



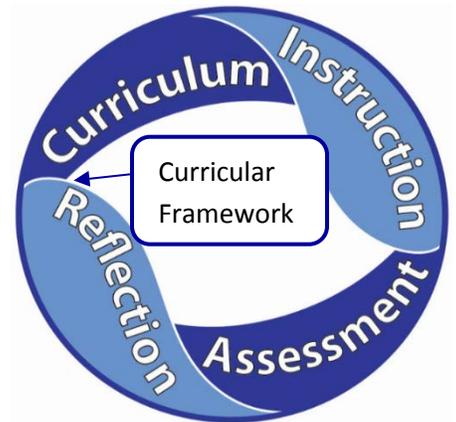
STATE OF NEW JERSEY
DEPARTMENT OF EDUCATION

Curricular Framework
Guidance Document and Supports
Mathematics

The Division of Teaching and Learning is proud to announce the newly developed curricular framework for English language arts and mathematics for kindergarten through grade twelve. It is the intent that the framework will replace the model curriculum. The framework also includes an alignment to the newly adopted New Jersey Student Learning Standards for English language arts and mathematics.

PURPOSE OF THE CURRICULAR FRAMEWORK

The purpose of the framework is to provide educators with a tool to guide conversations around curriculum and instruction that should be taking place in schools/districts around the state. The framework focuses on the standards and skills in order to provide a logical sequence of instruction with the goal of mastery of the standards at each grade level. It is not the intention to remove teacher autonomy; rather, it is the hope that the framework will provide a logical, rigorous, yet flexible path through which to meet instructional goals for all students. It is important to note that the framework is NOT a curriculum and sits within the cycle of teaching and learning. Districts might consider using the framework as a necessary step prior to developing curriculum.



DEVELOPMENT OF THE CURRICULAR FRAMEWORK

Many resources were considered in the development of the framework. The committee of writers considered other statewide frameworks, state and local resources, as well as the PARCC Evidence Tables for [English language arts](#) and [mathematics](#). In each grade level framework, there is an overview page provided at the beginning of the document. This will act as a roadmap on how to cluster the New Jersey Student Learning Standards over the course of the school year. At the end of each unit, tables are purposefully left blank for schools/districts to include their own curricular information. The units or clustering of standards were considered to accommodate the school schedule and standardized state testing. Standards are unpacked and skills are clarified and outlined for each unit.

OTHER CONSIDERATIONS

As educators work with the framework, there are no separate boxes for interdisciplinary connections, integration of 21st century themes and skills as well as modifications for special education, English language learners, students at risk of school failure and gifted students. This is intentional as the interdisciplinary connections of themes and skills are to be integrated throughout the framework. Educators should be mindful of these as they build out the framework and code them appropriately. Districts may choose to include additional boxes to suit their instructional needs.

WRITERS OF THE CURRICULAR FRAMEWORK

The Department of Education would like to thank all those who dedicated so much time and energy to this project. It is important to note that the writers are comprised of educators from across the state of New Jersey. These include teachers, supervisors, and administrators with a vast array of experience and expertise. Although the framework is focused on English language arts and mathematics, the committee of writers included those with other content area expertise, such as ELL and Special Education. In addition, the writers represented districts that included priority, focus, and reward schools from numerous counties and regions, with representation from early childhood to secondary schools. This variety of experience contributed to a comprehensive collaboration where all had a voice in the process and product.

SUGGESTED STEPS

After reviewing the framework and understanding how the standards and skills are organized, districts should [download the framework](#) and rename it as their own. Districts should continue collaborative conversations around curriculum and instruction that begin with discussing assessment. Beginning to frame the conversations in this way tightly aligns evidence to student learning. Additionally, educators will find support materials including details on how a district or school might begin this work, a PowerPoint slide deck on the background as well as guided professional learning.

SUGGESTED RESOURCES

Research-based resources are suggested in the framework documents which are currently being utilized by teachers in the field. A wide variety of accessible, free resources are made available to the educators in the form of websites, videos and printable documents. Teachers are not limited to the suggestions made in the framework. Districts are encouraged to add their own materials to the framework.

Additionally, support materials including details on how a district or school might begin this work, a PowerPoint slide deck on the background, as well as guided professional learning can be found online under the “Resources” tab.

- Background of the Curricular Framework PowerPoint
- Building the Curricular Framework PowerPoint

New Jersey Student Learning Standards

As always, standards drive instruction as the standards guide what students need to know and be able to do. Schools/districts may want to consider reviewing the [New Jersey Student Learning Standards](#).

Blended Online Learning Modules for Professional Learning Communities Using CAR

These [online modules](#) can serve as a support of the work of the framework during when your district might meet for professional learning communities.

Curricular Framework for Mathematics

Units within the curricular framework for mathematics are designed to be taught in the order in which they are presented in kindergarten through grade twelve. There is a logical and developmentally-appropriate progression of standards, with strong consideration given to Major, Supporting, and Additional content standards presented because most concepts build upon each other. Within the units the districts have flexibility of what order to present the standards. Major, Supporting and Additional Content standards are color coded for the districts to understand where to prioritize. The intent of the standards is to integrate the Major, Supporting and Additional standards. The order in which the standards and mathematical practices are clustered within the units is a suggested integration.

Grade Level Targets and Priority Concepts

Major, Supporting and Additional clusters of mathematics content standards are based on the New Jersey Student Learning Standards. Not all of the content in a given grade is emphasized equally in the standards. Some clusters require greater emphasis than others based on the depth of the ideas, time needed to master or model, and/or their importance to future grade levels. The standards in the framework are color coded as Major (green), Supporting (blue) and Additional (yellow). Suggested Mathematical Practice Standards are listed in each unit to be imbedded regularly in daily math instruction. It is important to note that the Major standards (green) are purposefully placed in tested grades for ensuring time for formal instruction in those standards.

Fluency in Grades K-5

The beginning units in kindergarten through grade two are designed with more time spent on foundational mathematical concepts needed for future units to build towards fluency in mathematics. For example, kindergarten Unit 1 begins with “Number Names and Counting Sequence” which is necessary to teach prior to “Foundations with Models for Addition and Subtraction” in Unit 2. Other units in grades three through five also follow the same logical progression of standards ensuring enough time for formal instruction with the Major Standards while still embedding Supporting and Additional Content Standards as well as Mathematical Practice Standards. It is also important to note that the fluency requirement for kindergarten through grade five is critical for students to master. See the Grade Level Fluency chart below:

Grade Level Fluency

Grade	Required Fluencies
K	Add/Subtract within 5
1	Add/Subtract within 10
2	Add/Subtract within 20 Add/Subtract within 100
3	Multiply/ Divide within 100 Add/Subtract within 1000
4	Add/Subtract within 1,000,000
5	Multi-digit multiplication

Conversational Considerations in Mathematics

After reviewing the framework and understanding how the standards and skills are organized, schools/districts should [download the framework](#) and rename it as their own. Educators should continue collaborative conversations around curriculum and instruction that begin with discussing assessment. Beginning to frame the conversations in this way tightly aligns evidence to student learning. The framework allows for a place to guide and capture essential components that build towards curriculum. The framework might be considered pre-work before schools/districts construct or revise their own curricular documents.

Understanding the Components of the Mathematics Framework

Indicates "Major Standard"

Suggested mathematical practices, others may apply to this standard

Overarching concepts when introduced

1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and sometimes it is necessary to compose a ten. *(benchmarked)

MP.2 Reason quantitatively.
 MP.3 Construct viable arguments and critique the reasoning of others.
 MP.4 Model with mathematics.
 MP.7 Look for and make use of structure.
 MP.8 Look for and express regularity in repeated reasoning.

- In adding two-digit numbers, add tens with tens and ones with ones.
 - In adding two-digit numbers, sometimes it is necessary to compose a ten.
- Students are able to:
- use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number.
 - use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number.
 - use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10.
 - use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10.
 - explain or show how the model relates to the strategy.

Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100).

Red font color indicates revised NJSLs.

"Benchmarked" indicates restriction on the standard in some way (ie: Count 1-100 can be broken down 1-10, then 1-20, then 1-50, etc) Full range of the standard is not being addressed in the unit.

Consider where, in any part of the framework, schools/districts should capture the integration of interdisciplinary connections, 21st connections and differentiation.

Conversations around skills, misconceptions and fluency at the district level are captured in this section.

Mathematical Concepts	
<i>Districts should consider listing prerequisites skills. Concepts that include a focus on relationships and representation.</i>	
Prerequisite skills:	
Common Misconceptions:	
Number Fluency (for grades K-5):	
District/School Tasks	District/School Primary and Supplementary Resources
<i>Exemplar tasks or illustrative models could be provided.</i>	<i>District/school resources and supplementary resources that are texts as well as digital resources used to support the instruction.</i>
Instructional Best Practices and Exemplars	
<i>This is a place to capture examples of standards integration and instructional best practices.</i>	

A textbook might be included here but schools/districts should capture many resources that are used to teach the standards clustered in this unit.