ELSF Math Guidelines Rating Scale Tool

Focus Area I: Interdependence of Mathematical Content, Practices, and Language

For each specification in the table below:

- Rate your understanding of and implementation of each of the specifications on a scale of 1–5.
- If you are at a 3 or higher in terms of your understanding or implementation of the specification, what does this look like in your curriculum, classroom, or teaching? Share with a partner.

Guideline 1: Strategic opportunities to use and refine both language and mathematics over time		
Specification	Understanding Rating	Implementation Rating
1a. Materials (teachers) highlight, define, illustrate, and show the purpose for mathematical language within the context of the lesson (not in isolation).		
1b. Materials guide teachers (teachers) encourage students to build their own understanding of mathematics actively, using language to actively build their own understanding of mathematics, using language, through sustained activities and experiences.		
1c. Materials (teachers) provide strategies to help students make connections between current language, new language, and mathematical concepts.		
1d. Units (lessons) offer repeated opportunities to develop, refine, and extend language for mathematical purposes over time.		

Guideline 2: Explicit mathematics and language learning goals and pathways		
Specification	Understanding Rating	Implementation Rating
2a. Teacher materials (teachers) state clear and specific language objectives both for math practices as well as for academic purposes that cut across disciplines.		
2b. Student materials (lessons) contain mathematics and language learning objectives.		
2c. Teacher materials (teachers) articulate a pathway or progression of objectives for content, practices, and language throughout units.		
2d. Materials (teachers) present opportunities for students to use language at different stages within a unit, such as speculating or predicting about a new topic, exploring and reflecting during an experience, presenting afterwards, etc.		

Guideline 3: Regular and varying opportunities to learn, reflect upon, and demonstrate learning of mathematics using a variety of modes and forms		
Specification	Understanding Rating	Implementation Rating
3a. Activities deepen and extend learning through the various modes of communication: speaking, listening to deepen and extend learning through varied modes: speaking, listening, reading, and writing.		
3b. Materials (teachers) include prompts for students to reflect on their own thought processes, language use, methods, and learning of mathematical content.		
3c. Materials (teachers) encourage students to utilize interdisciplinary words and phrases as well as math-specific words and phrases.		

Focus Area II: Interdependence of Mathematical Content, Practices, and Language

For each specification in the table below:

- Rate your understanding of and implementation of each of the specifications on a scale of 1–5.
- If you are at a 3 or higher in terms of your understanding or implementation of the specification, what does this look like in your curriculum, classroom, or teaching? Share with a partner.

Guideline 4: Opportunities for students to interact with and produce a variety of methods and representations		
Specification	Understanding Rating	Implementation Rating
4a. Learning activities provide ways for students to generate and interpret a range of mathematical methods and representations (symbols, manipulatives, graphs, tables, words, etc.) and methods.		
4b. Teacher materials provide guidance to (teachers) encourage students to draw comparisons and connections across different methods and representations.		
4c. Unit of study (lesson) includes multiple sensory modalities for student interaction.		
4d. Teacher materials provide supports for teacher modeling of (teachers model) reading, writing, listening, speaking, and thinking aloud.		

Guideline 5: Directions for providing specialized individual and small group instruction to ELs		
Specification	Understanding Rating	Implementation Rating
5a. Teacher materials point to strategic opportunities for teachers to (teachers strategically) meet directly with EL students individually and in small groups		
5b. Teacher materials give guidance on (teachers know) what to look for, listen for, questions to ask, and/or feedback to give when meeting with EL students.		
5c. Materials (lessons) present a balance of opportunities for independent, paired, small-group, and whole-class activities.		

Guideline 6: Guidance for anticipating potential language demands and opportunities in student activities		
Specification	Understanding Rating	Implementation Rating
6a. Teacher materials make suggestions for addressing (teachers/lessons address) possible language issues that may interfere with engagement of math content.		
6b. Materials demonstrate (lessons include) activities and ways to help students make meaning of typical mathematical texts such as word problems, graphs, tables, etc.		
6c. Materials provide (teachers facilitate) activities to help distinguish between common everyday meanings of language and mathematical meanings (table, round, product, origin, similar, etc.) as they emerge in the materials.		
6d. Unit (lesson) amplifies rather than simplifies English language structures and forms that are often used in mathematics.		

Focus Area III: Interdependence of Mathematical Content, Practices, and Language

For each specification in the table below:

- Rate your understanding of and implementation of each of the specifications on a scale of 1–5.
- If you are at a 3 or higher in terms of your understanding or implementation of the specification, what does this look like in your curriculum, classroom, or teaching? Share with a partner.

Guideline 7: Explicit guidance for teachers to engage students in using mathematical practices		
Specification	Understanding Rating	Implementation Rating
7a. Materials (lessons) have targeted opportunities for students to use and develop language functions while engaging in mathematical practices.		
7b. Teacher materials point out (teachers provide) opportunities for students to evaluate and address mathematical errors, misconceptions, and clarity of communication.		
7c. Teacher materials (lessons) provide opportunities for students to revise their own, peers', and/or fictitious mathematical writing.		

Guideline 8: Maintain appropriate challenge and high expectations of mathematics learning for EL students		
Specification	Understanding Rating	Implementation Rating
8a. Materials (teachers/lessons) consistently provide access to cognitively-demanding tasks.		
8b. Teacher materials (teachers) demonstrate when and how to support productive struggle before intervening.		
8c. Materials guide the implementation of (teachers implement) anchor charts, visual aids, models, and other resources for students to use as a reference.		

Guideline 9: Guidance for facilitation mathematical discussion and co-construction of meaning		
Specification	Understanding Rating	Implementation Rating
9a. Materials include prompts for teachers to (teachers) cultivate and facilitate back-and-forth mathematical discussions between students that refer to and build on each other's ideas.		
9b. Materials provide (teachers plan for) explicit purposes for communication between students.		
9c. Materials allow for (teachers encourage) equitable participation and risk-taking in conversations.		

Focus Area IV: Leveraging Students' Assets

For each specification in the table below:

- Rate your understanding of and implementation of each of the specifications on a scale of 1–5.
- If you are at a 3 or higher in terms of your understanding or implementation of the specification, what does this look like in your curriculum, classroom, or teaching? Share with a partner.

Guideline 10: Opportunities to draw on and incorporate students' cultural background and lived experiences in mathematics learning		
Specification	Understanding Rating	Implementation Rating
10a. Teacher materials include relevant and practical suggestions for connecting (teachers use varied methods to connect) mathematics content and practices to students lives.		
10b. Materials (teachers) encourage students to draw on prior knowledge, culture, and experiences.		
11c. Materials (teachers/lessons) offer opportunities for clarifying potentially unfamiliar contexts.		

Guideline 11: Suggestions for incorporating and valuing EL's written and spoken contributions		
Specification	Understanding Rating	Implementation Rating
11a. Teacher materials contain (teachers are aware of) examples (and non-examples) of evidence of students with various language strengths and needs engaged in mathematical practices.		
11b. Teacher materials contain explicit guidance for teachers to (teachers) examine their own values and beliefs about language ELS, and ways in which that might impact their teaching.		

Guideline 12: Encouragement for ELs to use and build on existing language resources		
Specification	Understanding Rating	Implementation Rating
12a. Activities permit appropriate opportunities for ELs to use and integrate first language (L1) and everyday English in communicating mathematical thinking.		
12b. Activities and materials present opportunities for students to ask and pursue their own questions and interests, using their own methods in their chosen contexts.		

Focus Area V: Assessment of Mathematical Content, Practices, and Language

For each specification in the table below:

- Rate your understanding of and implementation of each of the specifications on a scale of 1-5.
- If you are at a 3 or higher in terms of your understanding or implementation of the specification, what does this look like in your curriculum, classroom, or teaching? Share with a partner.

Guideline 13: Descriptions, illustrations, and examples of quality work and mathematical practices with varying levels of language proficiency		
Specification	Understanding Rating	Implementation Rating
13a. Teacher materials should provide (teachers are aware of) examples of teacher-student and student-student interactions that model and reflect the intent of mathematical practices.		
13b. Teacher materials present examples in a way that highlight (teachers are aware of) student potential for English proficiency, not deficit-based.		

Guideline 14: Assessments able to capture and measure students' mathematics and language progress over time		
Specification	Understanding Rating	Implementation Rating
14a. Assessments prompt students to use math practices through language (including but not limited to vocabulary).		
14b. Rubrics specifically identify and describe typical mathematical content, practice, and language achievements.		
14c. Teacher materials suggest ways to (assessments) capture students' progress from everyday language to language for more formal academic and mathematical purposes.		

Guideline 15: Guidance for recognizing and attending to student language produced to inform instructional decisions		
Specification	Understanding Rating	Implementation Rating
15a. Teacher materials instruct teachers to (teachers know how to) avoid interpreting lower level language proficiency as lower level mathematics proficiency.		
15b. Unit includes (teachers use) a range of assessments for formative purposes that enable students to draw on and make use of their existing language resources.		
15c. Summative assessment tools specifically identify, describe, and measure mathematical and language successes, errors, and misconceptions and guide teachers to score them accordingly.		