

Nutley Public Schools

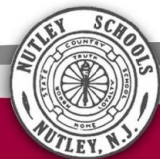
Mathematics Department K-12 Program Review 2022-2023

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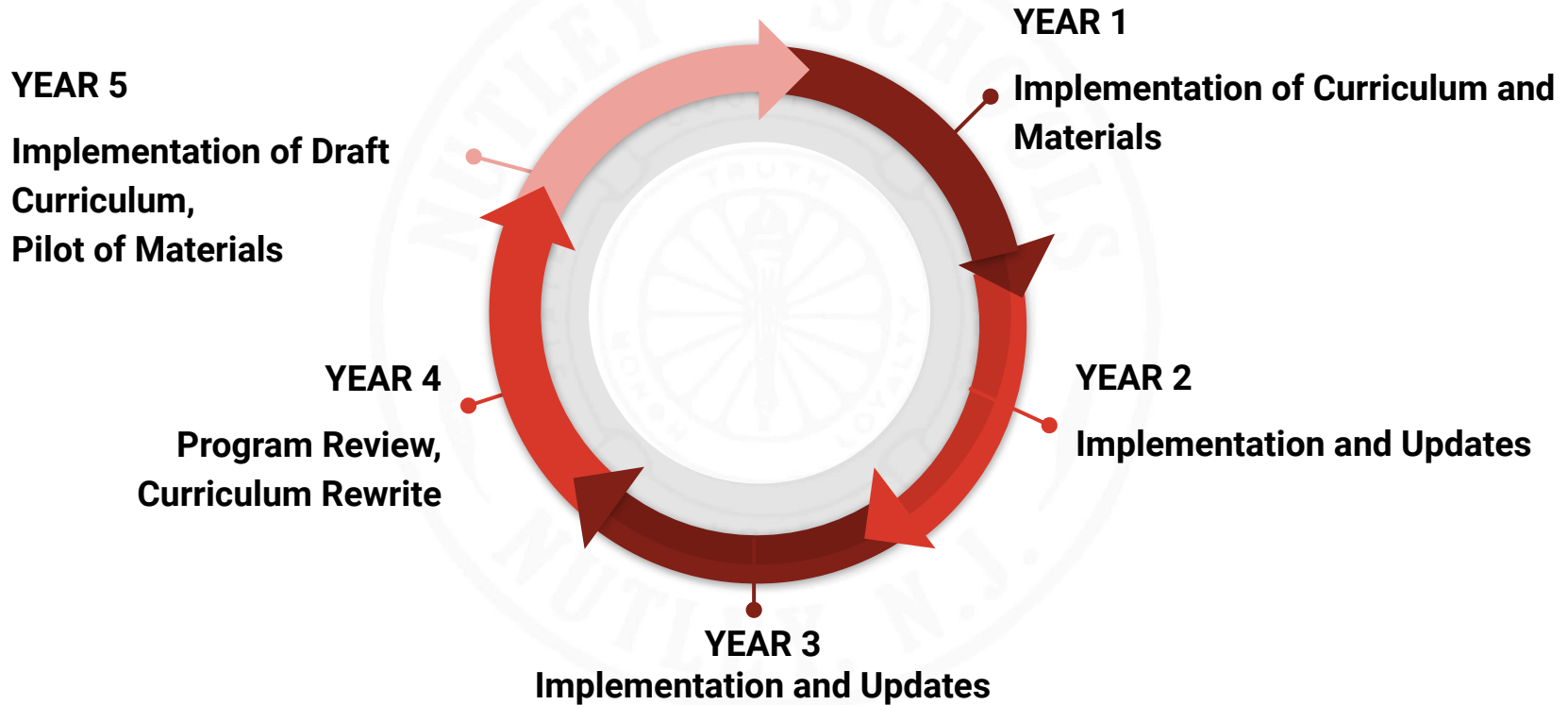
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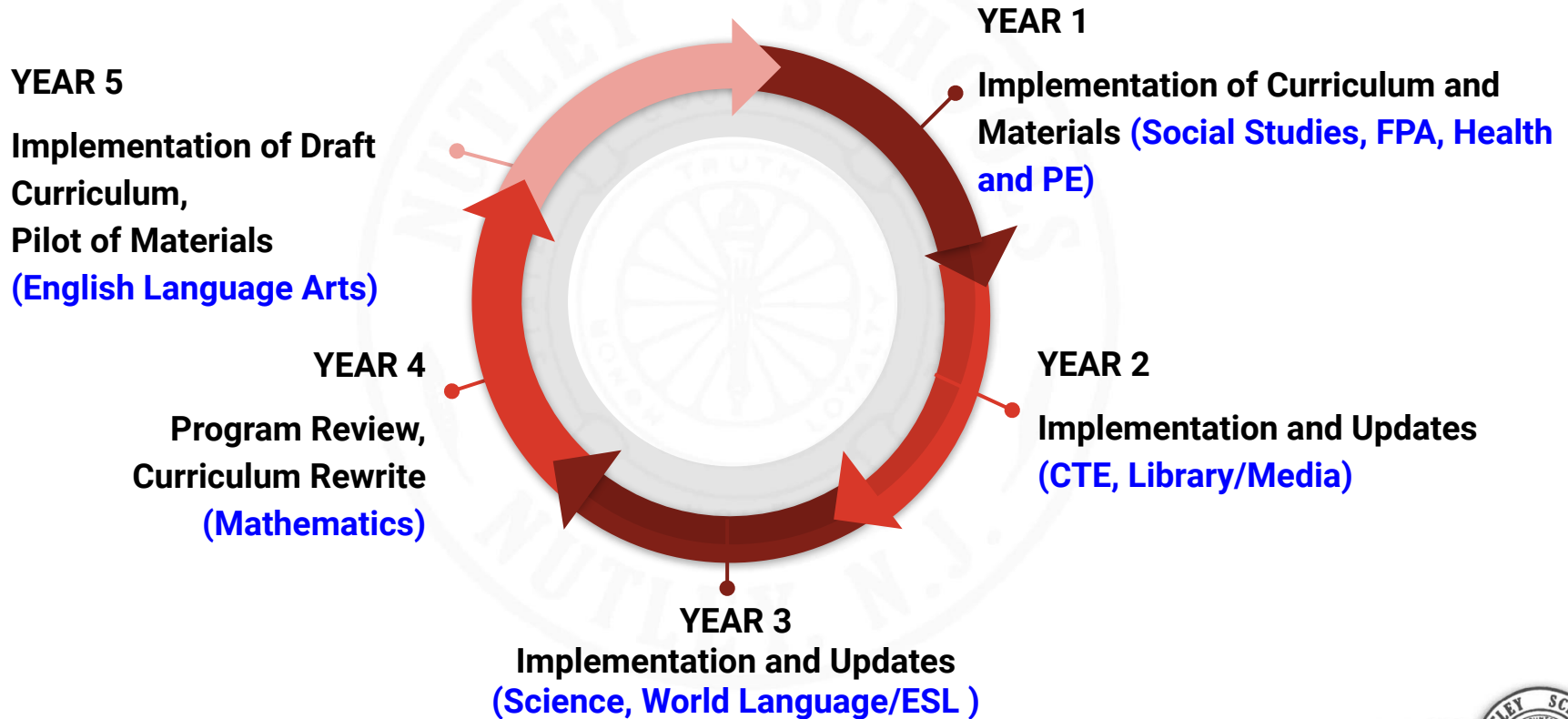
Math Coordinator



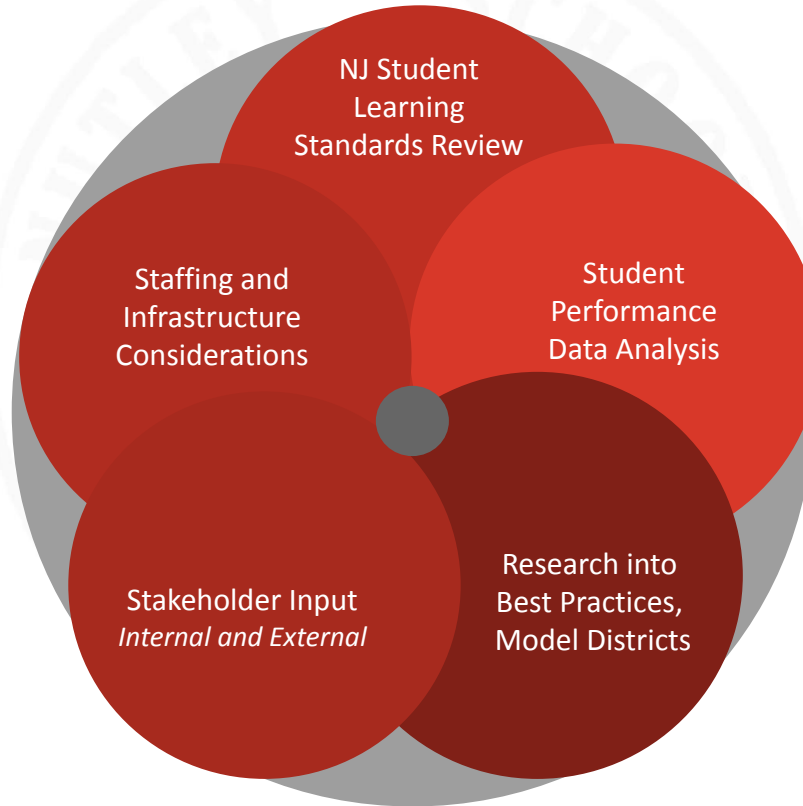
2022-2023 Curriculum Cycle



2022-2023 Curriculum Cycle



Program Review Cycle





Ms. Leann Martin

Coordinator of Mathematics



Process

→ Evaluate

- ◆ Curriculum
- ◆ Instruction
- ◆ Assessment
- ◆ Resources
- ◆ Professional Development

→ Data Sources

- ◆ Student performance data
- ◆ Survey data
- ◆ External consultants
- ◆ Anecdotal data



Data Collection Methodology

Mathematics Program K-12

Quantitative

- NJSLA Data
- District Performance Reports
- Math Common Assessment Data

Qualitative

- External Visitations- Bill Jackson and Makoto Yoshida
- Teacher Surveys
- Parent Survey
- Student Survey



Data Collection Findings

Mathematics Program K-12

External Visitations

- Teachers at all levels are committed to the implementation of the math program (*Math in Focus* K-8 and secondary courses).
 - Math in Focus resources have been updated to the 2020 version in K-5 and 2018 (6-8). The updated resources are better aligned to the NJSLs in Mathematics.
 - Teachers are utilizing instructional resources, within an “I do, we do, you do” (gradual release) workshop model lesson structure.
 - Students do participate during the lessons, but it is a more passive participation because the teachers are doing most of the explaining, particularly at the secondary level.
- The mathematical knowledge of middle and high school math teachers is strong and teachers demonstrate enthusiasm for the subject . The content knowledge of the K-5 teachers varies widely from teacher to teacher, which is common, as K-5 teachers teach several subjects and hold expertise in a variety of areas.

Surveys

- Some teachers express that they struggle with pacing issues due to learning loss/ gaps following the pandemic.
- Resource teachers are looking for support with modifying instructional resources and assessment.
- Parents struggle at times to help their children with homework.
- Parents struggle with understanding standards-based grading and reporting.



Student Performance

The most recent NJSLA (Spring 2022) data shows that students are at or above the state average in most areas, but equivalent or slightly below the state in the following:

Grade Level	Topic/ Related Standard
Grade 3	Fractions (3.NF.3a)
Grade 4	Fractions and Decimals (4.NF.2 and 4.NF.5)
Grade 5	Fractions (5.NF.3, 5.NF.5, 5.NF.6, 5.NF.7) Decimals- Operations (5.NBT.7) Reasoning
Grade 6	Rational Numbers (fractions and decimals) 6.NS.1, 6.NS.6a
Grade 7	Probability (7.SP.4) Statistics (7.SP.5-8) Circles (7.G.4) and 3-D Figures (7.G.3)
Grade 8	Different Representations of Functions (identifying characteristics in a graph, table of values, equation, verbal description with context) (8.F.2) Congruence and Transformations (8.G.1) Estimating value of an Irrational Radical (8.NS.2) Statistics - Two Way Tables (8.SP.4)
Secondary	Modeling and Reasoning Questions

*Areas in red were also identified as challenges by some teachers.

**Areas in blue are also areas that show up later in the year.



Recommendations

Mathematics Program K-12

Curriculum

- Work with teachers to continue the revisions of scope and sequence at each grade level K-8.
 - Where are the gaps in learning? Where do these topics begin in *Math in Focus*? (Go back to previous grades.)
 - How can we further infuse Math Bridges resources for Tier 1 intervention?
- Review and Update Math Curriculum and Scope & Sequence Documents for all math courses 7-12

Instruction

- Student centered problem-based math instruction
- Infuse Learning through Problem Solving into math instruction- with the goal of engaging students and fostering the development of a more meaningful understanding of concepts.
- Emphasize the student notebook as a record of learning and process.
- Explore use of classroom whiteboards during instruction.

Assessment

- Solidify District Common Assessment Plans for each grade level and secondary math course
- Review and Revise Unit (Chapter) Assessments and District (Baseline, Benchmark, Summative) K-12 Assessments
- Utilize Performance Matters for consistent assessment data collection and analysis

Resources

- Continued Implementation of Math in Focus program K-8
- Instructional Math Coach

Professional Development

- Differentiated Professional Development - Content & Pedagogy

Next Steps

Mathematics Program Review K-12

- Instructional Math Coach, Continued Professional Development
- Curriculum Writing
- Common Baseline, Unit & Summative Assessments in Performance Matters



Nutley Public Schools

Mathematics Department

K-12 Program Review

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May 22, 2023

