



INSTITUTE FOR THE PROFESSIONAL
DEVELOPMENT OF ADULT EDUCATORS

An Introduction to the ABE Mathematics Curriculum Matrix

Concept and Applications

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This training event is supported with federal funds as appropriated to the Florida Department of Education, Division of Career and Adult Education for the provision of state leadership professional development activities.

- I. The Purpose of the Matrix
- II. The College and Career Readiness Standards
- III. The ABE Mathematics Curriculum Frameworks
- IV. The ABE Mathematics Curriculum Matrix
- V. The Purpose of the Matrix
- VI. Matrix Alignment to TABE 11 & 12
- VII. Various Matrix Overlays
- VIII. The Interactive Online Curriculum Matrix
- IX. Additional Curriculum Matrix Resources



Curriculum

Format
and
Content

Requirements

Tools

WHAT'S
ON YOUR
MIND?

Classroom
Instruction

Interpreting
Scores

Resources

Planning
and Pacing

???

Professional
Development



TABE
TABE 11/12



Rationale

THE PURPOSE OF THE MATRIX



Adult Educators across the state are facing very similar challenges in the teaching of ABE Mathematics:

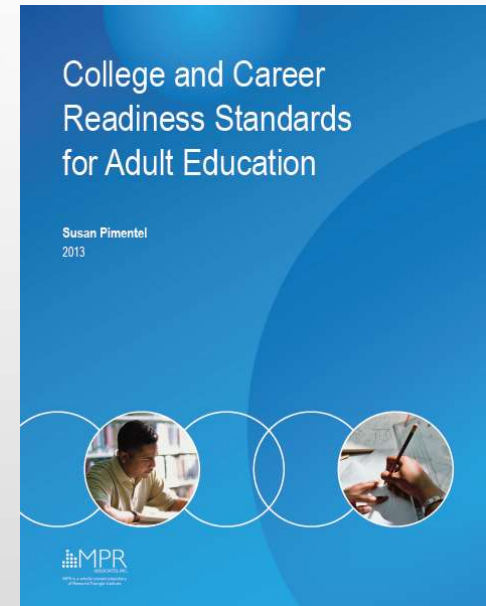
- Inconsistent background in math
- Unfamiliarity to certain math skills and concepts
- Limited understanding of the standards (CCRS)
- Lack of planning time
- Limited access to professional development
- Limited knowledge of math teaching strategies
- Limited resources for properly teaching math skills
- Massive and often multiple math content/curricula
- Catering to a very diverse group of students in terms of ability, background and goals

In terms of teaching math, a typical adult educator struggles with the following questions:

- Where do I start?
- Which skills and concepts do my students need more mastery? How do I know now? How will I know in the future?
- How much time do I have to teach this topic?
- What topics should I teach next? What is the end goal?
- Is this skill assessed on standardized tests? How?
- How much of this content is assessed on standardized tests?
- What is the best textbook out there? Or websites to use?

The ABE Mathematics Curriculum Matrix helps adult educators deal with the challenges of their work and answer the most important questions to be more efficient in their practice.





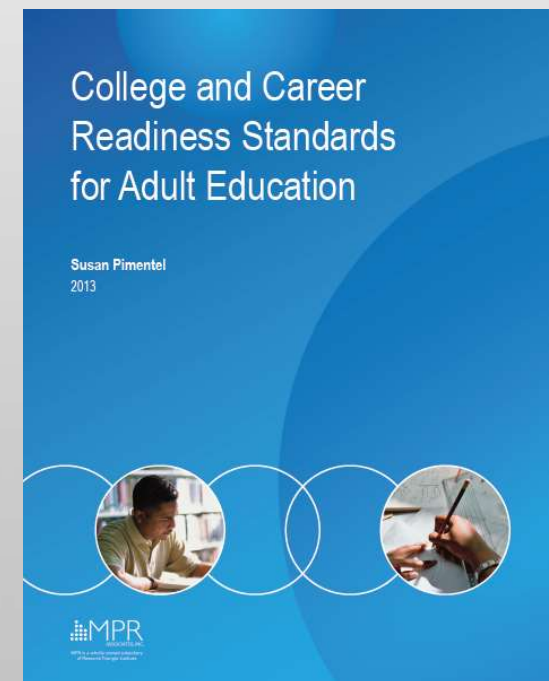
The Teaching of Mathematics According to:

THE COLLEGE AND CAREER READINESS STANDARDS



The Key Shifts in the Standards

1. Focus
2. Coherence
3. Rigor
 - a. Conceptual Understanding
 - b. Procedural Fluency
 - c. Application

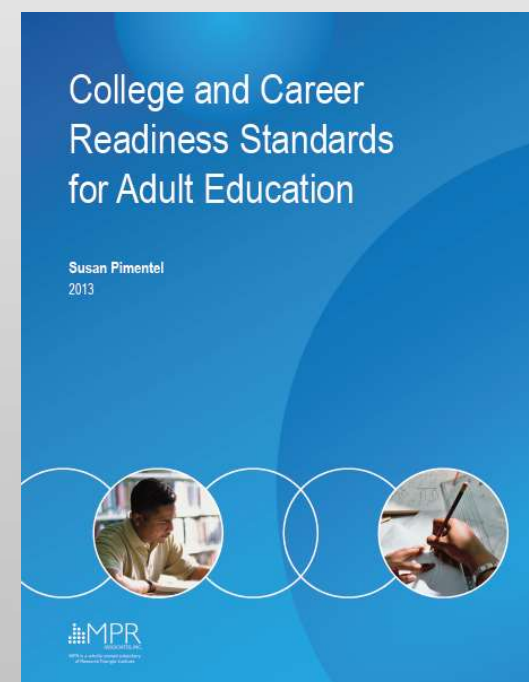


Focus

Focusing strongly where the standards focus

Instructors need to:

- narrow significantly and to deepen the manner in which they teach mathematics
- focus deeply on the major work of each level
- select priority content which addresses clear understanding

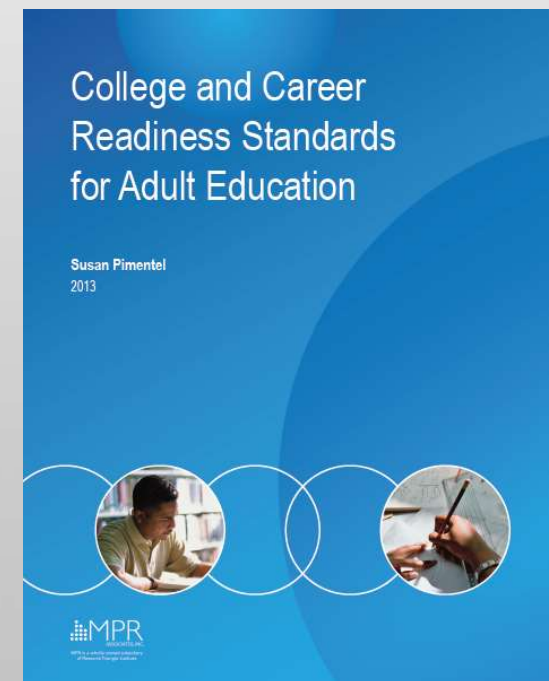


Coherence

*Designing learning around coherent progressions
level to level*

Instructors need to:

- create coherent progressions in the content within and across levels
- establish strong conceptual understanding of core content
- use standards at higher levels as extensions of previous learning rather than signaling a new concept or idea

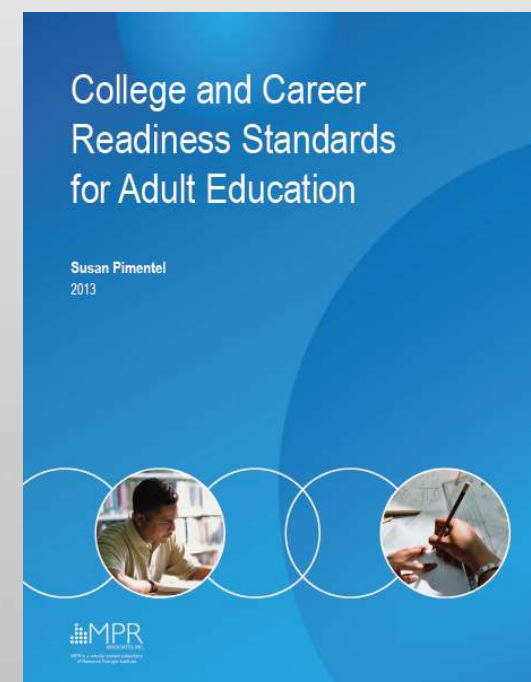


Rigor

Pursuing conceptual understanding, procedural skill and fluency, and application—all with equal intensity

Instructors need to:

- focus equally on conceptual understanding of key concepts, procedural skill and fluency, and rigorous application of mathematics in real-world contexts.
- teach more than “how to get the answer”
- employ concepts from several perspectives



The Starting Point of the ABE Math Curriculum Matrix

THE CURRICULUM FRAMEWORKS



The ABE Mathematics Curriculum Frameworks

Effective July, 2018

**Florida Department of Education
Adult General Education
Curriculum Framework**

ADULT BASIC EDUCATION-MATHEMATICS	
Program Title	Adult Basic Education (ABE)
Program Number	9900000
Course Title	Adult Basic Education-Mathematics
Course Number	School Districts: 9900001 Florida College System: ABXD100-ABXD199
CIP Number	1532010200
Grade Equivalent	0.0 – 8.9
Grade Level	30, 31
Standard Length	Varies (See Program Lengths Section)

Purpose
The Adult Basic Education (ABE) Program includes content standards that describe what students should know and be able to do in Mathematics, Language Arts (language, speaking and listening, and writing), and Reading. The content standards serve several purposes:

- Provide a common language for ABE levels among programs
- Assist programs with ABE curriculum development
- Provide guidance for new ABE instructors
- Provide instruction through professional development
- Ensure quality instruction through professional development
- Provide basic skills instruction (0.0 – 8.9) and critical thinking skills to prepare students for GED preparation (9.0 – 12.9), postsecondary education, and employment.

The content standards should be used as a basis for curriculum design and also to assist programs and teachers with selecting or designing appropriate instructional materials, instructional techniques, and ongoing assessment strategies. Standards do not tell teachers how to teach, but they do help teachers figure out the knowledge and skills their students should have so that teachers can build the best lessons and environments for their classrooms.

The ABE content standards have been revised to include the College and Career Readiness (CCR) standards. The integration of CCR standards into ABE programs is intended to provide the foundation of knowledge and skills that students will need to transition to adult secondary programs with the goal of continuing on to postsecondary education.

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Effective July, 2018

designed to develop literacy skills necessary to be successful workers, citizens
ent enrolled in the ABE program may be receiving instruction in one or more
thematics, Language Arts, or Reading.

vels that are reported as student educational gains: Educational
ederal reporting and Literacy Completion Points (LCPs) for state reporting.
e measured by approved validation methods in accordance with Rule
s responsibility to decide and inform the student of the criteria for
enchmark. It is not necessary for a student to master 100% of the
e proficiency in a standard.

recommended maximum number of instructional hours for each level.
ch student learns at his or her individual pace, and there will be
e the program or attain their educational goals in fewer or more
or each ABE instructional level.

l Assessment Paper, Division of Career and Adult Education, at
5423/ur/1415aeatap.pdf for both recommended and required
nts.

	Maximum Hours	NRS Levels
BE Level One (1)	450 Hours	1 (0.0 – 1.9)
BE Level Two (2)	450 Hours	2 (2.0-3.9)
BE Level Three (3)	300 Hours	3 (4.0 – 5.9)
BE Level Four (4)	300 Hours	4 (6.0 – 8.9)

to ten strands as shown in the chart below. Each strand is
r standards identical across all levels of learning. Each anchor
-readiness skills has a corresponding level-specific standard
ions call a benchmark skill. The table below illustrates the
andards, and skill standards.

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Effective July, 2018

Strand	Program Area	Mathematic Domain	NRS Level	Anchor Standard	Benchmark Skill
MA.	ABE.	2.	1.	3.	a)

Mathematic Thinking
with 20.
addition and subtraction by counting by 2 to add or subtract by 2.

students will progress through the performance standards sequentially. The
topic-centered and/or project-based lessons that integrate standards from
is.

TEACHER CERTIFICATION REQUIREMENTS
(b), F.S., each school district shall establish the minimal qualifications for
achers in adult education programs.

n requires the provision of accommodations for students with disabilities to
ensure equal access. **Adult students with disabilities must self-identify and**
ents with disabilities may need accommodations in areas such as
aterials, assignments and assessments, time demands and schedules,
ive technology and special communication systems. Documentation of the
and provided should be maintained in a confidential file.

ent standards are designed to be integrated into the ABE frameworks to
loration and planning. Students can access Florida's career information
e system for career exploration and development of a career plan.

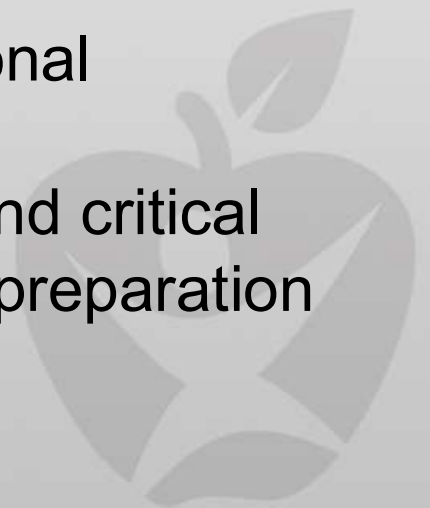
locate, evaluate, and interpret career information.
-skills, and personal preferences that influence career and education
ster and related pathways that match career and education goals.
ge a career and education plan.

tial in today's world. Students use a variety of technology tools such
outers for multiple uses; communicate with friends and family, apply
ng, and in the workplace. Technology standards are integrated in
ency of the reading and language arts standards. (Example
Writing 6, and Speaking and Listening 5).

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The content standards should be used as a basis for curriculum design and also to assist programs and teachers with selecting or designing:

- appropriate instructional materials
- instructional techniques, and
- ongoing assessment strategies.

Standards DO NOT tell teachers how to teach, but they do help teachers figure out the knowledge and skills their students should have so that teachers can build the best lessons and environments for their classrooms.

The ABE Mathematics Curriculum Frameworks

- 31 Pages
- 10 Mathematics Domains
- 79 Content Standards
- 294 Content Benchmarks
- 4 Career and Education Planning Standards
- 4 Digital Literacy (Technology) Standards
- 7 Workforce Preparation Activities

Effective July, 2018

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Adult General Education
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1 | Page

The ABE Mathematics Domains

ADULT BASIC EDUCATION MATHEMATIC DOMAINS					
Domain Number	NRS Reporting	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4
	Grade Equivalent (GE)	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	6.0 – 8.9
1	Number and Operations: Base Ten	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
2	Operations and Algebraic Thinking	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
3	Measurement and Data	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
4	Geometry	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	6.0 – 8.9
5	Number and Operations: Fractions		*3.0 – 3.9	4.0 – 5.9	
6	Expressions and Equations			4.0 – 5.9	6.0 – 8.9
7	The Number System			4.0 – 5.9	6.0 – 8.9
8	Ratios and Proportional Relationships			4.0 – 5.9	6.0 – 8.9
9	Statistics and Probability			4.0 – 5.9	6.0 – 8.9
10	Functions				*7.0 – 8.9

The ABE Mathematics Standards

ABE Level

MATHEMATICS (MA) Basic Literacy GE: 0.0-3.9 Anchor Standards and Benchmark Skills	
NRS LEVEL 1 GE: 0.0 – 1.9	NRS LEVEL 2 GE: 2.0 – 3.9
CCR.MA.ABE.1. Number and Operations: Base Ten	
1.1 Understand place value of two-digit numbers. a) Understand that the two digits of a two-digit number represent amounts of tens and ones. b) Compare two two-digit numbers recording the results of comparisons with the symbols greater than (>), equal to (=), and less than (<).	2.1 Understand place value of three-digit numbers. a) Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. b) Count within 1000 by 5s, 10s, and 100s. c) Read and write numbers to 1000 using numerals, number names, and expanded form. d) Compare two three-digit numbers using greater than (>), equal to (=), and less than (<) symbols to record the results of comparisons.

Domain

Anchor Standards

Benchmark Skills

This formatting and arrangement of math standards and benchmark skills span **25 pages** of the ABE Mathematics Curriculum Frameworks.

The ABE Mathematics Curriculum Matrix was developed directly from the ABE Mathematics Curriculum Frameworks released by the Florida Department of Education.



Domain	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4
1. Number and Operations: Base Ten	Read, write, and represent numbers to 100,000. Understand the place value of each digit. Add, subtract, multiply, and divide within 100,000.	Read, write, and represent numbers to 1,000,000. Understand the place value of each digit. Add, subtract, multiply, and divide within 1,000,000.	Read, write, and represent numbers to 100,000,000. Understand the place value of each digit. Add, subtract, multiply, and divide within 100,000,000.	Read, write, and represent numbers to 10,000,000,000. Understand the place value of each digit. Add, subtract, multiply, and divide within 10,000,000,000.
2. Operations and Algebraic Thinking	Use addition, subtraction, multiplication, and division to solve problems involving whole numbers. Understand the relationship between multiplication and division.	Use addition, subtraction, multiplication, and division to solve problems involving whole numbers. Understand the relationship between multiplication and division.	Use addition, subtraction, multiplication, and division to solve problems involving whole numbers. Understand the relationship between multiplication and division.	Use addition, subtraction, multiplication, and division to solve problems involving whole numbers. Understand the relationship between multiplication and division.
3. Measurement and Data	Use a variety of units to measure length, area, volume, and weight. Understand the relationship between different units.	Use a variety of units to measure length, area, volume, and weight. Understand the relationship between different units.	Use a variety of units to measure length, area, volume, and weight. Understand the relationship between different units.	Use a variety of units to measure length, area, volume, and weight. Understand the relationship between different units.
4. Geometry	Classify two-dimensional shapes based on their properties. Understand the relationship between different shapes.	Classify two-dimensional shapes based on their properties. Understand the relationship between different shapes.	Classify two-dimensional shapes based on their properties. Understand the relationship between different shapes.	Classify two-dimensional shapes based on their properties. Understand the relationship between different shapes.
5. Number and Operations: Fractions	Understand fractions and their relationship to division. Add and subtract fractions with like denominators.	Understand fractions and their relationship to division. Add and subtract fractions with like denominators.	Understand fractions and their relationship to division. Add and subtract fractions with like denominators.	Understand fractions and their relationship to division. Add and subtract fractions with like denominators.
6. Expressions and Equations	Use variables to represent numbers in a problem. Write an equation to represent a problem.	Use variables to represent numbers in a problem. Write an equation to represent a problem.	Use variables to represent numbers in a problem. Write an equation to represent a problem.	Use variables to represent numbers in a problem. Write an equation to represent a problem.
7. The Number System	Use the number line to represent numbers. Understand the relationship between different numbers.	Use the number line to represent numbers. Understand the relationship between different numbers.	Use the number line to represent numbers. Understand the relationship between different numbers.	Use the number line to represent numbers. Understand the relationship between different numbers.
8. Ratios and Proportional Relationships	Understand ratios and their relationship to division. Use ratios to solve problems.	Understand ratios and their relationship to division. Use ratios to solve problems.	Understand ratios and their relationship to division. Use ratios to solve problems.	Understand ratios and their relationship to division. Use ratios to solve problems.
9. Statistics and Probability	Understand data and its relationship to probability. Use data to solve problems.	Understand data and its relationship to probability. Use data to solve problems.	Understand data and its relationship to probability. Use data to solve problems.	Understand data and its relationship to probability. Use data to solve problems.
10. Functions	Understand functions and their relationship to division. Use functions to solve problems.	Understand functions and their relationship to division. Use functions to solve problems.	Understand functions and their relationship to division. Use functions to solve problems.	Understand functions and their relationship to division. Use functions to solve problems.

THE ABE MATHEMATICS CURRICULUM MATRIX










The screenshot shows the ipdae website homepage. At the top left is the ipdae logo with the tagline 'INSTITUTE FOR THE PROFESSIONAL DEVELOPMENT OF ADULT EDUCATORS'. To the right is a 'PORTAL LOGIN' link. Below the logo is a navigation menu with links for 'RESOURCES', 'E-TRAININGS', 'EVENT CALENDAR', 'FAQ', 'ABOUT', and 'CONTACT'. The main content area features a large image of a smiling man in a blue shirt standing behind a desk with a laptop, books, and a green apple. Text on the page reads 'By EDUCATORS for EDUCATORS' and 'Select an area below to view available resources.' Below this is a row of resource categories: 'ABE Adult Basic Education', 'Lessons', 'Links', 'Toolkits', 'Videos', 'Webinars', and 'Workshops'. The 'ABE' category is highlighted with a green border and a green arrow pointing down to it. To the right of the resource categories is a partially visible 'APS Career & Information System' link.

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WEBINARS

View our recorded webinars that provide information and training on various topics.

-  [Taking Care of Yourself: Making the Transition from Corrections to Work, Education & Daily Life : An Overview](#)
(Presented on 6/13/2018)
-  [ABE Math Curriculum Framework Map - Part 2](#)
(Presented on 6/6/2018)
-  [ABE Math Curriculum Framework Map - Part 1](#)
(Presented on 5/30/2018)
-  [TABE 11 and 12 Update](#)
(Presented on 5/16/2018)
-  [AGE to Post-Secondary Transition](#)
(Presented on 1/31/2018)

ABE - Webinars

Home / Resources / ABE / Webinars

ABE Math Curriculum Framework Map – Part 1

Presentation Date: 5/30/2018 at 3:00pm

Duration: 1 Hour

Description:

The math curriculum map, developed in partnership with the Florida Department of Education, is a user-friendly version of the ABE Mathematics Curriculum Frameworks. Using this map, teachers will be able to seamlessly navigate through various skills and content required by the College and Career Readiness Standards. This webinar will show teachers how to use this versatile tool in planning for instruction and remediation.

Presentation Documents:



 [Presentation \(PDF\)](#)


 [Handout: ABE Math Curriculum Matrix \(PDF\)](#)


 [Handout: ABE Math Curriculum Matrix Part 1 Activity Book \(PDF\)](#)

 [Handout: ABE Math 2018 \(PDF\)](#)

 [Handout: High Impact Indicators \(PDF\)](#)

ABE Math Curriculum Framework Map - P...  

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DEVELOPMENT OF ADULT EDUCATORS



**ABE Math Curriculum Framework Map
Part 1**

This webinar will show teachers
how to use this versatile tool in planning
for instruction and remediation.

Login to receive credit for viewing webinar

Original Version

Adult Basic Education (Mathematics) Curriculum Matrix

Domain	NRS Level 1		NRS Level 2				NRS Level 3				NRS Level 4			
1. Number and Operations: Base Ten	Place Value of 2 Digit Numbers	Add and Subtract 2 Digit Numbers	Place Value of 3 Digit Numbers	Add and Subtract 3 Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1 to 2-Digit Numbers	Use Place Value to Understand Decimals				
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2 or 100 to 3-Digit Numbers	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths				
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Relations	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers up to 100				
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100				
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Length through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, Mass and Money Including Fractions	Solve Problems in Length, Volume, Mass and Money	Solve Problems Involving Length, Time, Volume, Mass and Money Including Decimals	Solve Problems Involving Information Presented in Line Plots	Recognize Angles				
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement				
4. Geometry	Analyze, Compare, and Classify 2-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Area	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane	Solve Problems Involving Scale Drawings of Geometric Figures	Produce Congruent and Similarity Using Models		
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Measure, Area, SA and Volume	Recognize Congruence and Similarity from Transformations	Explain and Apply the Pythagorean Theorem	
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the Same Denominator	Decompose Fractions as Multiples of Unit Fractions				
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number				
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions				
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine if an Equation or Inequality is True	Express One Quantity as the Dependent Variable of Another Quantity	Add, Subtract, Factor, and Expand Linear Expressions	Continual Equations and Inequalities to Solve Problems	Apply the Properties of Exponents to Generate Equivalent Expressions	
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables and Equations to Show Variable Relationships	Rewrite Expressions to Show Relationships between Quantities	Solve Problems Using Algebraic Equations with Rational Coefficients	Evaluate Square and Cube Roots of Perfect Squares and Cubes	
							Rewrite Simultaneous Linear Equations in One Variable							
8. Ratios and Proportional Relationships							Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions	Plot/Find Ordered Pairs of Rational Numbers on a Coordinate Plane	Explain Statements of Order and Inequality Using a Number Line	Add and Subtract Rational Numbers Using a Number Line		
							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret, and Compare Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	Convert a Rational Number to Decimal	Solve Problems by Graphing	Multiply and Divide Rational Numbers		
9. Statistics and Probability							Describe Relationships Between Two Quantities Using a Ratio			Explain the Unit Rate $a:b$ Associated with the Ratio $a:b$, with $b \neq 0$	Use Various Techniques to Solve Problems Involving Ratios	Represent Proportional Relationships by Equations and Graphs	Estimate the Location of Irrational Numbers on a Number Line	Solve Problems Involving Proportional Relationships
							Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms, Box Plots	Relate Measures of Center and Variability to Data Distribution and Context	Draw Informal Comparative Inferences About Two Populations	Find or Approximate the Probability of Simple & Compound Events with Various Techniques	Construct and Interpret Scatter Plots from Two-Way Tables and Vice Versa
10. Functions							Summarize and Describe Numerical Data Sets	Use Interquartile Range and MAD to Draw Comparative Inferences About a Population		Define, Evaluate and Compare Functions	Interpret the Equation $y = mx + b$ as Defining a Linear Function	Construct a Function to Model Linear Relationships	Describe Qualitatively or Sketch the Functional Relationship Between Two Quantities	Use the Equation of a Linear Model to Solve Problems

Plain (Grayscale) Version

Adult Basic Education (Mathematics) Curriculum Matrix

Domain	NRS Level 1		NRS Level 2			NRS Level 3			NRS Level 4	
1. Number and Operations: Base Ten	Place Value of 2 Digit Numbers	Add and Subtract 2 Digit Numbers	Place Value of 3 Digit Numbers	Add and Subtract 3 Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1 to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2 or 100 to 3-Digit Numbers	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Perform Basic Operations on Decimal Numbers Using Multiple Strategies	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Relationships	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Find All Factor Pairs of Any 2-Digit Whole Number	Generate and Analyze Numerical Expressions without Evaluating Them	Recognize Angles
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, Mass and Money Including Fractions	Solve Problems Involving Length, Time, Volume, Mass and Money Including Decimals	Solve Problems Involving Time, Volume, Mass and Money Including Fractions	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas to Rectangles	Convert Measurements within a System		
4. Geometry	Analyze, Compare, and Classify 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 5, 6, 8, or 10 on a Number Line	Recognize Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the Same Denominator	Decompose Fractions as Multiples of Unit Fractions
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine if an Equation or Inequality is True	Express One Quantity as the Dependent Variable of Another Quantity
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables, and Equations to Show Variable Relationships
							Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions
8. Ratios and Proportional Relationships							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compare Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	Plot/Find Rational Numbers on a Number Line
										Convert a Rational Number to Decimal
9. Statistics and Probability							Describe a Relationship Between Two Quantities Using a Ratio			Explain the Unit Rate a/b Associated with the Ratio $a:b$, with $b \neq 0$
							Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms, Box Plots
10. Functions										Relate Measures of Center and Variability to Data Distribution and Context
										Draw Informal Comparative Inferences About Two Populations

Presentation Version

Domain	NRS Level 1		NRS Level 2				NRS Level 3				NRS Level 4		
1. Number and Operations: Base Ten	Place Value of 2 Digit Numbers	Add and Subtract 2 Digit Numbers	Place Value of 3 Digit Numbers	Add and Subtract 3 Digit Numbers	Round Whole Number to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1 to 2-Digit Numbers	Use Place Value to Understand Decimals			
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2 or 100 to 3-Digit Numbers	mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths			
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100			
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Read All Facts Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100			
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems on Length, Time, Volume, Mass and Money Including Decimals	Interpret Information Presented in Line Plots	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot			
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement			
4. Geometry	Analyze, Compare, and Classify 2-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane	Solve Problems Involving Scale Drawings of Geometric Figures	Produce Congruence and Similarity Using Models	
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Angle Measure, Area, SA and Volume	Recognize Congruence and Similarity from Transformations	Explain and Apply the Pythagorean Theorem
5. Number and Operations: Fractions	Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line		Recognize Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerator or Denominators	Decompose Fractions as Sum of Fractions with the Same Denominator	Decompose Fractions as Multiples of Unit Fractions				
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number			
6. Expressions and Equations	Write and Evaluate Algebraic Expressions with Exponents		Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine if an Equation or Inequality is True	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Express One Quantity as the Dependent Variable of Another Quantity	Use Graphs, Tables and Equations to Show Variable Relationships	Rewrite Expressions to Show Relationships Between Quantities	Solve Simultaneous Linear Equations in One Variable	Add, Subtract, Factor, and Expand Linear Expressions	Construct Equations and Inequalities to Solve Problems	Apply the Properties of Exponents to Generate Equivalent Expressions
													Solve Problems Involving Notation
7. The Number System	Fluently Divide Multi-Digit Numbers		Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions		Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Use Substitution to Determine if an Equation or Inequality is True	Express One Quantity as the Dependent Variable of Another Quantity	Use Graphs, Tables and Equations to Show Variable Relationships	Plot/Find Ordered Pairs of Rational Numbers on a Coordinate Plane	Explain Statements of Order and Inequality Using a Number Line	Add and Subtract Rational Numbers Using a Number Line
8. Ratios and Proportional Relationships	Describe a Relationship Between Two Quantities Using a Ratio		Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set		Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms, Box Plots	Explain the Unit Rate a/b Associated with the Ratio $a:b$	Use Various Techniques to Solve Problems Involving Ratios	Represent Proportional Relationships by Equations and Graphs	Find or Approximate the Probability of Simple and Compound Events with Various Techniques	Construct and Interpret Scatter Plots from Two-Way Tables and Vice Versa	Solve Problems Involving Proportional Relationships
9. Statistics and Probability	Summarize and Describe Numerical Data Sets		Use Inappropriate Range and MAD to Draw Comparative Inferences	Use Inappropriate Range and MAD to Draw Comparative Inferences	Interpret the Equation $y = mx + b$ as Defining a Line or Function								
10. Functions	Define, Evaluate and Compare Functions												

Domains

NRS Levels



Domain	NRS Level 1		NRS Level 2			NRS Level 3			NRS Level 4	
1. Number and Operations: Base Ten	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 3-Digit Numbers by 2 or 100 to 3-Digit Numbers	Round Multi-Digit Numbers to the Nearest Tens or Hundreds	Perform Multi-Digit Arithmetic	Place Value	Numbers in Names and Expanded Form	Decimals
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems	Solve Multi-Step Problems	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers up to 100
3. Measurement and Data	Measure Lengths and Estimate Lengths	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, and Mass	Solve Problems Involving Length, Time, Volume, Mass and Money including Fractions	Solve Problems Involving Length, Time, Volume, Mass and Money including Decimals	Recognize Angles	Recognize Angles
4. Geometry	Analyze, Compare, and Classify 2-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane	Solve Problems Involving Angles
5. Number and Operations: Fractions	Represent Fractions on a Number Line	Recognize Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions	Use Visual Models to Represent Equivalent Fractions
6. Expressions and Equations	Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Perform the Order of Operations on Algebraic Expressions	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Variables to Represent Two Related Quantities in a Problem	Use Variables to Represent Two Related Quantities in a Problem	Use Variables to Represent Two Related Quantities in a Problem
7. The Number System	Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	Apply Distributive Property to Generate Equivalent Expressions	Use Integers to Represent Quantities in Real World Contexts	Plot, Find Rational Numbers on a Number Line	Convert a Rational Number to a Decimal	Use Integers to Represent Quantities in Real World Contexts
8. Ratios and Proportional Relationships	Understand Ratios	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships	Use Ratios to Represent Proportional Relationships
9. Statistics and Probability	Understand Statistical Questions Involving Variability in Data	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape	Understand Statistical Questions Involving Center, Spread and Overall Shape
10. Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions	Understand Functions

163 Content Cells

The intersection between a domain and level is referred to as a **region** in the matrix.

What are NRS Levels?

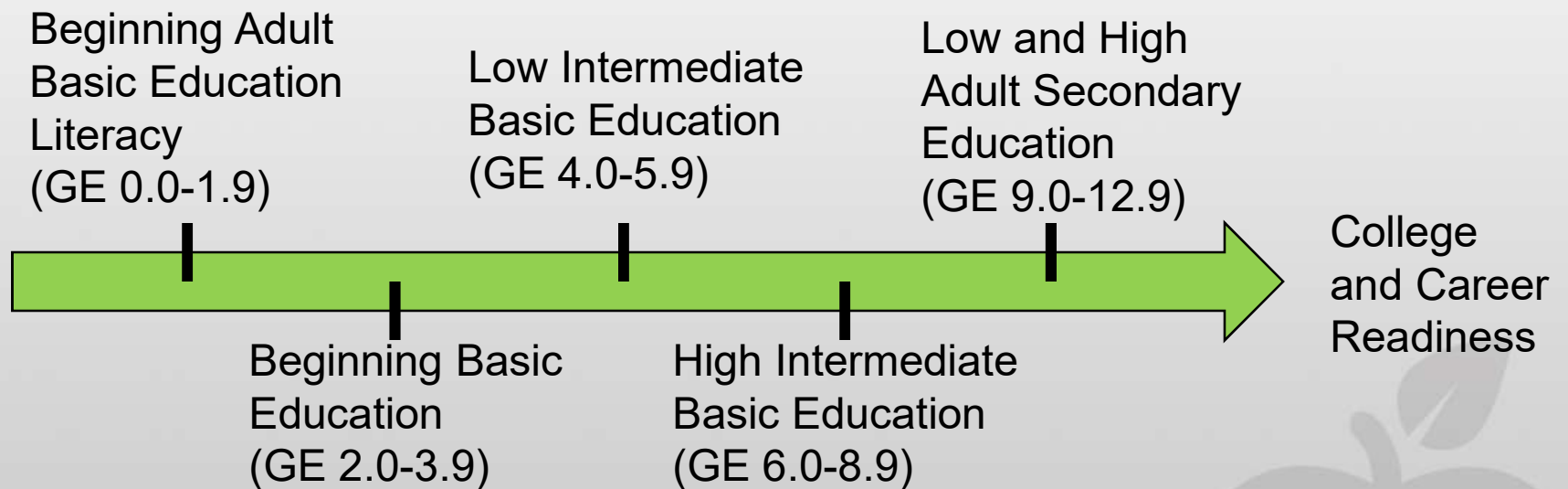
NRS stands for National Reporting System. The NRS divides Adult Basic Education into 4 levels:

- Level 1 – Literacy (Grade Equivalent 0 to 1)
- Level 2 – Beginning Basic (Grade Equivalent 2 to 3)
- Level 3 – Low Intermediate (Grade Equivalent 4 to 5)
- Level 4 – High Intermediate (Grade Equivalent 6 to 8)

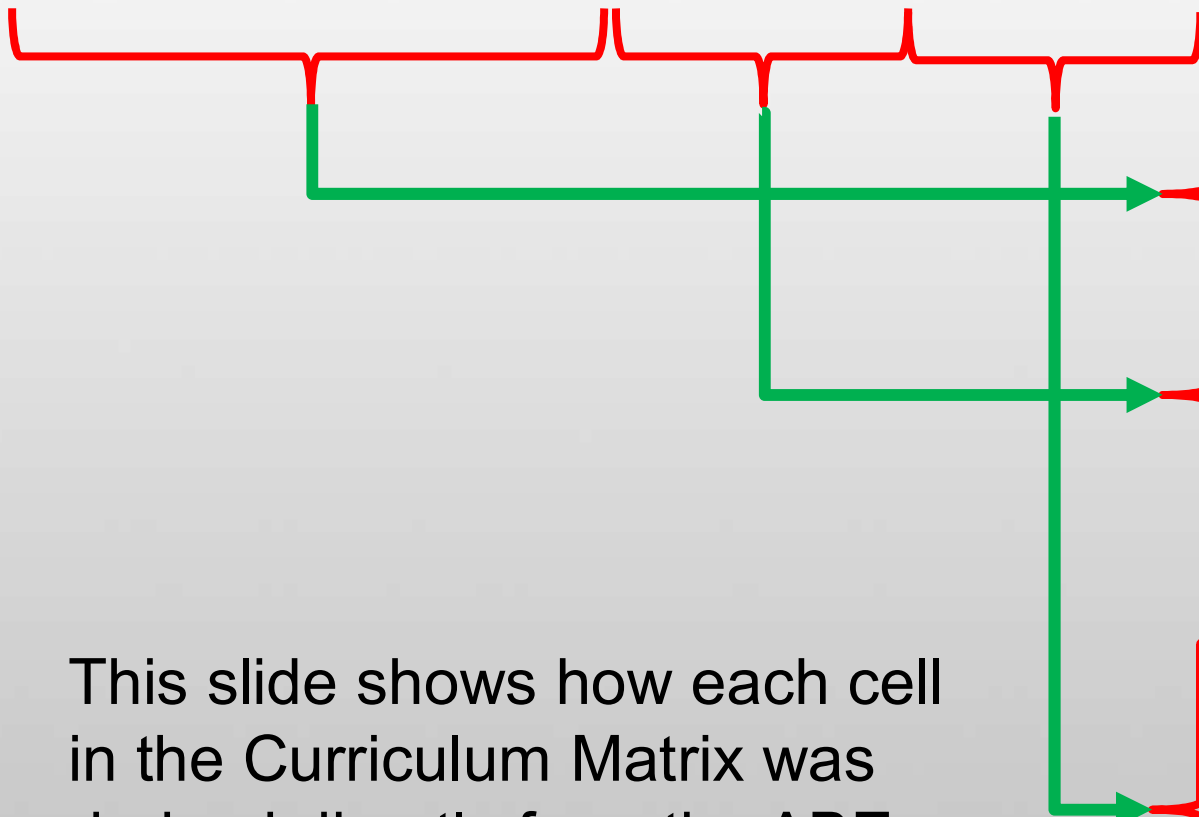
Levels 5 and 6 are levels that belong to Adult Secondary Education (GED Prep):

- Level 5 – Low Adult Secondary Education (Grade 9 – 10)
- Level 6 – High Adult Secondary Education (Grade 11 – 12)

Mathematics



Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line: Dot Plots, Histograms, Box Plots
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3.1 Develop understanding of statistical variability.

- a) Discuss a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
- b) Discuss a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
- c) Discuss that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

3.2 Summarize and describe distributions.

- a) Display numerical data in plots on a number line, including:
 - Dot plots (graph of data using dots).
 - Histograms (bar graph using ranges of data).
 - Box plots (graph uses rectangles with lines extending from the top and bottom).

This slide shows how each cell in the Curriculum Matrix was derived directly from the ABE Math Curriculum Frameworks.

Procedural Fluency

Domain	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4
1. Number and Operations: Base Ten	Represent 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers
	Represent 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers
2. Operations and Algebraic Thinking	Write and Interpret Numerical Expressions	Write and Interpret Numerical Expressions	Write and Interpret Numerical Expressions	Write and Interpret Numerical Expressions
	Use Properties of Operations to Simplify Expressions	Use Properties of Operations to Simplify Expressions	Use Properties of Operations to Simplify Expressions	Use Properties of Operations to Simplify Expressions
3. Measurement and Data	Classify Figures by Attributes	Classify Figures by Attributes	Classify Figures by Attributes	Classify Figures by Attributes
	Measure Length	Measure Length	Measure Length	Measure Length
4. Geometry	Classify Polygons	Classify Polygons	Classify Polygons	Classify Polygons
	Classify Polygons	Classify Polygons	Classify Polygons	Classify Polygons
5. Number and Operations: Fractions	Represent Fractions	Represent Fractions	Represent Fractions	Represent Fractions
	Represent Fractions	Represent Fractions	Represent Fractions	Represent Fractions
6. Expressions and Equations	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions
	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions	Write and Evaluate Algebraic Expressions
7. The Number System	Identify Divisors	Identify Divisors	Identify Divisors	Identify Divisors
	Identify Divisors	Identify Divisors	Identify Divisors	Identify Divisors
8. Ratios and Proportional Relationships	Recognize Proportional Relationships	Recognize Proportional Relationships	Recognize Proportional Relationships	Recognize Proportional Relationships
	Recognize Proportional Relationships	Recognize Proportional Relationships	Recognize Proportional Relationships	Recognize Proportional Relationships
9. Statistics and Probability	Discuss Statistical Questions	Discuss Statistical Questions	Discuss Statistical Questions	Discuss Statistical Questions
	Discuss Statistical Questions	Discuss Statistical Questions	Discuss Statistical Questions	Discuss Statistical Questions
10. Functions	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions
	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions	Define, Evaluate and Compare Functions

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 3-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generate Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mainly Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 2-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 3-Digit Numbers Up to 300
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Generate and Analyze Numeric and Geometric Patterns
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 3/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
5. Number and Operations: Fractions	Represent Fractions with Denominators 2, 3, 4, 5, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator			Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples of Unit Fractions
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine if an Equation or Inequality is True	Express One Quantity as the Dependent Variable of the Another Quantity
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables and Equations to Show Variable Relationships
							Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 300	Apply Distributive Property to Generate Equivalent Expressions
							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	

APPLICATIONS OF THE MATRIX

- The matrix can be used in planning (daily, weekly, or by unit). Start with the upper leftmost content cell within each region of the matrix then teaching outwards to cover the entire region.

Domain	NRS Level 1	
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations

- The matrix can be used to track class progress or individual student's progress, which is important in adjusting the pace of the lesson and design/selection or learning materials/activities.

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1 to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplication, Comparison, and Estimation	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems in Length, Time, Volume, Mass and Money Including Decimals	Solve Problems Involving Information Presented in Line Plots	Recognize Angles
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas to Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 3/8) in a Graph	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems Involving Partitioning Shapes	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in the Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Lengths of Edges with the Same Unit or Second Coordinate
5. Number and Operations: Fractions			Recognize Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Recognize Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generalize Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as a Sum of Fractions with the Same Denominator	Decompose Fractions as Multiples of Unit Fractions
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply and Divide Whole Numbers
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Solve Problems with Division Involving Fractions	Solve Problems Involving Addition and Subtraction of Fractions
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine Whether an Inequality is True	Express One Quantity as the Dependent Variable of the Another Quantity
7. The Number System							Reason and Solve One-Variable Equations and Inequalities	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Variables to Represent Two Related Quantities in a Problem
							Factor and Divide Multi-Digit Numbers	Factor and Divide Multi-Digit Numbers	Find the Least Common Multiple of Two Numbers	Apply Operations to Solve Problems Involving Equivalent Fractions

- The matrix can be used together with test results to map students strong and weak areas which could lead to developing class, small group or individual student learning profiles.

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Use Commutative and Associative Properties of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Properties of Addition	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division	Check Answers Using Mental Computation Strategies	Solve Problems Involving Interpretive Expressions and Equations	Find Factors of Any 2-Digit Number	Prime and Composite Numbers
3. Measurement and Data	Organize, Represent, and Interpret Categorical Data	Use Area to Measure Lengths	Analyze and Interpret Data	Analyze and Interpret Data	Measure and Estimate Lengths	Solve Problems Involving Volume, Mass, and Money	Solve Problems Involving Time, Mass, and Money Including Fractions	Evaluate the Reasonableness of Answers	Solve Problems Involving Time, Mass, and Money Including Decimals	Use Area to Measure Lengths
	Use Area to Measure Lengths	Use Area to Measure Lengths	Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Comparison	Analyze, Draw, Compare, and Classify Shapes	Identify Common Polygons and Triangles	Categorize Shapes with Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, and Planes	Solve Problems by Graphing Points on a Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
	Use Area to Measure Lengths	Use Area to Measure Lengths	Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples of Unit Fractions
5. Number and Operations: Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number
	Multiply and Divide Fractions	Multiply and Divide Fractions	Multiply and Divide Fractions	Multiply and Divide Fractions	Multiply and Divide Fractions	Multiply and Divide Fractions	Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions

Differentiating Instruction and Scaffolding

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems Involving Information Presented in Line Plots	Solve Problems Involving Length, Time, Volume, Mass and Money Including Decimals	Recognize Angles
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Lengths of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Color Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples of Unit Fractions
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number
							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions

These group or individual student profiles also help in developing **formative assessments** to determine mastery of each standard.

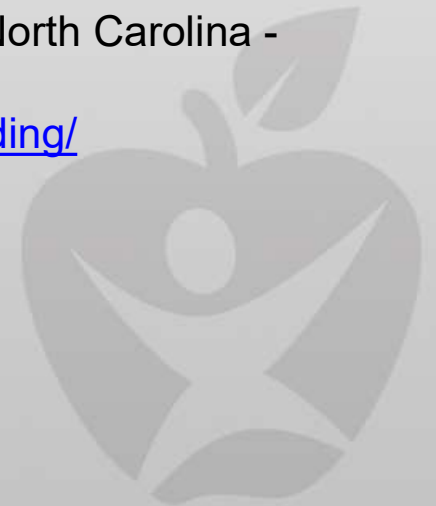
- The matrix can be used to emphasize big ideas or **learning trajectories** in the standards.

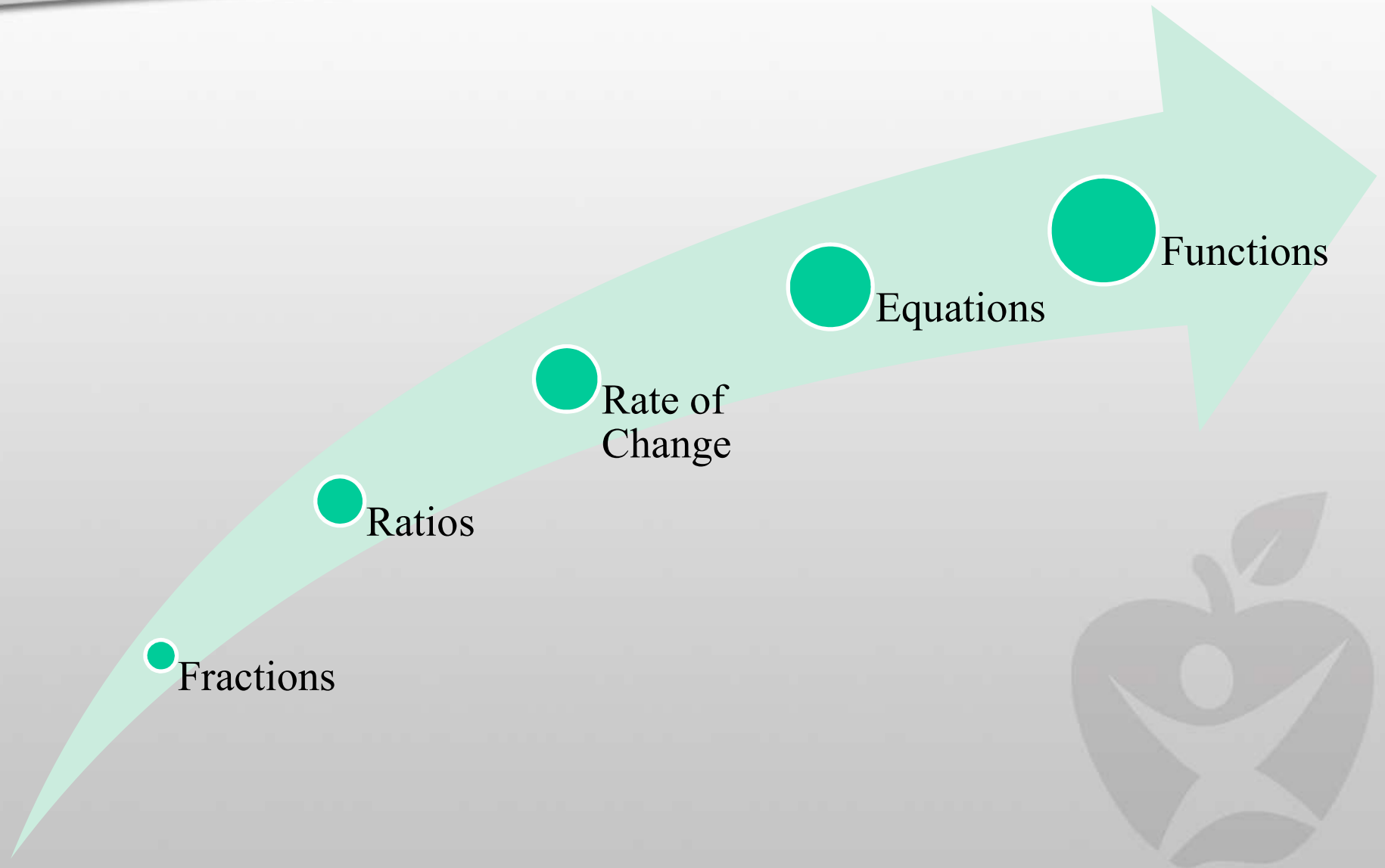
Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 300
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems Involving Information Presented in Line Plots	Generate and Analyze Numeric and Geometric Patterns	Identify Inexplicit Features of a Pattern from a Rule
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 3/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 5, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples of Unit Fractions
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine If an Equation or Inequality is True	Express One Quantity as the Dependent Variable of the Another Quantity
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One-Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables and Equations to Show Variable Relationships
							Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions
							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	

A **learning trajectory** is generally defined as a content-specific learning path, a developmental progression, and/or a building of conceptual components.

G. Mojica (2011). A trajectory toward understanding. University of North Carolina - Chapel Hill, School of Education, NC.

<http://thewell.web.unc.edu/2011/10/31/trajectory-toward-understanding/>





- The matrix can be used to emphasize big ideas or learning trajectories towards GED **High Impact Indicators** and **Performance Level Descriptors**.

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
							Basic Operations with Multi-Digit Numbers in Standard Algorithm	Perform Basic Operations on Decimal Numbers Using Multiple Strategies	Round Decimals to Any Place	Divide 4-Digit Numbers by 2-Digit Numbers Using Multiple Strategies
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
							Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Generate and Analyze Numeric and Geometric Patterns	Identify Implicit Features of a Pattern from a Rule
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems Involving Length, Time, Volume, Mass and Money Including Decimals	Solve Problems Involving Information Presented in Line Plots	Recognize Angles
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
							Measure and Sketch Angles in Whole-Number Degrees	Solve Addition and Subtraction Problems for Unknown Angles		
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
							Represent 3-Dimensional Figures Using Nets	Use Nets to Find the Surface Area of Figures		

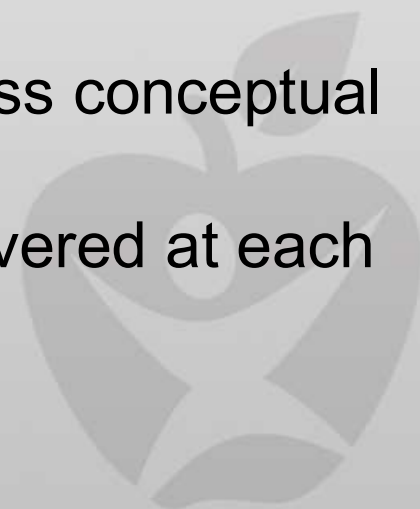
Q.4: Calculate dimensions, perimeter, circumference, and area of two-dimensional figures

Q.5: Calculate dimensions, surface area, and volume of three-dimensional figures

High Impact Indicators are skills/objectives that are useful for educators to emphasize in the classroom because they are essential for students in order to perform well on the GED Test.

- They represent particular foundational skills that are the basis for the development of other skills covered in the GED® Assessment Targets and have broad usefulness that can be applied in multiple contexts.
- They are a good fit for classroom instruction because they are not complicated but are important for students to know and use.
- GED® testing data suggests that educators may not be currently focusing on these skills in their GED® test preparation.

- Summarizes the ABE math standards in a more visual representation
- Shows an overall picture of the ABE math standards
- Shows the logical grouping and possible sequencing of the standards
- Emphasizes out how each standards relate to one another
- Organizes the standards in ABE levels across conceptual categories/domains
- Shows how much content/objectives are covered at each ABE level or domain



- Serves as a quick guide for teachers so that they are able to prioritize and differentiate teaching to the most important skills to adult students based on the student's ability, curriculum and standardized assessment.
- Enumerates every skill/concept/topic that has to be covered in the ABE Math Classroom.
- Highlights every standard that is tested in standardized assessments such as the TABE 11 & 12.

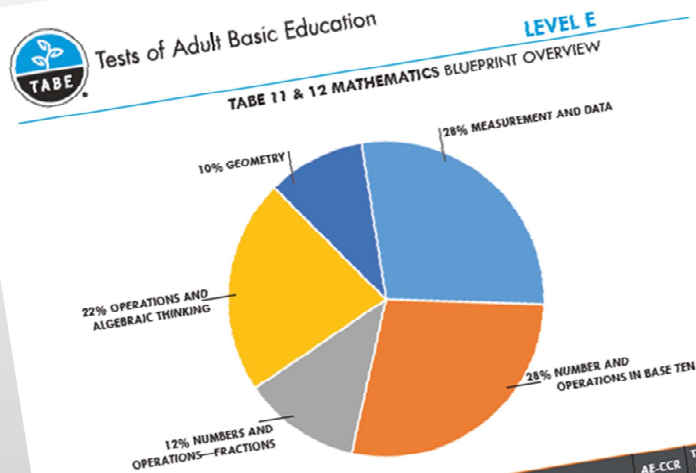




Aligning to Standardized Assessment Targets

TEST FOR ADULT BASIC EDUCATION (TABE) 11 & 12

The TABE Level E Assessment Blueprint



STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
2.NBT.1	Understand that three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: (2.NBT.1.a, 2.NBT.1.b)	B	Low
2.NBT.2	Use place value understanding to round whole numbers to the nearest 10 or 100.	B	Medium
2.NBT.3	Count within 1000; skip-count by 5s, 10s, and 100s.	B	Low
2.NBT.4	Fluently add and subtract within 1000 using strategies based on addition and subtraction, properties of operations, and/or the relationship between addition and subtraction.	B	Medium
2.NBT.5	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	B	Low
2.NBT.6	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	B	Medium
2.NBT.7	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	B	Medium
2.NBT.8	Add up to four two-digit numbers using strategies based on place value and properties of operations.	B	Medium
2.NBT.9	Add and subtract within 1000, using concrete models 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	B	Medium

STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
Interpret a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$.	B	Medium
Represent a fraction as a number on the number line; represent fractions on a number line. (3.NF.2.a, 3.NF.2.b)	B	Medium
Understand equivalence of fractions in special cases, and compare fractions by reasoning about their size. (3.NF.3.a, 3.NF.3.b, 3.NF.3.c, 3.NF.3.d)	B	High

STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
Use addition, subtraction, multiplication, and division within 100 to solve one- and two-step word problems involving unknowns in all positions, e.g., for addition, subtraction, multiplication, or division. (1.OA.D.8)	B	Medium
Interpret a number as a measure of an object or quantity; compare two objects or quantities of the same kind by measuring them with a measuring tool. (1.MD.A.2)	B	Medium
Partition a whole into equal shares of a whole object into equal shares. (1.G.A.3)	B	Low
Use a number line to represent addition and subtraction. (1.NB.A.1)	B	Low
Use a number line to represent multiplication and division. (1.NB.B.4)	B	Low
Use a number line to represent addition and subtraction. (1.NB.C.6)	B	Low
Use a number line to represent multiplication and division. (1.NB.D.8)	B	Low
Use a number line to represent addition and subtraction. (1.NB.E.9)	B	Low
Use a number line to represent multiplication and division. (1.NB.F.10)	B	Low
Use a number line to represent addition and subtraction. (1.NB.G.11)	B	Low
Use a number line to represent multiplication and division. (1.NB.H.12)	B	Low
Use a number line to represent addition and subtraction. (1.NB.I.13)	B	Low
Use a number line to represent multiplication and division. (1.NB.J.14)	B	Low
Use a number line to represent addition and subtraction. (1.NB.K.15)	B	Low
Use a number line to represent multiplication and division. (1.NB.L.16)	B	Low
Use a number line to represent addition and subtraction. (1.NB.M.17)	B	Low
Use a number line to represent multiplication and division. (1.NB.N.18)	B	Low
Use a number line to represent addition and subtraction. (1.NB.O.19)	B	Low
Use a number line to represent multiplication and division. (1.NB.P.20)	B	Low
Use a number line to represent addition and subtraction. (1.NB.Q.21)	B	Low
Use a number line to represent multiplication and division. (1.NB.R.22)	B	Low
Use a number line to represent addition and subtraction. (1.NB.S.23)	B	Low
Use a number line to represent multiplication and division. (1.NB.T.24)	B	Low
Use a number line to represent addition and subtraction. (1.NB.U.25)	B	Low
Use a number line to represent multiplication and division. (1.NB.V.26)	B	Low
Use a number line to represent addition and subtraction. (1.NB.W.27)	B	Low
Use a number line to represent multiplication and division. (1.NB.X.28)	B	Low
Use a number line to represent addition and subtraction. (1.NB.Y.29)	B	Low
Use a number line to represent multiplication and division. (1.NB.Z.30)	B	Low

MATHEMATICS BLUEPRINT OVERVIEW LEVEL E

STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
Identify and describe the attributes of two-dimensional shapes having specified attributes, such as a given number of vertices or equal sides. Identify triangles, quadrilaterals, pentagons, hexagons, and octagons, as well as larger shapes composed of quadrilaterals and triangles. (1.G.A.1)	B	Medium
Classify two-dimensional shapes into different categories (e.g., rhombuses, rectangles, and others) based on attributes. Recognize rhombuses, rectangles, and squares as special cases of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of the other categories. (1.G.A.2)	B	Medium
Partition a shape into two equal parts. Recognize that each part has the same number of objects as the whole. (1.G.A.3)	B	Low
Partition a shape into four equal parts. Recognize that each part has one-fourth of the area of the shape. (1.G.A.4)	B	Low

STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
Use a number line to represent addition and subtraction. (1.NB.A.1)	B	Medium
Use a number line to represent multiplication and division. (1.NB.B.4)	B	Low
Use a number line to represent addition and subtraction. (1.NB.C.6)	B	Medium
Use a number line to represent multiplication and division. (1.NB.D.8)	B	Low
Use a number line to represent addition and subtraction. (1.NB.E.9)	B	Low
Use a number line to represent multiplication and division. (1.NB.F.10)	B	Low
Use a number line to represent addition and subtraction. (1.NB.G.11)	B	Low
Use a number line to represent multiplication and division. (1.NB.H.12)	B	Low
Use a number line to represent addition and subtraction. (1.NB.I.13)	B	Low
Use a number line to represent multiplication and division. (1.NB.J.14)	B	Low
Use a number line to represent addition and subtraction. (1.NB.K.15)	B	Low
Use a number line to represent multiplication and division. (1.NB.L.16)	B	Low
Use a number line to represent addition and subtraction. (1.NB.M.17)	B	Low
Use a number line to represent multiplication and division. (1.NB.N.18)	B	Low
Use a number line to represent addition and subtraction. (1.NB.O.19)	B	Low
Use a number line to represent multiplication and division. (1.NB.P.20)	B	Low
Use a number line to represent addition and subtraction. (1.NB.Q.21)	B	Low
Use a number line to represent multiplication and division. (1.NB.R.22)	B	Low
Use a number line to represent addition and subtraction. (1.NB.S.23)	B	Low
Use a number line to represent multiplication and division. (1.NB.T.24)	B	Low
Use a number line to represent addition and subtraction. (1.NB.U.25)	B	Low
Use a number line to represent multiplication and division. (1.NB.V.26)	B	Low
Use a number line to represent addition and subtraction. (1.NB.W.27)	B	Low
Use a number line to represent multiplication and division. (1.NB.X.28)	B	Low
Use a number line to represent addition and subtraction. (1.NB.Y.29)	B	Low
Use a number line to represent multiplication and division. (1.NB.Z.30)	B	Low

Comparing the Matrix to the TABE Assessment Blueprints

Domain	NRS Level 1		NRS Level 2			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers

NUMBER AND OPERATIONS IN BASE TEN (28%)	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
	2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: (2.NBT.1.a, 2.NBT.1.b)	B	Low
	3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.	B	Medium
	2.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.	B	Medium
	3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	B	Low
	2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	B	Low
	3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10 - 90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations.	B	Medium
	2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	B	Medium
	2.NBT.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	B	Medium
	2.NBT.7	Add and subtract within 1000, using concrete models 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	B	Medium

Comparing the Matrix to the TABE Assessment Blueprints

2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations																																												
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100																																												
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For example, describe a context in which a total number of objects can be expressed as 5×7.</td> <td>B</td> <td>Medium</td> </tr> <tr> <td>3.OA.2</td> <td>Interpret whole-number quotients of whole numbers, e.g., interpret $56/8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56/8$.</td> <td>B</td> <td>Low</td> </tr> <tr> <td>3.OA.3</td> <td>Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</td> <td>B</td> <td>Low</td> </tr> <tr> <td>3.OA.4</td> <td>Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = [box]/3$, $6 \times 6 = ?$.</td> <td>B</td> <td>Low</td> </tr> <tr> <td>3.OA.5</td> <td>Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</td> <td>B</td> <td>Low</td> </tr> <tr> <td>3.OA.6</td> <td>Understand division as an unknown-factor problem. For example, find $32/8$ by finding the number that makes 32 when multiplied by 8.</td> <td>B</td> <td>Medium</td> </tr> <tr> <td>3.OA.7</td> <td>Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40/5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</td> <td>B</td> <td>Low</td> </tr> <tr> <td>3.OA.8</td> <td>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</td> <td>B</td> <td>Medium</td> </tr> <tr> <td>3.OA.9</td> <td>Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</td> <td>B</td> <td>Low</td> </tr> </tbody> </table>							STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL	2.OA.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	B	Medium	3.OA.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .	B	Medium	3.OA.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56/8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56/8$.	B	Low	3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	B	Low	3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = [box]/3$, $6 \times 6 = ?$.	B	Low	3.OA.5	Apply properties of operations as strategies to multiply and divide. 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OPERATIONS AND ALGEBRAIC THINKING (22%)



Comparing the Matrix to the TABE Assessment Blueprints

3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication

MEASUREMENT AND DATA (28%)	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
	3.MD.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	B	Medium
	2.MD.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	B	Low
	3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	B	Medium
	2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.	B	Low
	3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step how many more and how many less problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	B	Low
	2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	B	Low
	3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units - whole numbers, halves, or quarters.	B	Low
	3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement. (3.MD.5.b)	B	Low
	2.MD.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	B	Low
	3.MD.7	Relate area to the operations of multiplication and addition. (3.MD.7.a, 3.MD.7.b, 3.MD.7.c, 3.MD.7.d)	B	High
	3.MD.8	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	B	Medium
2.MD.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.	B	Low	



Comparing the Matrix to the TABE Assessment Blueprints

4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas

GEOMETRY (10%)	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
	2.G.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	B	Medium
	3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	B	Medium
	3.G.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.	B	Low
	2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	B	Low

Comparing the Matrix to the TABE Assessment Blueprints

5. Number and Operations: Fractions		Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator

NUMBER AND OPERATIONS —FRACTIONS (12%)	STANDARD	STANDARD DESCRIPTION	AE-CCR LEVEL	TABE 11/12 EMPHASIS LEVEL
	3.NF.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.	B	Medium
	3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. (3.NF.2.a, 3.NF.2.b)	B	Medium
	3.NF.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. (3.NF.3.a, 3.NF.3.b, 3.NF.3.c, 3.NF.3.d)	B	High



THE VARIOUS MATRIX OVERLAYS IN DEVELOPMENT



Adult Basic Education (Mathematics) Curriculum Matrix

Domain	NRS Level 1		NRS Level 2			NRS Level 3			NRS Level 4		
1. Number and Operations: Base Ten	Place Value of 2 Digit Numbers	Add and Subtract 2 Digit Numbers	Place Value of 3 Digit Numbers	Add and Subtract 3 Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1 to 2-Digit Numbers	Use Place Value to Understand Decimals	
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths	
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 100	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100	
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Write and Interpret Numerical Expressions	Interpret Expressions without Evaluating Them	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume, Mass, and Money Including Fractions	Solve Problems in Length, Time, Volume, Mass, and Money Including Decimals	Solve Problems Involving Information Presented in Line Plots	Recognize Angles		
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 3/8) in a Line Plot	Understand Concepts of Angle Measurement	
4. Geometry	Analyze, Compare, and Classify 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Classify Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Show and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane	Solve Problems Involving Scale Drawings of Geometric Figures
							Show and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate	Solve Problems Involving Area, Area, SA and Volume
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sums of Fractions with the Same Denominator	Decompose Fractions as Multiples of Unit Fractions	
							Use Models to Illustrate Equivalent Fractions	Compare Fractions Using Benchmark Fractions Such as 1/2	Add and Subtract Mixed Numbers Using Equivalent Fractions	Multiply Fractions by a Whole Number	
6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions	
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine if an Equation or Inequality is True	Express One Quantity as the Dependent Variable of the Another Quantity	Add, Subtract, Factor, and Expand Linear Expressions
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One Variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables, and Equations to Show Variable Relationships	Construct Equations and Inequalities to Solve Problems
							Identify Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions	Apply the Properties of Order and Inequality Using a Number Line
8. Ratios and Proportional Relationships							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	Understand and Evaluate Absolute Value of Rational Numbers	Explain Statements of Order and Inequality Using a Number Line
								Describe a Relationship Between Two Quantities Using a Ratio		Explain the Unit Rate a/b Associated with the Ratio $a:b$, with $b \neq 0$	Solve Problems Involving Rational Numbers on a Number Line
9. Statistics and Probability								Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line, Dot Plots, Histograms, Box Plots
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10. Functions								Discuss Statistical Questions Involving Variability in Data	Discuss Statistical Questions Involving Center, Spread and Overall Shape	Discuss the Measure of Center and Variation for a Numerical Data Set	Display Numerical Data in Plots on a Number Line, Dot Plots, Histograms, Box Plots
								Summarize and Describe Numerical Data Sets	Use Interval, Range and MAD to Draw Comparative Inferences	Use Random Sampling to Draw Inferences About a Population	Use the Equation of a Linear Model to Solve Problems

Learning Trajectory Overlays

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers by 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Interpret Expressions without Evaluating Them	Generate and Analyze Numeric and Geometric Patterns	Identify Inexplicit Features of a Pattern from a Rule
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
5. Number and Operations: Fractions			Represent Fractions with Denominators 2, 3, 4, 6, or 8 on a Number Line	Recognize Equivalent Fractions on a Number Line	Use Visual Models to Represent Equivalent Fractions	Compare Fractions with the Same Numerator or Denominator	Generate Equivalent Fractions	Compare Fractions Using Common Numerators or Denominators	Decompose Fractions as Sum of Fractions with the same Denominator	Decompose Fractions as Multiples of Unit Fractions
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6. Expressions and Equations							Multiply and Divide Fractions	Solve Problems Involving Multiplication and Division of Fractions	Convert Fractions with Denominators 10 or 100 to Decimals	Solve Problems Involving Addition and Subtraction of Fractions
							Write and Evaluate Algebraic Expressions with Exponents	Identify and Generate Equivalent Algebraic Expressions	Use Substitution to Determine If an Equation or Inequality is True	Express One Quantity as the Dependent Variable of the Another Quantity
7. The Number System							Perform the Order of Operations on Algebraic Expressions	Reason and Solve One-variable Equations and Inequalities	Use Variables to Represent Two Related Quantities in a Problem	Use Graphs, Tables and Equations to Show Variable Relationships
							Fluently Divide Multi-Digit Numbers	Fluently Add, Subtract, Multiply and Divide Multi-Digit Decimals	Find the Greatest Common Factor of Two Numbers ≤ 100	Apply Distributive Property to Generate Equivalent Expressions
							Find the Least Common Multiple of Two Numbers ≤ 12	Use Models to Illustrate, Interpret and Compute Quotients of Fractions	Solve Problems Involving Division of Fractions by Fractions	

Thematic and Career Cluster Overlays

ADULT BASIC EDUCATION MATHEMATIC DOMAINS					
Domain Number	Overarching Theme: Geometry (Domain 6)				
	Domain Name	Starting with a Point	Lines	Planes	Space
1	Number and Operations: Base Ten	Whole Number Operations			
2	Operations and Algebraic Thinking			Properties of Addition and Multiplication (Area Method of Addition and Multiplication)	Relating Volumes to Multiplication and Addition to Solve Real-World Problems
3	Measurement and Data		Representing and Analyzing Data (Line Plots)	Areas, Circle Graphs and Bar Graphs	Volumes and Surface Areas
5	Number and Operations: Fractions			Parts of a Whole and Unit Fractions	
6	Expressions and Equations	Evaluating Expressions and Solutions to Linear Equations	Linear Equations and Equivalent Expressions	Squares, Square Roots and Simultaneous Linear Equations	Cubes and Cube Roots
7	The Number System		The Number Line and Number Operations		
8	Ratios and Proportional Relationships		Double Number Line Diagrams and Graphs of Proportional Relationship	Tape Diagrams	
9	Statistics and Probability		Box Plots and Measures of Central Tendency	Dot Plots (Scatter Plots) and Histograms	
10	Functions		Linear Functions		
		Business, Management and Administration	Communications and Information Systems	Engineering, Manufacturing and Technology	Food and Health Sciences
Career Cluster					

GED High Impact Indicators and Performance Level Descriptors

Domain	NRS Level 1		NRS Level 2				NRS Level 3			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic	Generalize Understanding of Place Value	Read and Write Multi-Digit Numbers in Names and Expanded Form	Multiply 4-Digit Numbers by 1- to 2-Digit Numbers	Use Place Value to Understand Decimals
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Compare Any Multi-Digit Number	Round Multi-Digit Numbers to Any Place Value	Divide 4-Digit Numbers by 1-Digit Numbers	Read, Write, and Compare Decimals to Thousandths
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations	Solve Multi-Step Problems Using Basic Operations	Interpret Multiplication as Comparison Statements	Interpret the Remainder in Problems	Multiples of 1-Digit Numbers Up to 100
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100	Check Answers Using Mental Computation and Estimation	Solve Problems Involving Multiplicative Comparisons	Find All Factor Pairs of Any 2-Digit Whole Number	Prime and Composite Numbers within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass	Solve Problems in Length, Time, Volume, Mass and Money Including Fractions	Solve Problems Involving Time, Volume, Mass and Money Including Decimals	Solve Problems Involving Information Presented in Line Plots	Recognize Angles
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Area to Model Addition and Multiplication	Apply Area and Perimeter Formulas for Rectangles	Convert Measurements within a System	Organize Unit Fraction Data (1/2, 1/4, 1/8) in a Line Plot	Understand Concepts of Angle Measurement
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line segments, and Rays	Solve Problems by Graphing Points on the Coordinate Plane	Solve Problems Involving Area, Surface Area, and Volume	Draw Polygons in a Coordinate Plane
							Draw and Identify Angles, Perpendicular and Parallel Lines	Classify 2-Dimensional Figures into Categories Based on Properties	Find Areas of Polygons by Composing or Decomposing	Find the Length of a Side with the Same First or Second Coordinate
							Represent 3-Dimensional Figures Using Nets	Use Nets to Find the Surface Area of Figures		

TABE 11 & 12 Blueprint Overlays

Domain	NRS Level 1		NRS Level 2			
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers	Place Value of 3-Digit Numbers	Add and Subtract 3-Digit Numbers	Round Whole Numbers to the Nearest Tens or Hundreds	Use Properties of Operations to Perform Multi-Digit Arithmetic
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers	Compare 3-Digit Numbers	Model Addition and Subtraction of 3-Digit Numbers	Multiply 1-Digit Numbers By 2-Digit Multiples of 10	Mentally Add and Subtract 10 or 100 to 3-Digit Numbers
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign	Solve Addition and Subtraction Problems within 100	Solve Multiplication and Division Problems within 100	Multiplication Facts within 100	Solve 2-Step Problems or Equations
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations	Commutative and Associative Property of Multiplication	Solve Multiplication and Division Equations	Distributive Property of Multiplication	Model Multiplication and Division within 100
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Data	Indirectly Measure Lengths through Iteration	Analyze and Generate Picture Graphs and Bar Graphs	Analyze and Generate Line Plots	Measure and Estimate Lengths in Standard Units	Solve Problems Involving Time, Volume and Mass
			Represent Whole Number Lengths on a Number Line	Measuring and Estimating Areas of Plane Figures	Solve Problems Involving Perimeter of Polygons	Use Areas to Model Addition and Multiplication
4. Geometry	Analyze, Compare, and Compose 3-Dimensional Shapes	2- and 3-Dimensional Composite Shapes	Analyze, Draw and Compare Shapes Having Specified Attributes	Identify Common Polygons and 3-Dimensional Figures	Categorize Shapes with Common Attributes	Partition Shapes into Parts with Equal Areas

VALUE TO PROGRAMS AND ADMINISTRATORS



- Standards-Based Instruction Initiatives
- Program Evaluation and School Improvement
- Teacher Observation and/or Evaluation
- Instructional Resource Alignment, Development and/or Evaluation
- Curriculum Planning and Pacing
- Professional Development
- Student Recruitment and Retention
- Teacher Empowerment and Retention
- Career Pathways Planning and Counseling
- Cross-Curricular Collaboration





THE INTERACTIVE ONLINE CURRICULUM MATRIX




Coming Soon!


Domain	NRS Level 1	NRS Level 2	NRS Level 3	NRS Level 4
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers Add and Subtract 2-Digit Numbers Compare 2-Digit Numbers	Place Value of 3-Digit Numbers Add and Subtract 3-Digit Numbers Compare 3-Digit Numbers	Place Value of 4-Digit Numbers Add and Subtract 4-Digit Numbers Multiply 1-Digit Numbers by 2 Multiply 2-Digit Numbers by 10 Mentally Add and Subtract 10 or 100 to 3-Digit Numbers	Place Value of 5-Digit Numbers Add and Subtract 5-Digit Numbers Multiply 2-Digit Numbers by 2 Multiply 3-Digit Numbers by 10 Mentally Add and Subtract 10 or 100 to 3-Digit Numbers
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20 Commutative and Associative Property of Addition	Solve Addition and Subtraction Problems within 100 Commutative and Associative Property of Addition Properties of Multiplication	Solve Multiplication and Division Problems within 100 Distributive Property of Multiplication Division with 100	Solve Multi-Step Problems Using Basic Operations Check Answers Using Mental Computation and Estimation Write and Interpret Numerical Expressions
3. Measurement and Data	Organize, Represent, and Interpret 3 Categories of Objects Measure Lengths Directly through Iteration	Generate Picture Graphs Measure Lengths Indirectly using a Number Line Measuring and Estimating Areas of Plane Figures	Analyze and Generate Line Plots Measure Lengths Indirectly using Standard Units Solve Problems Involving Time, Volume, Mass, and Money Including Fractions Apply Area and Perimeter Formulas for Rectangles Measure and Sketch Angles in Whole Number Degrees	Solve Problems Involving Time, Volume, Mass, and Money Including Fractions Apply Area and Perimeter Formulas for Rectangles Measure and Sketch Angles in Whole Number Degrees Solve Problem Problems for
4. Geometry	Analyze, Compare, and Classify 2-Dimensional Shapes Classify 3-Dimensional Composite Shapes	Analyze, Compare, and Classify 2-Dimensional Shapes Having Attributes Identify 3-Dimensional Solids and Composites with Attributes Partition Shapes into Parts with Equal Areas	Draw and Identify Points, Lines, Line Segments, and Rays Draw and Identify Angles, Perpendicular and Parallel Lines Represent 3-Dimensional Figures Using Nets	Solve Problem Problems for Classify 2-Dimensional Shapes into Categories Properties Use Nets to Fit Areas of Figures
5. Number and Operations: Fractions		Represent Fractions with Denominators 2, 3, 4, 6, or 10 on a Number Line Generate Equivalent Fractions Use Visual Models to Represent Fractions with Numerator or Denominator	Generate Equivalent Fractions Compare Fractions with Common Numerators Compare Fractions with Common Denominators Compare Fractions Benchmark Fractions 1/2	Fluently Add, Subtract, Multiply, and Divide Fractions Use Models to Interpret and Compute Quotients of Fractions
6. Expressions and Equations			Write and Evaluate Algebraic Expressions with Exponents Perform the Order of Operations on Algebraic Expressions	Identify and Classify Equivalent Algebraic Expressions Reason and Solve Equations and Inequalities
7. The Number System			Fluently Divide Multi-Digit Numbers Find the Least Common Multiple of Two Numbers	Fluently Add, Subtract, Multiply, and Divide Rational Numbers Divide Fractions by Fractions
8. Ratios and Proportional Relationships				Understand Ratios as a Comparison of Two Quantities Use Ratio and Rate Reasoning to Solve Problems
9. Statistics and Probability				Understand Statistical Questions Represent Data Distributions with Plots Understand Statistical Questions
10. Functions				Understand Functions Interpret Functions in Different Representations Understand Functions

1.2 Use place value understanding and the properties of operations to add and subtract within 100.


- Add within 100, including adding a two digit number and a one-digit number, two-digit numbers, and multiples of 10.
- Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose (create) a ten.
- Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.
- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences).
- Use concrete models, 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.




Lessons




Links




Toolkits



Videos



Webinars



Workshops



ADDITIONAL CURRICULUM MATRIX RESOURCES

ABE Math Curriculum Matrix

Part 1

May 30, 2018

www.floridaipdae.org

This training event is supported with federal funds as appropriated to the Florida Department of Education, Division of Career and Adult Education for the provision of state leadership professional development activities.

<https://www.youtube.com/watch?v=hKs-obd0ufl>

floridaipdae.org

ABE Math Curriculum Matrix

Part 2

June 6, 2018

www.floridaipdae.org

This training event is supported with federal funds as appropriated to the Florida Department of Education, Division of Career and Adult Education for the provision of state leadership professional development activities.

<https://www.youtube.com/watch?v=gZ1MEKVppZY>

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ABE - Webinars

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ABE Math Curriculum Framework Map – Part 1






Presentation Date: 5/30/2018 at 3:00pm



Duration: 1 Hour


Description:


The math curriculum map, developed in partnership with the Florida Department of Education, is a user-friendly version of the ABE Mathematics Curriculum Framework. Using this map, teachers will be able to seamlessly navigate through various skills and standards aligned with the College and Career Readiness Standards. This webinar will show teachers how to use this versatile tool in planning for instruction and remediation.

Presentation Documents:

-  [Presentation \(PDF\)](#)
-  [Handout: ABE Math Curriculum Matrix \(PDF\)](#)
-  [Handout: ABE Math Curriculum Matrix Part 1 Activity Book \(PDF\)](#)
-  [Handout: ABE Math 2018 \(PDF\)](#)
-  [Handout: High Impact Indicators \(PDF\)](#)

ABE Math Curriculum Framework Map - P...  

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DEVELOPMENT OF ADULT EDUCATORS



ABE Math Curriculum Framework Map Part 1

This webinar will show teachers
how to use this versatile tool in planning
for instruction and remediation.

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**Thank you for your
participation!**

