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.1.5.1.A Participate in collaborative conversations with peers and adults in small and larger groups.
CC.1.5.2.A Participate in collaborative conversations with peers and adults in small and larger groups.

Mathematics
CC.2.2.1.A.1 Represent and solve problems involving addition and subtraction within 20.
CC.2.2.2.A.1 Represent and solve problems involving addition and subtraction within 100.

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:
Explain problem-solving procedures.

#### Cognitive Function:
Students at all levels of English proficiency will EXPLAIN problem-solving procedures.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Competencies</th>
<th>Vocabulary and Topic Related Language</th>
<th>Proficiency Level 1 Entering</th>
<th>Proficiency Level 2 Emerging</th>
<th>Proficiency Level 3 Developing</th>
<th>Proficiency Level 4 Expanding</th>
<th>Proficiency Level 5 Bridging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addition and subtraction</td>
<td>Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</td>
<td>Addend</td>
<td>Recite words about the operation to be used to solve a math story problem using a chart with a partner following explicit, repeated examples, as modeled and monitored by the teacher.</td>
<td>Restate the steps of an operation to solve a math story problem using graphic support within a small group.</td>
<td>Describe the steps used in an operation to solve a math story problem using graphic support to a partner.</td>
<td>Compare possible operations necessary to solve a math story problem using graphic support within a small group.</td>
<td>Explain the operation used to solve a math story problem using a graphic organizer.</td>
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<tr>
<td>Example Concepts</td>
<td>Example Competencies</td>
<td>Example Vocabulary</td>
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<tr>
<td>Addition and subtraction</td>
<td>Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. Apply properties of operations as strategies to add and subtract.</td>
<td>Addend</td>
<td>Supply words for addition and subtraction problems using manipulative materials and a sentence frame with a partner following explicit, repeated examples, as modeled and monitored by the teacher.</td>
<td>Compose phrases or simple sentences about a visually supported addition/subtraction problem using a word bank or a sentence frame.</td>
<td>Write the steps to solve an addition or subtraction problem using a word bank or sentence frames within a small group.</td>
<td>Create and solve an addition or subtraction problem from a guided model with a partner.</td>
<td>Create and solve an addition or subtraction problem from a guided model.</td>
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**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

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**Language Function** *(differentiated measurable expectations of student language use increasing in complexity and amount from English language proficiency level 1 to level 5)*

- Identify
- Copy or adapt single words, set phrases
- Label
- Answer either/or questions
- Identify
- Collect and display
- Sequence steps
- Compare
- Interpret
- Develop
- Predict
- Summarize
- Revise
- Draw conclusions
- Create

**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
- Realia
- Modeling
- Manipulative materials
- Visual support
- Realia
- Modeling
- Manipulative materials
- Visual support
- Realia
- Modeling
- Guided model
- Manipulative materials
- Modeling
- Graphic organizers
- Guided model
- Modeling
- Graphic organizers
- Word bank
| Sentence frames | Graphic organizers | Partner | Flexible grouping | First language support | Re-teaching and/or pre-teaching | Sentence frames | Graphic organizers | Word bank | Rubrics | Checklists | Partner | Flexible grouping | First language support | Re-teaching and/or pre-teaching | Sentence frames | Graphic organizers | Word bank | Rubrics | Checklists | Partner | Flexible grouping | First language support | Re-teaching and/or pre-teaching | Visual support | Word bank | Sentence frame | Rubrics | Checklists | Partner | Flexible grouping | Re-teaching and/or pre-teaching | Sentence frames | Graphic organizers | Word bank | Rubrics | Checklists | Partner | Flexible grouping | First language support | Re-teaching and/or pre-teaching |