Grade 1-3

Framework for **FORMATIVE/CLASSROOM** Instruction and Assessment

English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **MATHEMATICS.**

PA Academic Standards:

Use appropriate volume and clarity in formal speaking presentations. 1.6.3.B.
Apply place value concepts and base-ten numeration to order and compare whole numbers. 2.1.3.D.
Understand the concepts of addition and subtraction and use the inverse relationships between addition and subtraction to determine unknown quantities in equations. 2.1.3.F.
Develop fluency in the use of basic facts for the four operations. 2.2.3.A.
Add and subtract single- and double-digit numbers with regrouping and triple-digit numbers, without regrouping including problems with money. 2.2.3.B.
Use models and number facts to draw conclusions and explain reasons for conclusions. 2.4.3.A.
Develop a plan to analyze a problem, identify the information needed to solve the problem, carry out the plan, check whether an answer makes sense, and explain how the problem was solved in grade appropriate contexts. 2.5.3.A.
Use appropriate mathematical vocabulary when explaining how to solve a problem. 2.5.3.B.
Name, describe and draw/build 2- and 3-dimensional shapes. 2.9.3.A.
Identify and draw lines of symmetry. 2.9.3.B.

Speaking

Concepts	Competencies	Vocabulary	Level 1 Entering	Level 2 Beginning	Level 3 Developing	Level 4 Expanding	Level 5 Bridging	
Base Ten System: Place value to 10,000s place Multiplication and division of whole numbers and the relationship between the operations	Develop an understanding of multiplication and division of whole numbers by building on knowledge of the base ten system/operations and through the use of representations (e.g., equal-sized groups, arrays, area models, equal "jumps" on number lines, successive subtraction, partitioning, and sharing) in order to describe relationships, make estimations, and solve problems.	Associative property Commutative property Equation: Equivalent forms Identity property Inequality Inverse operations Models Patterns Reasonableness Venn diagram	Name the operation to be used to solve a simple math story problem using a chart.	Restate the steps of an operation after a teacher explanation within a small group.	Describe the steps used in an operation to solve a math problem to a partner.	Discuss the operation necessary to solve a problem within a small group.	Justify the operation used to solve a math story problem using a graphic organizer.	**Level 6- Reaching**
			Content Stems					
			Problem solving Name the operation using math language (e.g. story problem) Communicate the math expression	Problem solving Restate the operation using math language (e.g. story problem) Communicate the math expression	Problem solving Describe the operations in a story problem using math language (e.g. story problem) Communicate the math expression	Problem solving Describe the operations in a story problem using math language (e.g. story problem) Discussion of the operations Communicate the math expression	Problem solving Analyze and justifying the operations in a story problem using math language (e.g. story problem) Explain the operations Communicate the math expression	

			Instructional Support					
			Visual aids Model	Visual aids Modeling Think/write Pair share Small group work	Visual aids Demonstrate	Storyboards Pictographs Graphic organizers Small group work	Graphic organizers Flow chart Small group work	
			Language Use					
			Write math terms and operations based on visual representations using varying modalities	Restate the steps in a process Journal the steps in the process (e.g., open ended response)	Describe the steps in the operation used to solve the story problem Create new story problems in the journal (e.g., open ended response)	Discuss the steps in the operation used to solve the story problem. Create new problems using the process	Analyze the process to solve the problem Present the findings	
Writing								
Concepts	**Competencies**	**Vocabulary**	**Level 1 Entering**	**Level 2 Beginning**	**Level 3 Developing**	**Level 4 Expanding**	**Level 5 Bridging**	
Classification of figures: two- and three-dimensional figures Congruence and symmetry: composition, decomposition, transformation	Describe, analyze, compare, and classify two- and three-dimensional shapes/figures using their attributes. Use congruence and symmetry to decompose, compose, and transform two-dimensional figures.	Correspondence Equation Equivalent forms Models One-to-one Patterns Reasonableness Simulation Symmetry Venn diagram	Draw and label two- and three-dimensional objects using a picture dictionary.	Write a list of characteristics of two- and three-dimensional objects working with a partner.	Write a description of two- and three-dimensional objects using realia working with a partner.	List the steps of the procedure for constructing two- and three-dimensional objects within a small group.	Write an entry in a math journal analyzing how common real life objects have the attributes of two- and three-dimensional shapes using a guided model.	**Level 6- Reaching**

			Content Stems				
			Geometric shapes	Geometric shapes	Geometric shapes	Geometric shapes	Geometric shapes
			Instructional Support				
			Visual aids Math manipulatives to draw objects	Visual aids Graphic organizers Think/write Pair-share	Visual aids Graphic organizers Think/write Pair-share	Small group work Flow charts Graphic organizers Building materials	Flow charts Graphic organizers
			Language Use				
			Draw Label Identify	Describe characteristics Label Identify	Discern characteristics and describe differences Label	Steps in the process Describe the building procedures Draw and write about the process in a journal (e.g., open ended response)	Write in the journal using technical language Describe in a logical sequential manner the characteristics of real life objects versus 2-3 dimensional shapes