Grades 3-5
Mathematics
Framework for FORMATIVE/CLASSROOM Instruction and Assessment
Productive Domains of **Speaking and Writing**

Pennsylvania English Language Proficiency Standard 3
English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Mathematics.

Pennsylvania Core Standards

Speaking and Listening
CC.1.5.3.A Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.
CC.1.5.4.A Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.
CC.1.5.5.A Engage effectively in a range of collaborative discussions on grade level topics and texts, building on others' ideas and expressing their own clearly.

Mathematics
CC.2.1.3.C.1 Explore and develop an understanding of fractions as numbers.
M03.A-F.1.1.1, M03.A-F.1.1.2, M03.A-F.1.1.3, M03.A-F.1.1.4, M03.A-F.1.1.5

CC.2.1.4.C.1 Extend the understanding of fractions to show equivalence and ordering.
M04.A-F.1.1.1, M04.A-F.1.1.2

CC.2.1.5.C.1 Use the understanding of equivalency to add and subtract fractions.
M05.A-F.1.1.1

The PA ELL Overlays for English Language Arts and Mathematics assist educators in developing instructional units, lessons, or activities that are meaningful and comprehensible for English language learners. They illustrate the dynamic process of adapting instruction and assessment based on the English language proficiency of students. The PA ELL Overlays for English Language Arts and Mathematics are models that exemplify adaptations for a select instructional context and provide resources to extend this process to other instructional units.

Speaking Model Performance Indicator (MPI)							
Classroom Context: Understand and explain fractions and fraction problems.							
Cognitive Function: Students at all levels of English proficiency will UNDERSTAND and EXPLAIN fractions and fraction problems.							
Concepts	**Competencies**	**Vocabulary and Topic Related Language**	**Proficiency Level 1 Entering**	**Proficiency Level 2 Emerging**	**Proficiency Level 3 Developing**	**Proficiency Level 4 Expanding**	**Proficiency Level 5 Bridging**
Fractions	Develop an understanding of fractions as numbers. Demonstrate an understanding of fraction equivalence. Explain operations as they pertain to fractions.	Denominator Equivalent fractions Estimate Fraction Numerator Pattern In contrast In comparison As a result In conclusion On the other hand	Exchange key words involving fractions and solving fraction problems from models and visual support in first language with a partner following explicit, repeated examples, as modeled and monitored by the teacher.	Recite or rephrase sentences about fractions or solving fraction problems using visual support or models with a partner.	Sequence sentences to show how to solve fraction problems using visual support and confirm with a partner.	Describe different approaches to solve problems using visual support with a partner.	Explain to peers, in detail, strategies for solving problems involving operations and fractions.

Writing Model Performance Indicator (MPI)							
Classroom Context: Understand and explain fractions and fraction problems.							
Cognitive Function: Students at all levels of English proficiency will UNDERSTAND and EXPLAIN fractions and fraction problems.							
Concepts	**Competencies**	**Vocabulary and Topic Related Language**	**Proficiency Level 1 Entering**	**Proficiency Level 2 Emerging**	**Proficiency Level 3 Developing**	**Proficiency Level 4 Expanding**	**Proficiency Level 5 Bridging**
Fractions	Develop an understanding of fractions as numbers. Demonstrate an understanding of fraction equivalence. Explain operations as they pertain to fractions.	Denominator Equivalent fractions Estimate Fraction Numerator Pattern --- In contrast In comparison As a result In conclusion On the other hand	Label fractional parts of diagrams or pictures from word banks to facilitate solving math problems following explicit, repeated examples, as modeled and monitored by the teacher.	Describe what the fractional parts mean from diagrams or realia in phrases or short sentences to facilitate solving math problems.	Give step-by-step process of how to solve problems involving fractions from diagrams using a series of related sentence frames.	Describe strategies or tips for solving problems involving fractions from diagrams in paragraph form.	Create original problems involving fractions embedded in scenarios or situations with a partner.

Building Productive Model Performance Indicators (MPI) to differentiate and scaffold instruction per English language proficiency level by adjusting the ***language function*** and ***support***.							
Classroom Context:							
Cognitive Function: Students at all levels of English proficiency will							
Concepts	**Competencies**	**Vocabulary and Topic Related Language**	**Proficiency Level 1 Entering**	**Proficiency Level 2 Emerging**	**Proficiency Level 3 Developing**	**Proficiency Level 4 Expanding**	**Proficiency Level 5 Bridging**
			Language Function (differentiated measurable expectations of student language use increasing in complexity and amount from English language proficiency level 1 to level 5)				
			Produce icons, symbols, words, phrases to convey messages Draw in response to a prompt Label	Make lists Produce phrases, short sentences, notes Give information requested from oral or written directions	Compare/contrast information Describe Sequence steps	Develop Predict Evaluate	Draw conclusions Summarize Infer
			Content Stem (selected focus of grade-level curriculum for all students remains constant across all English language proficiency levels)				
			Instructional Support (scaffolds to accompany explicit instruction with multiple opportunities for student response and feedback decreasing in degree from English language proficiency level 1 to level 5. "I do, We do, You do")				
			Manipulative materials Visual support	Manipulative materials Visual support	Manipulative materials Visual support	Guided model Visual support Realia	Guided model Partner Graphic

			Realia Sentence frames Graphic organizers Partner Flexible grouping First language support Modeling Re-teaching and/or pre-teaching	Realia Sentence frames Graphic organizers Word bank Rubrics Checklists Partner Flexible grouping First language support Modeling Re-teaching and/or pre-teaching	Realia Sentence frames Graphic organizers Word bank Marking text Rubrics Checklists Partner Flexible grouping First language support Modeling Re-teaching and/or pre-teaching Activate/build prior knowledge	Sentence frames Graphic organizers Marking text Word bank Rubrics Checklists Partner/group work Modeling Frontload vocabulary Activate/build prior knowledge	organizers Word bank Marking text Rubrics Checklists Partner/roup work Modeling Frontload vocabulary Activate/build prior knowledge