning of mathematics. Then, linking research to practice, it gives readers a flavor of what a principle or an element might look like in practice, in a classroom.

<https://www.nctm.org/Store/Products/Enhancing-Classroom-Practice-with-Research-behind-Principles-to-Actions/>

5 Practices for Orchestrating Productive Mathematics Discussion, 2nd Edition by National Council of Teachers of Mathematics. This book presents and discusses a framework for orchestrating mathematically productive discussions that are rooted in student thinking.

<https://www.nctm.org/Store/Products/5-Practices-for-Orchestrating-Productive-Mathematics-Discussion,-2nd-Edition/>

Mathematical Mindsets. This book reveals how teachers, parents and other caregivers can transform children's ideas and experiences of math through a positive growth mindset method.

<https://www.youcubed.org/resources/mathematical-mindsets/>

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Creating the Schools Our Children Need: Why What We're Doing Now Won't Help Much (And What We Can Do Instead) by Dylan Wiliam. This book outlines a framework for evaluating new district initiatives, and guides school boards, administrators, and district leaders through a breakdown of why what we're doing right now isn't working, and what we need to be doing instead.

UDL Now!: A Teacher's Guide to Applying Universal Design for Learning in Today's Classrooms by Katie Novak. This book provides practical insights and savvy strategies for helping all learners meet high standards using the principles of Universal Design for Learning (UDL). UDL is a framework for inclusive education that aims to lower barriers to learning and optimize each individual's opportunity to learn. Novak shows how to use the UDL Guidelines to plan lessons, choose materials, assess learning, and improve instructional practice.

Videos of High-Quality Instruction

Massachusetts Department of Education. The videos depict a *range* of practice to support within-district calibration activities that promote a shared understanding of instructional quality. Select the video(s) that best meet your needs by grade, content area, or length.

<http://www.doe.mass.edu/eval/resources/calibration/videos.html>

Colorin' Colorado. A collection of classroom videos highlighting effective instruction of English language learners (ELLs). The videos are presented as professional development modules with related resources.

<http://www.colorincolorado.org/videos/classroom-video>

The Teaching Channel. A collection of teacher videos, strategies and lesson plans.

<https://www.teachingchannel.org/videos>