



ELD STANDARDS FRAMEWORK FOR DEVELOPING THE LANGUAGE OF MATH GRADES 4-5

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SECTION 1: ELD STANDARDS FRAMEWORK FOR DEVELOPING THE LANGUAGE OF MATH GRADES 4-5 - OVERVIEW

Section 1: Purpose

The **purpose of the English Language Development (ELD) Standards Framework and Instructional Guidance documents** is to provide clarity in the implementation and integration of the Nevada ELD Standards with Nevada Academic Content Standards and instruction. In addition, they support the application of the Nevada Educator Performance Framework (NEPF) Standards of best practices for English learners and other diverse student populations.

These Nevada ELD Standards documents specify the connection between the WIDA ELD Standards and the content disciplinary practices of mathematics. The practices identified in this document were created within the Common Core State Standards (CCSS) for Mathematics. The ELD Standards Instructional Guidance documents conceptualize the Nevada ELD Standards as intertwined with learning the Nevada Academic Content Standards and College and Career Readiness Standards.

Section 1: [Overview Document](#)

Section 2: [Framework for Developing the Language of Math](#)

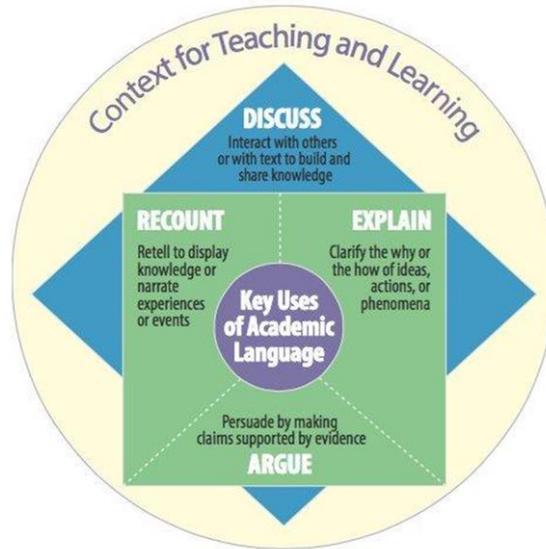
- A. Student Moves: Language Use Expectations
- B. Teacher Moves: Supports for Processing, Producing, and Collaborating in the Language of the Content
- C. Teacher Moves: Supports for Collaborating in the Academic Language

Section 3: [Instructional Guidance: Mathematical Practices](#)

- A. **Summary: Content Disciplinary Practices and Example Tasks**
- B. **Math Disciplinary Practices**
 - Practice 1: Make sense of problems and persevere in solving them
 - Practice 2: Reason abstractly and quantitatively
 - Practice 3: Construct viable arguments and critique the reasoning of others
 - Practice 4: Model with mathematics
 - Practice 5: Use appropriate tools strategically
 - Practice 6: Attend to precision
 - Practice 7: Look for and make use of structure
 - Practice 8: Look for and express regularity in repeated reasoning

Section 1: Key Uses of Academic Language

These purposes, referred to as **Key Uses**, were identified based on reviews of literature and a language analysis of college and career readiness standards:



KEY USES	KEY USES DESCRIPTION
RECOUNT	To display knowledge or narrate experiences or events. Example tasks for the Key Use of Recount include telling or summarizing stories, producing information reports, and sharing past experiences.
EXPLAIN	To clarify the “why” or the “how” of ideas, actions, or phenomena. Example tasks for the Key Use of Explain include describing life cycles, sharing why or how things work, stating causes and effects, and sharing results of experiments.
ARGUE	To persuade by making claims supported by evidence. Example tasks for the Key Use of Argue include stating preferences or opinions and constructing arguments with evidence.
DISCUSS	To interact with others to build meaning and share knowledge. Example tasks for the Key Use of Discuss include participating in small or large group activities and projects.

SECTION 2: ELD STANDARDS FRAMEWORK FOR DEVELOPING THE LANGUAGE OF MATH GRADES 4-5

Section 2A: Student Moves: Language Use Expectations

TASK SAMPLES from the *WIDA Can Do Descriptors, Key Uses Edition* show us that toward the end of a given level of English language proficiency, and with instructional support, **English learners can process or produce...**

Language Domains	Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p>Receptive Listening & Reading</p>	<p>With appropriate visual, graphic or interactive support students can...</p> <ul style="list-style-type: none"> • Recognize the meaning of some words learned through conversation and show increasing awareness of differences between informal and language appropriate to the classroom. • Determine the meaning of some general academic and content-specific words and phrases. • Label key vocabulary or steps within a math operation. • Mark position/location of numbers or illustrated objects from oral commands. • Identify comparative quantities of numbers or illustrated objects from oral commands or questions. • Identify large whole numbers from pictures or models and phrases or short sentences. • Match words or phrases related to estimation to estimate word banks of varying quantities. 	<p>With appropriate visual, graphic or interactive support, as necessary, student can...</p> <ul style="list-style-type: none"> • Determine the meaning of general academic and content-specific words and phrases. • Match general and some specific technical language of associated content to oral examples. • Discriminate between different meanings of language general and specific technical language associated with content in oral discourse. • Sort examples of large whole numbers from pictures or models and text (e.g., those more than or less than one thousand). 	<p>Determine the meaning of general academic and content-specific words and phrases.</p> <ul style="list-style-type: none"> • Distinguish between language of estimation sentences (e.g., “I have almost one dollar.”) and language of precision (“I have one dollar.”) in illustrated sentences. • Apply technical language related to content grade-level oral scenarios (e.g., concepts of volume and related volume to multiplication and to addition).

Section 2A: Student Moves: Language Use Expectations (continued)

TASK SAMPLES from the *WIDA Can Do Descriptors, Key Uses Edition* show us that toward the end of a given level of English language proficiency, and with instructional support, English learners can process or produce...

Language Domains	Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p>Productive Speaking & Writing</p>	<p>With appropriate visual, graphic or interactive support students can...</p> <ul style="list-style-type: none"> • State words in figures or formulas from illustrated examples. • Use general vocabulary in math sentences from illustrated examples. • Participate in short written exchanges. • Listen actively to others and respond to simple questions and some wh-questions. • Construct a simple claim and provide a reason to support the claim in solving a problem. • Reproduce names of three-dimensional shapes from labeled models. • Make lists of real-world examples of three-dimensional shapes from labeled models. 	<p>With visual, graphic or interactive support, as necessary, student can...</p> <ul style="list-style-type: none"> • Use transitional words and phrases to connect ideas. • Describe how reasons support the specific approach or strategy in a math scenario. • Participate in written exchanges and respond to others' comments. • Ask and answer relevant questions and add relevant information with reasoning. • Construct a claim and provide a few reasons to support the claim in solving a problem. • Relate multiple uses of specific vocabulary in illustrated math sentences. • Paraphrase illustrated math sentences using specific or technical vocabulary. • Compare/contrast attributes of three-dimensional shapes from labeled models or charts (e.g., "A__ is like a__ because __.>"). 	<ul style="list-style-type: none"> • Use a variety of lining words and phrases to connect ideas and reasoning. • Use a wide variety of general academic and content-specific words and phrases. • Explain different ways of problem-solving grade-level examples using specific or technical vocabulary. • Participate in extended conversations and discussions and build on the ideas of others. • Pose and respond to relevant questions and add relevant comments with reasoning. • Construct a claim and provide logically ordered reasons to support the claim in solving a problem. • Write algebraic expressions and use academic language related to content grade-level (e.g. interpret numerical expressions). • Incorporate descriptions of three-dimensional shapes into real-world situations.

Section 2B: Teacher Moves: Supports for Processing and Producing Language

What general supports can teachers provide to students at different language proficiency levels to process or produce academic language in all language domains? (See the [Go to Strategies Matrix](#), page 19.)

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Build background in key language and concepts. • Provide explicit instruction and practice in key social and instructional vocabulary. • Model orally the academic language and specific vocabulary. • Provide explicit instruction and practice for students to construct the language using sentence and discourse starters and visual aids from the text. • Use physical gestures to accompany oral directives. • Label visuals and objects with target vocabulary. • Introduce cognates to aid comprehension. • Give two step contextualized directions. • Restate/rephrase and use Patterned Oral Language routines. • Provide a list of important concepts on a graphic organizer. • Provide a content vocabulary Word Bank with non-linguistic representations. 	<ul style="list-style-type: none"> • Build background in key language and concepts. • Model orally the academic language and specific vocabulary. • Provide explicit instruction and practice for students to construct the language using sentence and discourse starters and visual aids from the text. • Provide a system for students to record and process key academic and content-specific vocabulary. • Check comprehension of all students frequently. Use wait time. • Require full sentence responses by asking open ended questions. • Require the use of academic language. • Provide a list of important concepts on a graphic organizer. • Provide a content vocabulary Word Bank with non-linguistic representations. 	<ul style="list-style-type: none"> • Build background in key language and concepts. • Use complex sentence and discourse starters. • Model orally the academic language and specific vocabulary. • Confirm students' prior knowledge of content topics. • Extend content vocabulary with multiple examples and non-examples.

Section 2C: Teacher Moves: Supports for Collaborating in the Academic Language

How can teachers provide ongoing opportunities for students to collaborate using academic language?

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p>Prior to reading, writing, and discussion, Teacher prepares collaborative discourse structures for students to...</p> <ul style="list-style-type: none"> • Engage in pair work (in L1 if possible) to prepare questions for discussion using graphic, interactive, and/or language supports. • Participate in pair/triad/small group discussions using graphic, interactive, and/or language supports (including L1 as appropriate). • Use Clock Buddies. • Use Numbered Heads Together. • Use Think-Pair-Share Squared. • Use key sentence frames for pair interactions. • Participate with Strategic Partners at a higher English proficiency level and/or with same primary language peer(s). • Use Cloze sentences with a Word Bank. • Use dialogue structures (e.g.): My turn/your turn; Partner A/Partner B; Collaborative groups. 	<p>Prior to reading, writing, and discussion, Teacher prepares collaborative discourse structures for students to...</p> <ul style="list-style-type: none"> • Engage pair work to prepare questions for discussion using graphic, interactive, and/or language supports as needed. • Contribute to pair/triad/small group discussions by supporting with examples, asking clarifying questions, and using graphic, interactive, and/or language supports as needed. • Engage with whole/large group discussions by connecting ideas with supporting details, generating original questions, and using graphic, interactive, and/or language supports as needed. • Use Think-Pair-Share. • Repeat and expand their responses and other students' responses in a Collaborative Dialogue. • Use dialogue structures (e.g.): My turn/your turn; Partner A/Partner B; Collaborative groups. 	<p>Prior to reading, writing, and discussion, Teacher prepares collaborative discourse structures for students to...</p> <ul style="list-style-type: none"> • Engage in structured pair work to process. • Inform and formulate thinking, then prepare questions for discussion. • Contribute to pair/triad/small group discussions to share individual ideas and compare with other ideas in the group, using graphic, interactive, and/or language supports as needed. • Engage with whole/large group discussions by generating original questions and/or building on the ideas of others using graphic, interactive, and/or language supports as needed. • Use dialogue structures (e.g.): My turn/your turn; Partner A/Partner B; Collaborative groups.

SECTION 3: INSTRUCTIONAL GUIDANCE
for English Language Development in the Content Area of
Mathematical Practices Grades 4-5

SECTION 3: INSTRUCTIONAL GUIDANCE: MATH PRACTICES GRADES 4-5

Section 3A: Summary: Content Disciplinary Practices and Example Tasks

Table of example tasks for each practice, with sample proficiency descriptors for each [Key Use of Academic Language](#):

Math Practices	Example Tasks
1. Make sense of problems and persevere in solving them.	Roger Rabbit
2. Reason abstractly and quantitatively.	Barnyard
3. Construct viable arguments and critique the reasoning of others.	Roger Rabbit
4. Model with mathematics.	Tiling Pool
5. Use appropriate tools strategically.	Nine People in a Room
6. Attend to precision.	Roger Rabbit
7. Look for and make use of structure.	Roger Rabbit
8. Look for and express regularity in repeated reasoning.	Roger Rabbit

Section 3B: Math Disciplinary Practices

Practice 1a: Make Sense of Problems and Persevere in Solving Them – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. Example: I used _____ to solve the problem. My first step was _____. • Students record academic vocabulary on the Mathematically Speaking Task Template with L1 (primary language) translation or non-linguistic representation. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: I solved the problem by _____. I first _____. Then I _____. Finally, I _____. (To describe their process.) I think _____ because _____. What do you know? What do you need to find out? (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: In order to solve the problem, I _____. Information that I need is _____ because _____. The best solution is _____ because _____. What would be sensible to try? Why? (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)

Section 3B: Math Disciplinary Practices (continued)

Practice 1b: Make Sense of Problems and Persevere in Solving Them – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate** their learning of language and content in at **different language proficiency levels**? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 2a: Reason Abstractly and Quantitatively – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide sentence frames or sentence starters for students to use to access group discussion. <p>Example: The numbers I can use to represent this problem are _____. The words I can use represent this problem are _____. My first step was _____. I chose _____ because _____. I did not understand _____. The problem I had was _____.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: I solved the problem by _____. I first _____. Then I _____. Finally, I _____. (to describe their process) I chose the _____ method for solving the problem because it was the most efficient. It was most efficient because _____. I struggled with _____, and I solved it by _____. How do your answers help you solve that problem?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: In order to solve the problem, I _____. I chose to solve the problem by _____. The solution was the most efficient because _____. Information that I need is _____ because _____. Another way to solve the problem is _____. The problem(s) encountered were _____. I solved them by _____.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 2b: Reason Abstractly and Quantitatively – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate their learning** of language and content in at **different language proficiency levels?** Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool! <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 3a: Construct Viable Arguments and Critique the Reasoning of Others – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. <p>Example: My answer/strategy is ____ because _____. My answer matches/does not match yours. I think you made your error here. (point) Can you please repeat that?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: My solution is different than yours. I think this is because _____. My solution is the same is yours. I think this because _____. I used the same/different strategy as you. I'd like to add _____, or it's different because _____. Can you tell me more about?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: I was thinking about what _____ said, and I was wondering if _____. I'm not sure I understood you when you said _____. Could you say more about that? My answer is similar to/different than _____ because _____. I can justify the answer by _____. What is your evidence and how can you justify it?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 3b: Construct Viable Arguments and Critique the Reasoning of Others – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate their learning** of language and content in at **different language proficiency levels?** Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p align="center">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p align="center">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies, e.g. diagram, pictures, math expression. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p align="center">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool Assessing the 8 Mathematical Practices Rubric</p> <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 4a: Model with Mathematics – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary or illustrated expression with a learning partner. • Provide sentence frames or sentence starters for students to use to access group discussion. <p>Example: I used the _____ model to solve the problem. Students record academic vocabulary on the Mathematically Speaking Task Template with L1 (primary language) translation or non-linguistic representation.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: I solved the problem by_____. I drew _____ because _____. I can prove my answer was correct using the _____ model because _____. I chose the _____ model for solving the problem because _____. I struggled with _____, and I solved it by_____. What are other ways to model this?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: In order to solve the problem, I _____. I chose to solve the problem by _____. My solution was _____ because _____. I have seen this before when _____. The problem(s) I encountered using this model were_____. I solved them by _____. What are the additional models that can be used?</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 4b: Model with Mathematics – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate their learning** of language and content in at **different language proficiency levels?** Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 5a: Use Appropriate Tools Strategically – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. Example: The best tool to use is _____. The tool that I drew was _____. The best tool is _____ because _____. Can you please repeat that? • Students record academic vocabulary on the Mathematically Speaking Task Template with L1 (primary language) translation or non-linguistic representation. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: I’m using a tool different than you because _____. I used _____ tool to solve the problem by _____. I used the same/different tool as you. My reason is _____. Can you tell me more about _____? Using a _____ shows us _____. Using a _____ can’t show us _____. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: I was thinking about what _____ said, and I was wondering if _____ would be a better tool for this problem/process. I’m not sure I understood why/how you used _____ tool. Could you say more about that? I agree / disagree with _____’s choice of _____ tool, but I chose _____ also/instead because of _____. I could have used _____ (tool) because _____. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)

Section 3B: Math Disciplinary Practices (continued)

Practice 5b: Use Appropriate Tools Strategically – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate** their learning of language and content in at **different language proficiency levels**? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 6a: Attend to Precision – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

<p style="text-align: center;">Entering/Emerging (Levels 1-2)</p>	<p style="text-align: center;">Developing/Expanding (Levels 3-4)</p>	<p style="text-align: center;">Bridging/Reaching (Levels 5-6)</p>
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide sentence frames or sentence starters for students to use to access group discussion. <p>Example: This picture shows _____ (math term). _____ (math term) means _____ (from word bank). _____ (math term) is used in this problem. I labeled it _____. I need to label it _____.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: _____ (math term) means _____. I know my answer is accurate because _____. I used the label _____ because _____.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. <p>Example: I used the mathematical term _____ to explain _____. My answer is _____ rather than _____ because _____.</p> <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 6b: Attend to Precision – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate** their learning of language and content in at **different language proficiency levels**? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 7a: Look For and Make Use of Structure – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide sentence frames or sentence starters for students to use to access group discussion. Example: My conclusion is _____. I noticed _____. These are similar/different because they _____. The pattern/rule is _____. <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: Based on the information _____ I can conclude that _____. _____ and _____ are both similar/different because they both _____, _____, and _____. The pattern/rule is _____. I know this because _____. How did you get that? <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: If _____ then _____. The trend of the data is _____ because _____. There are several major differences between the patterns/data sets. The most notable is _____ because _____. I can generalize that _____. Explain your thinking about _____. <p>(NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 7b: Look For and Make Use of Structure – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate their learning** of language and content in at **different language proficiency levels?** Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>

Section 3B: Math Disciplinary Practices (continued)

Practice 8a: Look For and Express Regularity in Repeated Reasoning – Teacher Moves

Teacher Moves: What supports can teachers provide students at different proficiency levels to use language to interpret or make meaning of the content? Examples:

<p>Entering/Emerging (Levels 1-2)</p>	<p>Developing/Expanding (Levels 3-4)</p>	<p>Bridging/Reaching (Levels 5-6)</p>
<ul style="list-style-type: none"> • Provide scaffolded tasks for students to draw a picture of their solution and to label it. • Provide simple sentence frames for students to emulate/copy basic content provided with a predetermined learning partner. • Model the language of mathematical expression examples, and then provide the task for students to label the mathematical expressions; have students state the academic vocabulary associated with the number or illustrated expression with a predetermined learning partner. • Provide sentence frames or sentence starters for students to use to access group discussion. Example: I see a pattern. (Point) The pattern is _____. My answer makes sense/does not make sense. • Record academic vocabulary on the Mathematically Speaking Task Template with L1 (primary language) translation or non-linguistic representation. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently a predetermined dialogue structures for students to state and clarify their reasoning to a partner or small group and listen to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: I was able to identify the pattern _____. My answer makes sense/does not make sense because _____. As a result, I will _____. I know my answer makes sense because _____. The repeated patterns I found are _____. (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3) 	<ul style="list-style-type: none"> • Provide learning tasks in which students can use illustrations or numbers to explain their understandings. • Model consistently predetermined dialogue structures for students to state and clarifies their reasoning to a partner or small group and listens to the ideas of others to agree or disagree with reasons to ensure the participation of all students. • Provide students with sentence starters from a leveled list of scaffolding statements. Example: My answer makes sense/doesn't make sense because _____. Consequently, I need to _____. Through my work I was able to identify _____ (repeated patterns, etc.). (NEPF – IP.1.2; 2.1; 2.2; 3.1; 3.2; 5.3)

Section 3B: Math Disciplinary Practices (continued)

Practice 8b: Look For and Express Regularity in Repeated Reasoning – Success Criteria

Success Criteria: How will students be able to **communicate or demonstrate** their learning of language and content in at **different language proficiency levels**? Examples:

Entering/Emerging (Levels 1-2)	Developing/Expanding (Levels 3-4)	Bridging/Reaching (Levels 5-6)
<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Solve problems and identify the associated academic vocabulary on Exit Slips and other formal or informal assessments. • Describe steps to solve problems using pictures, symbols, or artifacts. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain and produce a graphic representation (illustration or numbers) of their strategy for solving problems. • State some specific and technical academic vocabulary in their explanation and justification of one of the preferred student strategies. <p>(NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>	<p style="text-align: center;">Success Criteria</p> <p>Students will...</p> <ul style="list-style-type: none"> • Orally explain, justify, and defend their problem solving strategies. • Use specific and technical academic vocabulary in their explanation, justification, and defense of one of the preferred student strategies. <p>Assessment Tool <u>Assessing the 8 Mathematical Practices Rubric</u> (NEPF – IP.1.3; 2.2; 3.4; 5.3)</p>