

Patterns™ for Reaching and Impacting Students in Math (PRISM)

**Information for the NC State Board of Education
January 2024**

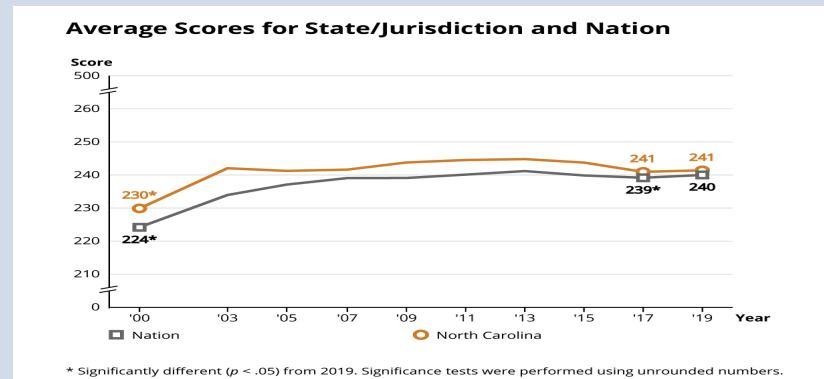
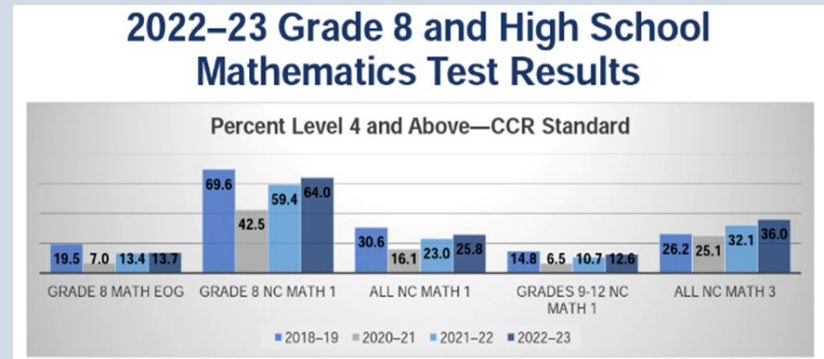
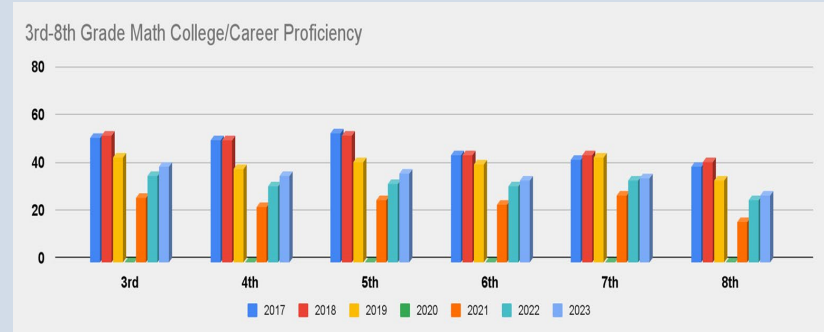
Dr. Michael Maher, Deputy State Superintendent, Standards, Accountability, and Research
Dr. Kristi Day, Director, Academic Standards
Dr. Charles Aiken, Section Chief, Science, Mathematics, & STEM

Background



Math Outcomes

- State and national Math proficiency rates indicate a majority of students are not entering high school with the necessary math readiness
- Pandemic had a greater negative impact on students already struggling in math
- Data indicates rural schools regularly perform below the state average each year at each grade level on math end-of-grade tests



Teacher Support

- Elementary lays the foundation for students' math proficiency, and effective instruction during these formative years is vital
- Rural areas often do not have access to a robust network of peers in their grade level and subject area
- Effective professional development requires a sustained and embedded approach with coaching



What is the PRISM grant?



PRISM

Patterns™ for Reaching & Impacting Students in Math (PRISM)

- A 5 year \$7.86 million Education and Innovation Research Grant (EIR) with the U.S. Dept. of Education
- A partnership with Carnegie Learning and WestEd to engage up to 300 rural 4th grade Math teachers serving as many as 7,000 students, across the state in a unique, ongoing professional learning experience
- One of 45 grants awarded from 266 that were submitted
- Goals:
 - Teachers receive individualized support in math content and instruction
 - Increases in growth and math proficiency



PRISM

The Partners -

- NCDPI - Overseeing the project, supporting recruiting and coordination between schools, teachers, Carnegie Learning and WestEd and ensuring alignment between professional development and NC standards
- Carnegie Learning - Leading the implementation of the Patterns™ professional development platform and coaching
- WestEd - Leading the research and evaluation of the project to determine its impact on teachers and students

Patterns™

- Blended learning platform combining online learning modules with both virtual and in-person coaching
- Successfully used in 19 states
- A flexible, blended professional development program designed to:
 - Deepen understanding of math concepts
 - Show vertical connections across grade levels
 - Build a network of teachers across the state
- Combines independent self paced learning time with scheduled online coaching



Patterns™

- Teacher learning and initial coaching takes place over approximately 10 weeks with topics/modules with a focus on fractions concepts such as:
 - Comparing and ordering fractions and explore equivalent fractions
 - Determining fractional representations given parts of the whole
 - Investigating multiple representations of fractions
 - Exploring fractions as division
 - Modeling operations with fractions



Timeline



Timeline - 5 years

Year 1 (January 2024 - December 2024):

- Finalize all processes, protocols, and procedures to initiate the grant work
- Identify an initial group of teachers and students to plan for the full project roll out

Years 2-4 (January 2025 - June 2028):

- Full implementation
- Complete training for two cohorts of teachers (150 in each cohort)
- Evaluation of impact on teacher knowledge and instructional practices
- Conduct longitudinal evaluation of student outcomes

Year 5 (July 2028 - December 2028)

- Disseminate results



Questions?

