Framework for English Language Proficiency Development Standards

corresponding to the Common Core State Standards and the Next Generation Science Standards

CCSSO

Council of Chief State School Officers

Development Process

The Council of Chief State School Officers (CCSSO) asked Susan Pimentel, a lead writer of the Common Core State Standards in English language arts/literacy, to coordinate the writing of an English Language Proficiency Development (ELPD) Framework, hereafter referred to as the "Framework," to guide the creation of English Language Proficiency (ELP) standards.[*] Assisting her in that work is a writing team consisting of Mariana Castro of the Wisconsin Center for Education Research at UW-Madison; H. Gary Cook of the Wisconsin Center for Education Research at UW-Madison; Amanda Kibler of the University of Virginia; Okhee Lee of New York University; David Pook, an educational consultant; Lydia Stack, former president of Teachers of English to Speakers of Other Languages, Inc. (TESOL); Guadalupe Valdés of Stanford University; and Aída Walqui of WestEd.

Throughout the drafting process, a Rapid Response Expert Feedback Group (RREFG) was also engaged to provide advice and counsel to the Framework team. Members of the RREFG include Elvira Armas of Loyola Marymount University; Rosa Aronson of TESOL; Alison Bailey of UCLA; Tim Boals of World-Class Instruction Design and Assessment (WIDA); Phil Daro, a lead CCSS mathematics writer; Richard Duran of UC Santa Barbara; Kenji Hakuta of Stanford University; Magaly Lavadenz of Loyola Marymount University; Judit Moschkovich of UC Santa Cruz; Gisela O'Brien of the Los Angeles Unified School District; and Gabriela Uro of the Council of Great City Schools. Additionally, feedback was solicited from district leaders from the Council of Great City Schools and from CCSSO's English Language Learner State Collaborative on Assessment and Student Standards (ELL SCASS) during their June 2012 meeting.

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[*] The term English Language Proficiency Development was chosen to connote the fact that language development is ongoing and although multiple pathways are possible, the end goal is English language proficiency to ensure full participation of ELLs in school contexts, hence an ELPD Framework. For the sake of familiarity and convenience, state standards are referred to as state ELP standards.

Executive Summary

Many states have begun the process of developing or adapting English Language Proficiency (ELP) standards to align with the Common Core State Standards (CCSS) and the forthcoming Next Generation Science Standards (NGSS). This need stems not only from a desire to ensure that *all* students receive the rigorous and systematic education they need to graduate from high school as college and career ready, but also because states must have ELP standards aligned to college and career readiness standards as a requirement to receive an Elementary and Secondary Education Act (ESEA) waiver. The Council of Chief State School Officers (CCSSO) has coordinated the development of a framework to assist states with this work. The goal of the English Language Proficiency Development (ELPD) Framework, hereafter referred to as the "Framework," is to provide guidance to states on how to use the expectations of the CCSS and NGSS as tools for the creation and evaluation of ELP standards.

The CCSS as well as the NGSS spell out the sophisticated language competencies that students will need to perform across their respective academic subject areas. These include close reading and constructing effective arguments to support their conclusions, identifying a speaker's key points and elaborating on these ideas in group settings, and tasks such as constructing and testing models and predictions as well as strategically choosing and efficiently implementing procedures to solve problems. But they also implicitly demand students acquire ever-increasing command of language in order to acquire and perform the knowledge and skills articulated in the standards.

English language learners (ELLs) thus face a double challenge: they must simultaneously learn how to acquire enough of a second language to participate in an academic setting while gaining an understanding of the knowledge and skills in multiple disciplines through that second language. As a result, state ELP standards corresponding to the CCSS and NGSS must be examined closely to determine what supports need to be put in place to provide ELLs with the help they need to access grade-level content while building their language proficiency. To that end, the Framework outlines the underlying English language practices found in the CCSS and the NGSS, communicates to ELL stakeholders the language that all ELLs must acquire in order to successfully engage the CCSS and NGSS, and specifies a procedure by which to evaluate the degree of alignment present between the Framework and ELP standards under consideration or adopted by states.

Table of Contents for the
English Language Proficiency Development Framework

Section 1: Introduction to the Framework

Section 1.1: Background

The Common Core State Standards (CCSS) have been adopted by 46 states and the District of Columbia as the benchmark for determining college and career readiness in English language arts/literacy and mathematics. Work is also underway on the Next Generation Science Standards (NGSS), which will serve a similar role for establishing college and career readiness in science. These rigorous standards articulate high expectations for students in these content areas, ranging from close reading and constructing effective arguments to support their conclusions, to identifying a speaker's key points and elaborating on these ideas in group settings, to constructing and testing hypotheses and strategically choosing and implementing procedures to solve problems. But given the sophisticated use of language required by the standards, these changes also entail a reconceptualization of the way English language learners (ELLs) "apprentice" into these demanding **disciplinary practices**[1] by simultaneously acquiring and developing language as well as acquiring disciplinary knowledge and skills. The English Language Proficiency Development (ELPD) Framework, hereafter referred to as the "Framework," envisions these not as separate and distinct activities, but as mutually enriching processes.

Many states are on the cusp or have begun the process of developing or adapting their English Language Proficiency/English Language Development standards (referred to hereafter as ELP standards), and yet recognize the need to ensure their ELP standards will enable ELLs to meet the more rigorous academic content expectations now manifested in the CCSS and NGSS.[2] As the CCSS states, "all students must have the opportunity to learn and meet the same high standards if they are to access the knowledge and skills necessary in their post-high school lives."[3] At this critical moment, calls for guidance abound. To support this process, the Council of Chief State School Officers (CCSSO) has coordinated the development of the Framework.

> *There is a glossary of terms in Section 6, and words you will see in bold font are defined in the glossary. Additionally, at first mention, glossary terms will be defined in a footnote.*

Section 1.2: Purposes and Vision of the Framework

The purpose of the Framework is to communicate to ELL stakeholders in states—from chief state school officers and district chief academic officers to state/district ELL and content area specialists to curriculum developers and teacher

> *The purpose of the Framework is to communicate to ELL stakeholders in states the language practices that all ELLs must acquire in order to successfully master the CCSS and NGSS and for second language acquisition more generally.*

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[1] **Disciplinary practices or performances:** The activities in which students and teachers engage to construct knowledge, concepts, and skills in particular subject areas (e.g., science). In the NGSS and CCSS for mathematics, these are known as "practices." ELA does not define these explicitly, so a set of ELA "performances" has been developed for this project to align with the notion of "practices." These are also known as *content area practices* or *performances*.

[2] Indeed, the last reauthorization of Elementary and Secondary Education Act (NCLB) placed explicit requirements upon states to develop such standards.

[3] From CCSS for English Language Arts (ELA), retrieved July 3, 2012, from http://www.corestandards.org/the-standards/english-language-arts-standards/introduction/key-design-considerations/.

leaders—the **language practices**[4] that all ELLs must acquire in order to successfully master the CCSS and NGSS and for second language acquisition more generally. The Framework offers a descriptively rich structure for unpacking the **language demands**[5] of the CCSS and NGSS. It also provides a protocol for determining the degree of alignment present between the Framework (which outlines the language demands of the CCSS and NGSS) and current ELP standards or those under development. The goal is to ensure that states utilize well-crafted ELP standards so that the developing language needs of ELLs are met and all ELLs receive the rigorous and systematic education they need to graduate from high school as college and career ready.

The theory of action embedded in the Framework does not view the ELP standards as a bridge to first cross before acquiring the CCSS and NGSS, but as partner standards articulating practices, knowledge, and skills students need to have access to the CCSS and NGSS. The vision that informs the Framework conceptualizes the acquisition of state ELP standards as intertwined with learning the CCSS and NGSS.

> *The vision that informs the Framework conceptualizes the acquisition of state ELP standards as intertwined with learning the CCSS and NGSS. Learn more about the premises of the framework in Section 7.2.*

The Framework recognizes that marrying the expectations of the CCSS and NGSS to the aims behind learning a second language will require the next generation of ELP standards to go beyond articulating standard expectations of acquiring and using vocabulary and grammatical structures correctly to achieve native-like fluency. Indeed, as the CCSS notes,

> the development of native like proficiency in English takes many years and will not be achieved by all ELLs especially if they start schooling in the US in the later grades. Teachers should recognize that it is possible to achieve the standards for reading and literature, writing & research, language development and speaking & listening without manifesting native-like control of conventions and vocabulary.[6]

The Framework therefore offers useful guidance in how to craft the next generation of ELP standards corresponding to the CCSS and NGSS such that they articulate both disciplinary practices and embedded language practices.

Lastly, as noted in the CCSS, ELLs bring with them many resources that can enhance their education and serve as resources for their learning. Many ELLs have first language and literacy knowledge and skills that can enhance their acquisition of language and literacy in English. Additionally, they bring diverse sets of knowledge related to academic topics addressed in the standards and cultural practices and perspectives that can enrich their learning. The Framework recognizes that in order for students to successfully negotiate the complex demands of the CCSS and NGSS, state ELP standards should build on this valuable reservoir of knowledge.

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[4]   **Language practices or performances:** A combination of communicative acts (e.g., saying, writing, doing, and being) used in the transmission of ideas, concepts, and information in a socially mediated context.

[5]   **Language demands:** The types of language embedded in and therefore necessary to engage in disciplinary practices or performances.

[6]   From *Application of Common Core State Standards for English Language Learners*, retrieved June 27, 2012, from http:// www.corestandards.org/assets/application-for-english-learners.pdf.

Section 1.3: What is Not Covered by the Framework

While offering states helpful guidance in the development of ELP standards, the Framework is limited in its scope and aims. Grasping what it does not attempt to do is as important as understanding what it does accomplish. The most important limitations are as follows:

1. The Framework does not offer a specific set of ELP standards. Instead, in Section 2 of the Framework the language practices embedded within the CCSS and NGSS for English language arts, mathematics, and science are communicated. By showing how to unpack those expectations, the Framework illustrates the language expectations found in any discipline. The Framework then offers an alignment process through which states can develop and/or evaluate the degree to which the ELP standards they are developing or considering for adoption reflect the language practices embedded in the CCSS and NGSS. In other words the Framework does not offer ELP standards directly, but offers a process by which to evaluate state ELP standards for their fidelity to the language demands of the standards. The sample models of ELP standards provided in Section 4 are intended to clarify how the Framework could be used, but are <u>not</u> examples of fully developed sets of ELP standards themselves.

> *The Framework does not offer ELP standards directly, but offers a process by which to evaluate state ELP standards for their fidelity to the language demands of the standards.*

2. While the Framework is intended to offer guidance in outlining curricula, it does not spell out everything that ELLs should be taught. For example, the ELP standards that states or state consortia produce using the Framework are intended to articulate the fundamental language practices that ELLs must learn as they acquire the specific content areas covered by the CCSS and NGSS. But ELLs must also learn the language practices that will enable them to access and express essential discipline-specific content in other subject areas not covered by the CCSS and NGSS, like social studies, geography, art, or music. Though states can use the outline of the Framework as an example of how to identify and articulate the language practices rooted in other disciplines, the Framework only details the language demands stemming from those disciplines covered by the CCSS and NGSS—English Language Arts and Literacy, mathematics, and science.

3. The Framework is not an attempt to outline how schools should approach teaching ELLs (e.g., sheltered instruction or dual language instruction). This is an important and critical element of any fully fleshed out vision of ELL education and ELL curricula, but the Framework only addresses the critical links between the CCSS and the NGSS and state ELP standards.

Section 1.4: Implications of the Framework

While the Framework does not address specific issues related to pedagogy, it should be noted that creating state ELP standards using the Framework will have significant implications for current instructional arrangements (particularly in middle and high school). At present, second language development is often seen as the primary responsibility of the ESL teacher, while content development (particularly in grades 6-12) as that of the subject area teacher. Given the diverse range of program design and explicitness in

the CCSS and NGSS regarding how language must be used to enact disciplinary knowledge and skills, such a division of labor is no longer viable. Both content teachers and ESL teachers must be engaged in the process, particularly since the Framework envisions ELP standards as acquired in concert with the CCSS and NGSS. On the one hand, content area teachers must recognize and target the key language and literacy practices inherent in their disciplines – such as explaining and arguing with evidence – to enhance the engagement of ELLs with rich content. On the other hand, to help their students to grow, ESL teachers must cultivate a deeper knowledge of the **discipline-specific language[7]** and literacy practices that ELLs need in order to perform the activities germane to those disciplines.

> *ELLs are a heterogeneous group with differences in ethnic background, first language, socioeconomic status, quality of prior schooling, and levels of English language proficiency. State ELP standards should therefore respect and build on the language and culture of ELLs by leveraging the primary language linguistic and cultural resources they bring to the classroom.*

Effectively educating ELL students requires ELP standards that aid teachers in instructionally diagnosing each student, adjusting instruction accordingly, and closely monitoring student progress.[8] ELLs are a heterogeneous group with differences in ethnic background, first language, socioeconomic status, quality of prior schooling, and levels of English **language proficiency[9]**. State ELP standards should therefore respect and build on the language and culture of ELLs by leveraging the primary language *linguistic and cultural resources* they bring to the classroom. For example, state ELP standards should explicitly consider how the transfer of literacy skills from students' first language (L1) to the second language (L2) could best proceed by understanding how the **discourse practices[10]** of the primary language could be utilized to facilitate learning.

Section 1.5: Contents of the Framework

The specification of the language demands for the disciplines associated with ELA, mathematics, and science can be found in Section 2 of this document. In broad strokes, the Framework outlines expectations regarding four key areas that all state ELP standards must address to correspond to the language demands of the CCSS and NGSS:

> **Section 2.1: Foundations**: the Framework explains why state ELP standards should transparently articulate the theoretical foundations (i.e., a theory of action that reflects best practices for language development) upon which they are based.

> **Section 2.2: Progression**: the Framework explains how the ELP standards should offer a sequence of language development that is grounded in the theoretical foundations for the standards, responsive to the various backgrounds of students, and attuned to varying language growth trajectories of different ELLs.

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[7]   **Discipline-specific language:** The language used, orally or in writing, to communicate ideas, concepts, and information or to engage in activities in particular subject areas (e.g., science).

[8]   Nor should students remain unaware of the challenges they face: ELP standards should invite students to gain awareness of and use strategies that help them engage in grade-level content knowledge as well as reflect on and monitor their own performance.

[9]   **Language proficiency:** A socially constructed notion of the ability or capacity of individuals to use language for specific purposes

[10]   **Discourse practices:** or **Language practices or performances:** A combination of communicative acts (e.g., saying, writing, doing, and being) used in the transmission of ideas, concepts, and information in a socially mediated context.

Section 2.3: Standards Match: the Framework unpacks the relationship between the language expectations and underlying language practices embedded within the CCSS and NGSS and the developing language needs ELLs should acquire in order to learn this content.

Section 2.4: Classroom Match: the Framework describes the importance of explaining how the ELP standards should be used to inform and guide language use in the classroom.

The Framework then proposes an alignment procedure in Section 3 aligned to the four key areas above so states can understand how their current or proposed ELPD standards reflect the key areas and expectations of the Framework (which in turn would make the standards correspond to the CCSS and NGSS).

Robust sample models of ELP standards created using the Framework are presented in Section 4. The Framework is rounded out by the conclusion in Section 5, the glossary in Section 6, and supplementary materials in Section 7 including an explanation of what it means for ELP standards to *correspond* versus *align* to the CCSS and NGSS, a series of foundational premises that guided the overall development of the Framework, implications for assessments, and references used during the development of the Framework.

Section 2: The Framework

Section 2.1: Foundations

The Framework acknowledges that there are many different theories of second language development or acquisition that could serve as anchors for ELP standards. It does not take a stance on arguing for one theory over another (other than to suggest that ELP standards are acquired simultaneously with the content of the CCSS and NGSS). However, the Framework asserts that all state ELP standards ought to be firmly grounded in a validated research based theory that reflects best practices regarding child and adolescent second language acquisition, and the alignment process proposed below begins by addressing the theoretical foundations of the state ELP standards.

> *The goal of the ELPD Framework is to provide states with a tool by which they can determine how well their ELP standards capture the insights and key shifts found in the CCSS and NCSS.*

The theory used in the development of the state ELP standards should offer a clear and coherent conceptualization of language as well as the second language acquisition process, and address how differences in age, grade, and educational background are accounted for. In particular, the theory should offer guidance for state ELP developers with respect to the various aspects of language that support the variety of language practices and **discourse elements[11]** present in schooling. It should clearly guide the development of the sequence of language development found within the state ELP standards.

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[11]   **Discourse elements:** The language features involved in communication. These include word level features (e.g. words and phrases), sentence level features (e.g., language forms and conventions) and supra-sentence level features (e.g., organization, text types, and genre) and are guided by the demands of the context (e.g., audience, registers, task or situation, roles, and identities).

Section 2.2: Progression

The Framework acknowledges that there are many different ways in which the standards could be organized, and does not take a stance on arguing for one design over another other than to endorse the theory of action discussed above. The Framework does require that state ELP standards reflect a principled organizational strategy rooted in theoretical foundation(s) that reflects the variety of ways in which different ELLs progress diversely in their language development, including methodologies for scaling and developing descriptions of language proficiency which have been cited and researched. Justification should also be provided for the number of levels adopted and evidence provided to support how these levels represent distinctions that can reasonably be measured and are based on actual student performance. If levels are being tentatively established as part of an ongoing validation process, methods for refining categories and descriptors should also be specified.

Specifically, the Framework supports the development of state ELP standards that are responsive to students' linguistic, academic, and developmental levels. Proficiency levels should be organized to reflect not only intuitive insights but also be rooted in research based qualitative and quantitative methods. They should include both productive and receptive language tasks and make evident how stated proficiencies are related to disciplinary practices described in the Framework. The Framework maintains that state ELP standards should also be organized in meaningful ways to help teachers create

> *The Framework supports the development of state ELP standards that are responsive to students' linguistic, academic, and developmental levels. Proficiency levels should be organized to reflect not only intuitive insights but also be rooted in research based qualitative and quantitative methods.*

summative and formative assessments that help identify and position ELLs according to their varying levels of English language proficiency; additionally, the standards should help teachers scaffold instruction to support students as they engage in sophisticated and cognitively demanding disciplinary practices and develop their conceptual, academic, and linguistic skills at all levels of proficiency. While they should support the academic rigor demanded by the CCSS and the NGSS and articulate clear and explicit criteria for measuring varying levels of English language proficiency, state ELP standards should accommodate the uneven growth and development ELLs undergo and not expect native-like performance. Lastly, the Framework envisions state ELP standards that stipulate the importance of strategically withdrawing scaffolds and supports as students develop independence and language proficiency.[12]

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Section 2.3: Standards Match

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[12]   The models of ELP Standards based on this Framework provided in Section 4 offer a useful example of how ELP standards can address the diversity of proficiency levels in the ELL population.

content. When looking at the language demands outlined in the ELA standards,[13] several important considerations emerge. The first is the priority the standards place on the complexity of the language (and ideas) found in the texts students read, as well as the skill with which they read these demanding texts. For each grade level, Reading Standard 10 defines the expectations students must meet for where they are on the staircase of text complexity that ultimately reaches the summit of college and career readiness. The standard requires students to grasp ever-increasing layers of language complexity as they proceed through the grades, and in doing so grasp the content knowledge contained in what they are reading. Simultaneously, the other reading standards call upon students to become increasingly adept at performing a range of difficult language practices whose degree of sophistication intensifies over time, from critically weighing and employing a growing range of evidence drawn from texts to becoming more attuned to discerning nuance, logic, ambiguity, and even inconsistency in an author's reasoning.

The ELA standards make equally challenging demands on students with regard to the language practices they must master with respect to writing. Students must emerge with the ability to fashion narratives as well as write arguments and explanations about what they have read with their audience and purpose in mind. They must not only logically sequence what they write but also consider what evidence and ideas best fit the particular task at hand. Writing Standard 9 explicitly reflects the deep connection found between what students read and what they write, calling upon students to master writing about what they have read using evidence from literary and informational texts. The link is reinforced by the way the ELA standards stress that students must practice a range of language practices associated with research, which also is a critical source of content knowledge for students.

Students must learn important aspects of successful teamwork: listening to one another critically but respectfully while expressing one's own ideas with increasing specificity and precision.

The ELA standards also draw attention to critical language practices associated with speaking and listening as well as conventions. Students must learn important aspects of successful teamwork: listening to one another critically but respectfully while expressing one's own ideas with increasing specificity and precision. They must use their oral and aural skills to integrate and evaluate what they see and hear, adapting what they say dependent upon tone, context, and audience. Additionally, the ELA standards identify essential language practices with respect to using English structures (grammar, syntax, mechanical conventions, as well as word meanings) to communicate. Running as a continuous thread through all the ELA standards is the overarching consideration that students will grow in their ability to utilize these language practices to craft prose and make strategic decisions with regard to the language they employ in varying contexts.

As with ELA, the mathematical practices have implications for language development. To "make sense" of a mathematics problem often includes making sense of the language in which the problem is posed.

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[13]   While the CCSS for mathematics and the NGSS explicitly state key practices and core ideas for their respective discipline, the CCSS for ELA does not explicitly identify key practices and core ideas; hence the corresponding features in the ELA charts were identified through a close analysis of the priorities contained within the standards themselves.

Symbolic, graphic, tabular, and diagrammatic mathematical representations are typically embedded in ordinary language. Mathematical problems posed using only ordinary language are a special genre of text that has conventions and structures needing to be learned. The language used to pose mathematical problems evolves with grade level and across mathematics content.

The combination of mathematical practices and grade level content standards raises expectations for students' comprehension and production when explaining abstract concepts and relationships, which often include a blend of visual models, text, and talk. In mathematics, explanations demand explicitness with respect to what is being referred to as well as clarity regarding references that correspond across multiple representations. The same quantity is often referred to by a phrase in the posed problem and symbolically in expressions read and produced by students (e.g., a row in a table and a dimension in a graph). Comprehending these corresponding references is central to comprehending mathematics.

> *The combination of mathematical practices and grade level content standards raises expectations for students' comprehension and production when explaining abstract concepts and relationships, which often include a blend of visual models, text, and talk.*

The mathematical practices call for students to produce viable arguments and critique the arguments of others. Arguments in mathematics are expressed in language that embeds mathematical expressions, diagrams, and terms in phrases, sentences, or paragraphs. These unique features of mathematical argument are not a natural extension of ordinary language, but a discourse unique to mathematics. Arguments are chains of reasoning represented in sequences of sentences logically related to each other. Unlike arguments in other fields, argument in mathematics does not rely upon empirical evidence, but upon proofs, precise definitions, properties, and prior results.[14]

> *Unlike arguments in other fields, argument in mathematics does not rely upon empirical evidence, but upon proofs, precise definitions, properties, and prior results.[14]*

As students progress through the grades, their production and comprehension of mathematical arguments evolves from informal and concrete toward more formal and abstract. In early grades students employ imprecise expressions which with practice over time become more precise and viable arguments in later grades. Indeed, the use of imprecise language is part of the process in learning how to make more precise arguments in mathematics. Ultimately, conversation about arguments helps students transform assumptions into explicit and precise claims.

> *Closely examining the practices called out by the NGSS reveals deep ramifications for language development. Engaging in science and engineering practices involves both scientific sense-making and language use. These practices intertwine with one another when making meaning of experiences from a scientific point of view.*

Finally, closely examining the practices called out by the NGSS reveals deep ramifications for language development. Engaging in science and engineering

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[14] Examples play an important role: they are useful for explaining or illustrating a point, but are not evidence.

practices involves both scientific sense-making and language use. These practices intertwine with one another when making meaning of experiences from a scientific point of view, which is a key endeavor in students transitioning from their naïve conceptions of the world to more scientifically-based perspectives. Performing these science and engineering practices is also language-intensive in that they both *demand* and *afford* rich student discourse.

Students must read, write, view, and visually represent as they develop their models and explanations. They speak and listen as they present their ideas or engage in reasoned argumentation with others to refine their ideas and reach shared conclusions. As students analyze examples of arguments, they learn the characteristics of a strong scientific justification of a claim and they learn to identify weak support. As they argue with others to arrive at a shared "best" explanation or model, they are motivated to clarify both their language and their thinking by the atmosphere of shared interest and goals.

The language used within the science classroom, and of science textbooks as well, differs greatly from the everyday discourse of students, but it is also distinct from the professional discourse and writing of scientists (though it mirrors those conventions as the students advance across the grades). As science classrooms incorporate the language of science, they will become richer language learning environments for students engaged in scientific pursuits.

The Framework does not describe key practices, analytic tasks or productive and receptive language functions in other content areas such as history, the arts, and technical subjects. However, it should be understood that such practices, **analytical tasks[15]**, and language functions should be part of states' ELP standards in some fashion, and the tables below model how states can examine those disciplines for their language demands. Providing any detailed information about those practices, tasks, and functions, however, is beyond the scope of the Framework because those are state specific, and the Framework is focused solely on the disciplines covered by the CCSS and NGSS.

Standards Match Tables

In the tables that appear below, the Framework offers useful conceptualizations of the language practices embedded within the CCSS and NGSS for English language arts, mathematics, and science that span linguistic, discourse, interpersonal, sociocultural, strategic, and pragmatic competencies. In each subject area, the first of these tables note the key practices in each subject area as described by the respective standards (as well as identifying the disciplinary core ideas that these practices are meant to support).[16] The second table unpacks how ELLs engage in the key practices by performing certain analytical tasks to make sense of and construct

> **Key point for teachers of English Language Arts, Mathematics, and Science**
>
> *In the tables that appear below, the Framework offers useful conceptualizations of the language practices embedded within the CCSS and NGSS for English language arts, mathematics, and science that span linguistic, discourse, interpersonal, sociocultural, strategic, and pragmatic competencies.*

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[15] **Analytical tasks:** Subcomponents of disciplinary practices that outline the intellectual activities in which students engage

[16] It should be noted that these practices are not listed hierarchically.

knowledge through engaging in both receptive (listening/reading) language and productive (speaking/writing) language functions.[17] It should be noted that the analytical tasks as well as the receptive and productive language functions included in Table 2 are selective rather than exhaustive and deliberately appear separately to highlight the complexity of the language in disciplinary classrooms. However, these tasks and language functions are intrinsically interrelated and should be integrated during instruction and assessment. Additionally, state ELP standards should emphasize that ELLs are positioned along a continuum with regard to their ability to express in English the performance of these analytical tasks and language functions. In other words, while the tables identify specific analytical tasks and language functions, students will differ in their ability to meet them (in English) because of the unique characteristics and understandings each student brings to the classroom.

The Framework envisions state ELP standards addressing the various aspects of the tables described above and delineated below such that a teacher can use them to help students acquire the language functions needed to demonstrate mastery of grade-level content. The standards should facilitate the development of *discipline-specific language practices* at both the textual and discourse level to help students integrate their language development with the conceptual understanding they are acquiring within English language arts, mathematics, and science. By explicitly calling attention to these practices, state ELP standards cultivate higher order thinking skills in ELLs and target their ability to comprehend and communicate about complex text.

To learn to perform analytical tasks and language functions over time, ELLs need teacher support and access to a rich everyday language environment grounded in learning activities that reflect the practices listed below (recognizing that ELLs will vary in the degree to which they can independently demonstrate the stated practices). At the same time, ELLs bring linguistic and cultural repertoires as well as other assets to learning a second language. Access cannot be achieved without considering both the needs and strengths ELLs bring to the classroom. Nor can these tasks and functions be reduced to "laundry lists" to be taught and learned in isolation; rather, they must be taken up in combination with one another as students engage in demanding levels of learning. In short, Tables 1 and 2 can be used to facilitate correspondence of ELP standards with the key practices of the subject areas in which they are embedded.

> *ELLs bring linguistic and cultural repertoires as well as other assets to learning a second language. Access cannot be achieved without considering both the needs and strengths ELLs bring to the classroom.*

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[17]   In other words, analytical tasks outline the intellectual activities in which students engage, whereas the language functions are what the students do with language to accomplish the content tasks. The analytical tasks in ELA are divided in Table 2 into those first introduced (and carried onward) at the elementary level and those first introduced (and carried onward, along with the former) at the secondary level, in keeping with their phased introduction in the CCSS itself.

Tables[18] for English Language Arts

> **Key point for teachers of English Language Arts:**
>
> In the tables that appear below, the Framework offers useful conceptualizations of the language practices embedded within the CCSS and NGSS for English language arts that span linguistic, discourse, interpersonal, sociocultural, strategic, and pragmatic competencies.

Table 1: Key Practices and Disciplinary Core Ideas of the ELA CCSS

This table summarizes key practices in the CCSS for ELA.

Key CCSS ELA "Practices"[19]	Disciplinary Core Ideas from the CCSS
1. Support analyses of a range of grade level complex texts with evidence 2. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience 3. Construct valid arguments from evidence and critique the reasoning of others 4. Build and present knowledge through research by integrating, comparing, and synthesizing ideas from texts 5. Build upon the ideas of others and articulate their own when working collaboratively 6. Use English structures to communicate context specific messages	<u>Reading</u> • Read complex literature closely and support analyses with evidence • Read complex informational texts closely and support analyses with evidence • Use context to determine the meaning of words and phrases • Engage in the comparison and synthesis of ideas within and/or across texts <u>Writing</u> • Write analytically (e.g., write to inform/explain and to make an argument) in response to sources • Write narratives to develop craft of writing • Develop and strengthen writing through revision and editing • Gather, synthesize, and report on research • Write routinely over various timeframes <u>Speaking and Listening</u> • Participate in purposeful collaborative conversations with partners as well as in small and large groups • Comprehend information presented orally or visually • Share information in a variety of formats (including those that employ the use of technology) • Adapt speech to a variety of contexts and tasks <u>Language</u> • Use the English language to achieve rhetorical and aesthetic effects and recognize and use language strategically • Determine word meanings and word nuances

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[18]   The underlying structure of these tables is based upon the work Lee, Quinn, and Valdés (under review), adapted from Valdés, Walqui, & Kibler (n.d.).

[19]   While the CCSS for mathematics and the NGSS explicitly state key practices and core ideas for their respective discipline, the corresponding features in the ELA charts were identified through a close analysis of the priorities contained within the standards themselves (because the CCSS for ELA does not explicitly identify key practices and core ideas).

Table 2: Key CCSS Practice of ELA with Embedded Analytical Tasks and Receptive and Productive Language Functions[20]

This table defines in detail these practices by outlining the language functions that ELLs need to engage with English language arts content.

English Language Arts Sense-Making and Language Use[21]
Key CCSS ELA Practice 1: Support analyses of a range of grade level complex texts with evidence

Analytical Tasks[22]	**Tasks that are primarily introduced at the elementary level** • Analyze on-level complex texts (e.g., stories, dramas, poetry, literary non-fiction, digital/visual/multimedia, and historical, scientific, and technical texts) from diverse cultures and time periods with fluency and understanding • Render an understanding of what has been read through assembling details and ideas • Identify ideas and key elements of a text like theme, central idea, or main points • Use evidence to make inferences beyond what is explicitly stated • Extract evidence from a variety of text structures • Analyze how ideas or events develop or interact over the course of the text • Build both vocabulary and content knowledge through comprehension of texts • Compare themes and topics across multiple texts **Tasks that are primarily introduced at the secondary level (in addition to elementary)** • Assess how point of view or purpose shapes content and style of text • Analyze how specific word choices shape meaning or tone • Analyze how ideas or events are transformed from one text to another • Approach text(s) using multiple approaches to glean a well-rounded view of the text
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the elementary level** • Comprehend text being read aloud or silently • Comprehend talk about the meaning of a text being read aloud or silently • Comprehend oral and written classroom discourse about investigating text for details as well as assembling those details both orally and in writing

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20   The terms "receptive" and "productive" are in keeping with terminology used by the American Council of Foreign Language Teaching. In other parts of the Framework, productive is referred to as "expressive."

21   Note that analytical tasks and receptive and productive language functions in ELA are divided in Table 2 into those first introduced (and carried onward) at the elementary level and those first introduced (and carried onward, along with the former) at the secondary level, in keeping with their phased introduction in the CCSS at different grade levels. Such divisions do not suggest that all students will fit such an age-grade profile. Newcomer ELL students, for example, may arrive at any grade level and may have varied experiences with the subject matter, their home language(s), and English. Mathematics and Science tasks are not divided by grade level, with the understanding that the practices and disciplinary core ideas associated with them apply throughout the grades, but students' sophistication of knowledge, understanding, and reasoning will develop throughout the school years, as they do in ELA as well, once tasks are introduced.

22   Analytical tasks are subcomponents of disciplinary practices that outline the intellectual activities in which students engage; the language functions are what the students "do" with language to accomplish the analytical tasks.

Productive Language Functions	**Productive Language Functions that are primarily introduced at the elementary level** Communicate orally and in writing ideas, concepts, and information related to the reading of complex literacy and informational texts and evidence-supported analysis, including • Identifying evidence within a text • Explaining the meaning of particular details • Explaining the meaning of the text as a whole • Creating written and oral analyses of on-level text • Providing explanations about how the most important points and details presented in two texts on the same topic compare to one another • Presenting and explaining evidence to others • Answering questions by providing details from textual analysis • Asking questions to resolve confusions or further probing one's comprehension of the text • Responding to questions or requests for clarification **Productive Language Functions that are primarily introduced at the secondary school level** • Explaining how parts of text relate to one another • Probing the views of others regarding the close reading of texts • Systematically organizing and synthesizing textual evidence both orally and in writing • Describing discernible points of comparison (e.g., point of view or focus, style, amount and quality of evidence, differences in emphasis, and significant omissions and/or inclusions of ideas)
Key CCSS ELA Practice 2: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
Analytical Tasks	**Tasks that are primarily introduced at the elementary level** • Develop a topic or describe real or imagined experience(s) or event(s) through use of facts, definitions, concrete details, quotations, clear event sequences, and/or other information and examples as relevant to the genre(s) • Group and sequence related information and events • Create writing that is appropriate to the task, purpose, and audience **Tasks that are primarily introduced at the secondary level (in addition to elementary)** • Link ideas or sequences of events to create cohesion and clarify the relationships among ideas and concepts • Use precise language with purpose, including well-chosen words and phrases, and sensory details
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the elementary school level** • Comprehend oral and written classroom discourse about the content and craft of expository writing, narration, and other forms of creative writing • Comprehend oral and written classroom discourse about critiquing the writing of others • Comprehend model texts in multiple genres

Productive Language Functions	**Productive Language Functions that are primarily introduced at the elementary school level** Communicate orally and in writing ideas, concepts, and information related to producing clear and coherent writing, including • Introducing a topic clearly • Creating an organization that logically categorizes or sequences ideas • Developing a topic with ideas and reasons that are supported by facts and/or details • Developing narratives with details, description, and other features of the specific narrative genre • Crafting narratives to convey a sense of place or the personality of characters • Developing and strengthening writing through revising and editing as needed **Productive Language Functions that are primarily introduced at the secondary school level** Communicate orally and in writing ideas, concepts, and information related to producing clear and coherent writing, including • Establishing a point of view to engage and orient the reader, when appropriate • Including sufficient details, facts, reasons, etc., to develop a topic or narrative • Linking ideas to create adequate cohesion • Strategically using language, vocabulary, and style appropriate to the purpose and audience • Revising and editing own and others' writing to clarify the message

Key CCSS ELA Practice 3: Construct valid arguments from evidence and critique the reasoning of others

Analytical Tasks	**Tasks that are primarily introduced at the elementary level** • Delineate specific claims made by the author • Distinguish between a claim and supporting evidence or explanation • Distinguish claims that are supported by evidence from claims that are not • Make plausible arguments (offer opinions) taking into account context from which evidence was taken **Tasks that are primarily introduced at the secondary level (in addition to elementary)** • Establish clear relationships among claim(s), counterclaims, reasoning, and evidence in one's own writing • Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources • Comprehend and use stated assumptions, definitions, and previously established results to support claims • Justify conclusions, communicate them to others, and respond to counterclaims • Analyze arguments by breaking them into claims and corresponding evidence • Assess the reasoning of an argument and identify errors in logic or reasoning • Recognize when the evidence introduced is relevant and sufficient to support the claims or it is irrelevant or contradicts the claim
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the secondary school level** • Comprehend the logic and meaning of arguments being made (orally or in writing) as well as the evidence produced in support of them • Comprehend oral and written classroom discourse about argumentation • Comprehend oral and written classroom discourse about the critiques of the arguments of others

Productive Language Functions	**Productive Language Functions that are primarily introduced at the secondary school level** Communicate orally and in writing ideas, concepts, and information related to constructing arguments and critiquing reasoning, including: • Providing explanation of an argument through the logical presentation of its steps • Providing explanations about whether the evidence is relevant and sufficient to support the claims or whether it is insufficient, irrelevant, or contradicts the claim • Making arguments that anticipate the audience's knowledge level and concerns • Justifying conclusions with logical reasoning and relevant evidence and responding to counterclaims • Presenting key evidence using accurate, credible sources • Using and explaining own and others' counterclaims • Responding to questions by countering or amplifying prior explanation or by accepting as needing further thought • Questioning, critiquing, or supporting explanations or arguments offered by others
	Key CCSS ELA Practice 4: Build and present knowledge through research by integrating, comparing, and synthesizing ideas from texts
Analytical Tasks	**Tasks that are primarily introduced at the elementary level** • Gather evidence from a wide range of sources • Synthesize multiple sources on a subject • Use technology in the creation and production of research **Tasks that are primarily introduced at the secondary level (in addition to elementary)** • Narrow or broaden the inquiry when appropriate • Verify the accuracy of sources • Rely on sources that have been vetted for accuracy and credibility • Analyze and compare evidence, selecting the strongest to answer the research question • Assemble evidence into logical sequences to support claims or argument • Interpret evidence to provide deeper insight into research question • Generate additional research questions to further inquiry
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the elementary school level** • Comprehend texts used as sources for research • Comprehend written research products produced by peers • Comprehend oral and written discourse about the research process • Comprehend oral and written discourse about research conducted by others **Receptive Language Functions that are primarily introduced at the secondary school level (in addition to elementary)** • Comprehend oral and written classroom discourse about the task of integrating, comparing, and synthesizing ideas • Comprehend oral and written classroom discourse about critiques of one's research as well as the research of others

Productive Language Functions

Productive Language Functions that are primarily introduced at the elementary level

Communicate orally and in writing ideas, concepts, and information
related to building and presenting knowledge, including

• Demonstrating a coherent understanding of a topic or issue by
integrating information presented in different texts or formats
• Producing and interpreting evidence in logical sequences to support claims or thesis
• Describing results of research

**Productive Language Functions that are primarily introduced at
the secondary school level (in addition to elementary)**

Communicate orally and in writing ideas, concepts, and information
related to building and presenting knowledge, including

• Presenting a synthesis of ideas in two or more texts to show a
coherent understanding on similar topics or events
• Explaining implications of research
• Explaining own research process
• Asking questions and hypothesizing about others' research

**Key CCSS ELA Practice 5: Build upon the ideas of others and
articulate their own clearly when working collaboratively**

Analytical Tasks

Tasks that are primarily introduced at the elementary level

• Work productively in pairs, small groups, and whole class settings
• Contribute effectively in group settings to the overall project or understanding sought
• Explore the task and purpose and adjust goals accordingly
• Analyze the main ideas and other key details of a speaker
• Break down the speaker's message conceptually into component parts
• Use evidence to make inferences beyond what is explicitly stated
• Render an understanding of what has been said through assembling details and ideas
• Identify confusions on the part of the listener as well as on the part of the speaker
• Employ the use of technology to present or amplify communications
through use of digital and multimedia texts

Tasks that are primarily introduced at the secondary level (in addition to elementary)

• Identify the contributions of others and leverage them for
greater insight into the problem or issue
• Synthesize comments, arguments, claims, and evidence
• Determine what additional information or research is required
to deepen the investigation or complete the task
• Identify the disciplinary expectations and take them into account when planning communications

	Receptive Language Functions that are primarily introduced at the elementary school level
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the elementary school level** • Read and comprehend background material under study • Comprehend peers' requests for assistance, invitations to contribute, and feedback on contributions • Comprehend comments, arguments, claims, and evidence presented by others • Comprehend classroom talk about the meaning of collaboration with partners, small groups, and whole class • Comprehend classroom talk about listening attentively, constructive criticism, and teamwork • Comprehend a speaker's key points, argument, and evidence • Comprehend task and purpose at hand, as presented orally or in writing • Monitor own comprehension and analyze sources of confusion • Infer implicit meanings based on background knowledge, evidence in presentation, and verbal and non-verbal cues • Identify specific pieces of information within stretches of connected discourse in a text **Receptive Language Functions that are primarily introduced at the secondary school level (in addition to elementary)** Comprehend oral and written classroom discourse about • purpose of a speaker as well as discussions about the presentation • meaning of organizing one's ideas in a coherent and logical fashion • appealing to one's audience, addressing the task or purpose, and the disciplinary context
Productive Language Functions	**Productive Language Functions that are primarily introduced at the elementary school level** Communicate orally and in writing ideas, concepts, and information related to collaboration, including • Referring to evidence from texts or research on the topic to stimulate an exchange of ideas • Asking questions of peers and responding to peer requests, invitations, feedback, and questions • Explaining the meaning of a speaker's key ideas and particular details • Asking questions, suggesting, clarifying, verifying, or challenging ideas and conclusions • Sharing evidence and explanations with others • Identifying structures and activities that help or hinder collaboration **Productive Language Functions that are primarily introduced at the secondary school level (in addition to elementary)** Communicate orally and in writing ideas, concepts, and information related to collaboration, including • Asking and responding to questions about own and others' participation and contribution to the group • Asking questions about the logical structure of the claims and findings of peers or others • Describing, defending, or challenging a speaker's point of view • Explaining a line of argument through reliance on organized notes taken from oral and multimodal presentations • Describing and justifying claims according to discipline-appropriate organizational structure • Amplifying or revising one's explanation in response to oral or written feedback from peers or teachers

Key CCSS ELA Practice 6: Use English structures to communicate context specific messages

Analytical Tasks	**Tasks that are primarily introduced at the elementary level** • Move toward recognizing meaning and purpose of developmentally-appropriate structural forms in English as a vehicle for communicating meaning • Differentiate between contexts that call for discipline-specific registers of English (e.g., presenting ideas) and situations where informal or colloquial discourse/ registers is appropriate (e.g., small group, home, and playground discussions) • Compare and contrast varieties of English (e.g., regional and social dialects) used in stories, dramas, poems, or other texts, or in their own and others' writing and speaking • Demonstrate understanding of figurative language, word relationships, and nuances in word meaning • Recognize vocabulary that has been learned in new contexts • Infer meaning of crucial academic and discipline-specific vocabulary from context **Tasks that are primarily introduced at the secondary level (in addition to elementary)** • Problem-solve to realize effective communications using accepted grammatical forms in English that are developmentally-appropriate • Recognize and observe differences between the conventions of home, playground, classroom, and discipline-specific registers of English in written and spoken form • Identify and move toward using strategies to improve expression in discipline-appropriate registers
Receptive Language Functions	**Receptive Language Functions that are primarily introduced at the elementary school level** • Comprehend oral and written language in multiple registers and varieties of English • Comprehend written and spoken discussions about English linguistic structures (e.g., vocabulary choices, word formation, phrase and clause structure, and parallelism) as a vehicle for communicating meaning • Engage in the study of vocabulary (denotations and connotations, general and technical words, means of expanding vocabulary range) • Comprehend oral and written classroom discourse about vocabulary and the means by which to acquire it • Comprehend oral and written classroom discourse about general academic as well as **domain specific**[23] words **Receptive Language Functions that are primarily introduced at the secondary school level (in addition to elementary)** • Comprehend oral and written language that uses different school-based and discipline-specific registers of English in order to identify key features of registers and difference among them

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[23]   **Domain-specific:** or **Discipline-specific language:** The language used, orally or in writing, to communicate ideas, concepts, and information or to engage in activities in particular subject areas (e.g., science).

Productive Language Functions	**Productive Language Functions that are primarily introduced at the elementary school level**
	Communicate orally and in writing ideas, concepts, and information related to communicating and comprehending through English linguistic structures, including
	• Asking questions about various linguistic elements used by others
	• Using accepted grammatical forms that are developmentally appropriate
	• Using words and phrases appropriate to varied classroom-based and discipline-specific registers of English that have been acquired through conversations, reading and being read to, and responding to texts
	• Strategically employing styles and registers of English for specific purposes
	• Describing the multiple meanings of words in context
	• Asking questions about the word usage of others
	• Employing vocabulary with appropriate denotative, connotative, and figurative meanings in written and oral presentations
	Productive Language Functions that are primarily introduced at the secondary school level (in addition to elementary)
	Communicate orally and in writing ideas, concepts, and information related to communicating and comprehending through English linguistic structure, including
	• Using accepted grammatical forms that are developmentally-appropriate
	• Adapting speech to a variety of contexts and tasks, demonstrating command of multiple school-based and discipline-specific registers in English when indicated or appropriate
	• Describing how a linguistic structure (e.g., an appositive) is used for particular rhetorical effect
	• Describing how certain word choice impacts meaning
	• Sharing thoughts and ideas about a wide range of word-related resources

Tables for Mathematics

Key point for teachers of Mathematics:

In the tables that appear below, the Framework offers useful conceptualizations of the language practices embedded within the CCSS and NGSS for mathematics that span linguistic, discourse, interpersonal, sociocultural, strategic, and pragmatic competencies.

Table 3: Key Practices and Disciplinary Core Ideas ("Domains") of the Mathematics CCSS

This table summarizes key standards for mathematical practice.

Standards for Mathematical Practices[24]	Disciplinary Core Ideas ("Domains")
1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others 4. Model with mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure 8. Look for and express regularity in repeated reasoning	**K-5** Counting and Cardinality (K only) Operations and Algebraic Thinking Numbers and Operations in Base Ten Numbers and Operations - Fractions (3-5 only) Measurement and Data Geometry **6-8** Ratios and Proportional Relationships Number System Expressions and Equations Functions (8 only) Geometry Statistics and Probability **9-12** Number and Quantity Algebra Functions Modeling Geometry Statistics and Probability

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[24]   The term "Standards" here refers to processes and principles behind the mathematical practices and not exclusively to the complete set of expectations students should know and be able to do in mathematics.

Table 4: Key CCSS for Mathematical Practice[25] with Embedded Analytical Tasks and Receptive and Productive Language Functions

This table defines in detail these practices by outlining the language functions that ELLs need to engage with mathematics content.

Mathematics Sense-Making and Language Use	
Key CCSS for Mathematical Practice 1: Make sense of problems and persevere in solving them	
Analytical Tasks	• Explain to self a problem's meaning, look for entry points to solution, and plan solution pathway • Analyze givens, constraints, relationships, and goals • Make conjectures about form and meaning of solution • Consider analogous problems • Monitor effectiveness of current selected solution strategy and decide when to pursue a different solution strategy • Check answers using different methods • Understand others' approaches to solving complex problems and identify correspondences between them • Create coherent representation of problems, considering units • Monitor use of resources such as time and effectiveness of current selected solution strategy • Monitor and evaluate reasonableness of intermediate and final results
Receptive Language Functions	• Comprehend the meaning of a problem as presented in multiple representations, such as spoken language, written texts, diagrams, drawings, tables, graphs, and mathematical expressions or equations • Comprehend others' talk about math problems, solutions, approaches, and reasoning • Coordinate texts and multiple representations
Productive Language Functions	Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to problem solving: • Create, label, describe, and use in presenting solutions to a math problem multiple written representations of a problem[26] • Explain in words orally or in writing relationships between quantities and multiple representations of problem solutions • Present information, description of solutions, explanations, and arguments to others • Respond to questions or critiques from others • Ask questions about others' solutions, strategies, and procedures for solving problems

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25   These practices are intended to apply systematically across grade level content in mathematics; they are not free-floating, but well-grounded in the content standards. Neither are the practices static across grades but instead should be tailored to the content of the grade and to grade-level appropriate student thinking.

26   Multiple representations include written text, diagrams, drawings, symbols, mathematical expressions or equations, tables, graphs, mathematical models, and/or pictures of math manipulatives or other objects.

	Key CCSS for Mathematical Practice 2: Reason abstractly and quantitatively
Analytical Tasks	• Know when it is best to abstract a given problem situation, represent it symbolically, and manipulate symbols without necessarily attending to referents (decontextualize) • Know when it is best to pause as needed during symbol manipulation to use the meaning of the symbols involved (contextualize) • Monitor and decide when to contextualize and decontextualize • Attend to meaning of quantities in the problem situation • Do and undo computations; abstract from computation
Receptive Language Functions	• Comprehend the meaning of a problem situation and its relevant quantities as presented through multiple representations • Comprehend others' talk about the relevant and irrelevant quantities in the problem situation • Coordinate written texts and multiple representations
Productive Language Functions	Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to abstract and quantitative reasoning: • Explain reasoning as it relates to problem situation, especially the quantities in the problem that are mathematically relevant • Create, label, describe, and defend coherent representations of the problem situation at hand • Ask questions to contextualize the problem situation or the quantities in the problem
	Key CCSS for Mathematical Practice 3: Construct viable arguments and critique the reasoning of others
Analytical Tasks	• Understand and use stated assumptions, definitions, and previously established results • Make conjectures and build logical progression of statements to explore truth of conjectures • Justify conclusions, communicate them to others, and respond to counterarguments • Analyze situations by breaking them into cases • Recognize and use counterexamples • Make plausible arguments taking into account context from which data arose • Compare effectiveness of two plausible arguments • Identify correct vs. flawed logic/reasoning • Monitor one's own and others' reasoning
Receptive Language Functions	Comprehend oral and written concepts, procedures, or strategies used in arguments and reasoning, including • Questions and critiques using words or other representations • Explanations offered using words or other representations by others (peers or teachers) • Explanations offered by written texts using words or other representations

Productive Language Functions	Communicate using words (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to constructing arguments and critique reasoning: • Provide written or verbal explanation of an argument using words through logical progression of statements, and also using multiple non-verbal representations, concrete referents (such as objects), or more formal means (i.e., mathematical symbols and mathematical proofs) • Justify conclusions and respond to counterarguments • Recognize and use counterexamples • Respond to questions by amplifying explanation • Respond to critiques by countering with further explanation or by accepting as needing further thought • Critique or support explanations or designs offered by others

Key CCSS for Mathematical Practice 4: Model with mathematics

Analytical Tasks	• Apply math to everyday situations (e.g., outside of school and on the job) • Pose a problem for a situation that can be solved with the available data and by using mathematical models • Make assumptions and approximations to temporarily simplify a complicated problem situation • Identify and map relationships among important quantities; decide which quantities are relevant • Analyze relationships among quantities mathematically to draw conclusions • Interpret results in context of the situation • Monitor one's own and others' reasoning in support of a model • Reflect on reasonableness of results and improve model as needed • Use technology to visualize results, explore consequences, and compare predictions with data
Receptive Language Functions	• Comprehend others' oral or written descriptions, defenses, and discussions of their models • Comprehend the meaning of models presented in multiple representations
Productive Language Functions	Communicate (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to mathematical models: • Label (or create and label) diagrams of a model • Describe and defend a model using words and other representations • Ask questions and hypothesize about whether or how others' models work

Key CCSS for Mathematical Practice 5: Use appropriate tools[27] strategically

Analytical Tasks	• Make sound decisions about helpfulness of different tools for problem solving • Use estimation and other strategies to detect possible errors in computation • Use technology to explore and deepen conceptual understanding, visualize results, explore consequences, and compare predictions with data • Identify and use relevant mathematical resources such as digital content on websites

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[27]   Tools include algorithms (e.g., the instructed procedure for double digit multiplication), strategies (e.g., estimation), technology (e.g., calculators and websites), and visual media (e.g., dynamic models and simulations).

Receptive Language Functions	• Comprehend others' oral and written language that describes purposes and functions of tools and other resources • Comprehend the purposes and functions of tools and other resources as presented in texts, diagrams, and visual media
Productive Language Functions	Communicate (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to strategic use of tools: • Ask questions regarding purpose and functions of tools and others' use of them • Explain own use of tools and outcomes of tool use

Key CCSS for Mathematical Practice 6: Attend to precision

Analytical Tasks	• When appropriate, communicate precisely with others about mathematical reasoning and objects (e.g., use clear definitions of terms, state meaning of symbols used, specify units of measure, label visual representations, and make claims that apply to a precise set of situations) • Refine communication about mathematical reasoning and objects so that it increasingly becomes more mathematically precise (e.g., uses clearer definitions of terms, explicitly states the meaning of symbols used, specifies units of measure) • Calculate, compute, and use arithmetic procedures appropriately, accurately, and efficiently • Express numerical answers with degrees of precision appropriate for the problem situation • Monitor one's own and others' use of precision • Decide when precision is more necessary (e.g., during a presentation) and when it is not a high priority (e.g., during exploration and exploratory talk in groups) • Decide the level of precision necessary (e.g., one can make a precise claim that only applies to a defined set of instances even when using colloquial or imprecise individual words).
Receptive Language Functions	• Comprehend others' spoken language regarding definitions, meaning of symbols, arithmetic procedures, strategies, solutions, claims, evidence, etc. • Comprehend the meaning and features of precision of definitions, symbols meanings, units of measure, and visual representations as presented in multiple representations (e.g., texts, diagrams, and visual media)
Productive Language Functions	Communicate with precision (orally, in writing, and through other representations) about claims and arguments related to precision: • Define key terms and concepts • Explain meaning of symbols • Specify units of measure • Label (or create and label) visual representations • Ask questions to clarify meaning of others' statements or representations • Make specific claims and evaluate constraints

Key CCSS for Mathematical Practice 7: Look for and make use of structure

Analytical Tasks	• Look closely to discern pattern or structure (e.g., look for patterns in quantities, relationships among quantities, arithmetic procedures, data in tables, and graphs) • Shift perspective on a problem situation or a mathematical representation (e.g., equation, table, or graph) if necessary • See complicated mathematical representations, such as algebraic expressions, equations, or lines, as a process, single objects, or as composed of several objects • Flexibly use different perspectives of mathematical representations • Monitor and decide which perspective is most useful for the problem situation at hand

Receptive Language Functions	• Comprehend the meaning of patterns or structures found in a situation, problem, or mathematical expression as presented in spoken language, texts, and diagrams • Comprehend others' talk about patterns and structures
Productive Language Functions	Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to structure: • Create and label representations of patterns or structures • Describe patterns or structures • Ask questions about others' use of patterns or structures

Key CCSS for Mathematical Practice 8: Look for and express regularity in repeated reasoning

Analytical Tasks	• Notice if calculations are repeated (i.e., reflect on arithmetic procedures) • Look both for general methods or solution strategies (generalize) and for shortcuts • Monitor reasoning process while attending to detail • Monitor and evaluate reasonableness of intermediate and final results • Search for regularity or trends in multiple representations (e.g., look for regularity in relationships among quantities, data in tables, and graphs) • Graph data and search for regularity or trends • Abstract from computation, build rules to represent functions
Receptive Language Functions	• Comprehend others' oral and written language and other representations regarding regularity (e.g., repetition of calculations, methods used, or evaluation of intermediate and final results) • Comprehend descriptions, discussions, and arguments about regularity (i.e., repeated patterns, discussions of methods or solution strategies, or evaluations of intermediate results as presented in multiple representations)
Productive Language Functions	Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to regularity in repeated reasoning: • Ask questions about others' use of repetition, methods or solution strategies, and evaluation of intermediate and final results • Explain patterns, discuss methods or solution strategies, and evaluations of results

Tables for Science

> Key point for teachers of Science:
>
> In the tables that appear below, the Framework offers useful conceptualizations of the language practices embedded within the CCSS and NGSS for science that span linguistic, discourse, interpersonal, sociocultural, strategic, and pragmatic competencies.

Table 5: Key Practices, Crosscutting Concepts and Disciplinary Core Ideas of the Science NGSS[28]

This table summarizes key science and engineering pactices.

Scientific and Engineering Practices	Disciplinary Core Ideas
1. Asking questions (for science) and defining problems (for engineering) 2. Developing and using models 3 Planning and carrying out investigations 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations (for science) and designing solutions (for engineering) 7. Engaging in argument from evidence 8. btaining, evaluating, and communicating information	**Physical Sciences** PS 1: Matter and its interactions PS 2: Motion and stability: Forces and interactions PS 3: Energy PS 4: Waves and their applications in technologies for information transfer **Life Sciences** LS 1: From molecules to organisms: Structures and processes LS 2: Ecosystems: Interactions, energy, and dynamics LS 3: Heredity: Inheritance and variation of traits LS 4: Biological Evolution: Unity and diversity
Crosscutting Concepts	**Earth and Space Sciences** ESS 1: Earth's place in the universe ESS 2: Earth's systems ESS 3: Earth and human activity
1. Patterns, similarity, and diversity 2. Cause and effect: Mechanism and explanation 3. Scale, proportion, and quantity 4. Systems and system models 5. Energy and matter: Flows, cycles, and conservation 6. Structure and function 7. Stability and change	**Engineering, Technology, and the Applications of Science** ETS 1: Engineering design ETS 2: Links among engineering, technology, science, and society

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[28] The Next Generation Science Standards are currently in draft format, but the basis of those standards is the National Research Council Framework, which enumerates these practices. A free copy of the NRC framework is available through www.nextgenscience.org.

Table 6: Key NGSS Science and Engineering Practices with Embedded Analytical Tasks and Receptive and Productive Language Functions

This table defines in detail these practices by outlining the language functions that ELLs need to engage with science and engineering content.

Scientific Sense-Making and Language Use	
Key NGSS Practice 1a: Ask questions (science)	
Analytical Tasks	Frame questions conceptually to • Achieve improved understanding of current topic • Elicit clarification of a statement just made by another • Elicit further details of models or explanations of others Conceptually frame and refine questions that can be investigated by further observations or measurements
Receptive Language Functions	• Comprehend and develop own understanding of a topic or another's ideas, expressed orally or in writing • Comprehend questions and responses of others
Productive Language Functions	Ask questions to • Achieve improved understanding of current topic • Elicit clarification of a statement just made by another or further details of models or explanations of others • Propose investigations to be carried out through further observations or measurements
Key NGSS Practice 1b: Define the problem (engineering)	
Analytical Tasks	• Analyze the needs and constraints of the situation • Analyze what design criteria are needed
Receptive Language Functions	• Comprehend oral or written explanations of needs and constraints • Comprehend suggestions of others
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to formulation and expression of design criteria: • Ask questions to elicit needs and constraints • Specify criteria using words and graphic representations • Describe design criteria and own analytic process orally or in writing
Key NGSS Practice 2: Develop models	
Analytical Tasks	• Develop and represent an explicit model of a phenomenon or system • Use a model to support an explanation of a phenomenon or system • Make revisions to a model based on either suggestions of others or conflicts between a model and observation

Receptive Language Functions	• Comprehend others' oral and written descriptions, discussions, and justifications of models of phenomena or systems • Interpret the meaning of models presented in texts and diagrams
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to a phenomenon or system using a model developed for this purpose: • Label diagrams of a model and make lists of parts • Describe a model using oral and/or written language as well as illustrations • Describe how a model relates to a phenomenon or system • Discuss limitations of a model • Ask questions about others' models
Key NGSS Practice 3: Plan and carry out investigations	
Analytical Tasks	• Refine questions to be investigated • Analyze variables in situation and decide whether and how variables are to be controlled • Analyze resources needed • Plan observations or measurements and how to record them • Predict expected results based on proposed model and explanation (i.e., based on a hypothesis about the system)
Receptive Language Functions	• Comprehend descriptions of variables and resources • Comprehend suggestions of others for the plan • Comprehend alternate hypotheses and predictions suggested by others • Read and follow investigation plan
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to investigation tasks: • Explain ideas for the task to others • Respond to others' suggestions or questions about the plan • Produce a written plan for an investigation • Make predictions • Describe observations • Describe conditions and record measurements
Key NGSS Practice 4: Analyze and interpret data	
Analytical Tasks	• Decide on ways to organize and display data (e.g., graphs, charts, and timelines) • Recognize relationships between variables found in data, and where possible suggest mathematical expressions of them • Compare results obtained to predictions
Receptive Language Functions	• Comprehend suggestions of others and discussion of data • Interpret questions from others about the data
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to analysis: • Create and label coherent representation of the data • Describe analysis and interpretations to others (orally or in writing) • Question others about their analysis

Key NGSS Practice 5: Use mathematics and computational thinking (linked to grade-level math standards)	
Analytical Tasks	• Interpret and produce graphs of data • Relate mathematical symbols to physical quantities • Recognize where units of measure are needed • Recognize and apply mathematical relationships in interpreting phenomena • Recognize and apply algorithms for repeated computation (e.g., in data spreadsheet) • Employ computational tools appropriately
Receptive Language Functions	• Comprehend mathematical statements and arguments of others • Comprehend proposed algorithms for calculations • Comprehend discussions of use and purpose of computational tools
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to mathematical ideas and computational algorithms: • Create and label coherent representation of data • Describe mathematical ideas in words as well as symbols • Describe and explain proposed algorithms for calculations
Key NGSS Practice 6: Construct explanations (science) and design solutions (engineering)	
Analytical Tasks	• Develop explanation or design • Analyze the match between explanation or model and a phenomenon or system • Revise explanation or design based on input of others or further observations • Analyze how well a solution meets design criteria
Receptive Language Functions	• Comprehend questions and critiques • Comprehend explanations offered by others • Comprehend explanations offered by texts • Coordinate texts and representations
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to a phenomenon or system (natural or designed): • Provide information needed by listeners or readers • Respond to questions by amplifying explanation • Respond to critiques by countering with further explanation or by accepting as needing further thought • Critique or support explanations or designs offered by others
Key NGSS Practice 7: Engage in argument from evidence	
Analytical Tasks	• Distinguish between a claim and supporting evidence or explanation • Analyze whether evidence supports or contradicts a claim • Analyze how well a model and evidence are aligned • Construct an argument
Receptive Language Functions	• Comprehend arguments made by others orally • Comprehend arguments made by others in writing

Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to the formation, defense, and critique of arguments: • Structure and order written or verbal arguments for a position • Select and present key evidence to support or refute claims • Question or critique arguments of others
Key NGSS Practice 8: Obtain, evaluate, and communicate scientific information	
Analytical Tasks	• Coordinate written, verbal, and diagrammatic inputs • Evaluate quality of an information source • Evaluate agreement/disagreement of multiple sources • Evaluate need for further information • Summarize main points of a text or oral discussion
Receptive Language Functions	• Read or listen to obtain scientific information from diverse sources including lab or equipment manuals, oral and written presentations of other students, Internet materials, textbooks, science-oriented trade books, and science press articles • Listen to and understand questions or ideas of others
Productive Language Functions	Communicate (orally and in writing) ideas, concepts, and information related to scientific information: • Present information, explanations, or arguments to others • Formulate clarification questions about scientific information • Provide summaries of information obtained appropriate a specific purpose or audience • Discuss the quality of scientific information obtained from text sources based on investigating the scientific reputation of the source, and comparing information from multiple sources

Section 2.4: Classroom Match

The Framework proposes that the deep knowledge required to understand the language practices embedded in the CCSS and NGSS extends to the classroom and teachers' and students' uses of language there. State ELP standards should reference *different types of communicative activities* embedded in subject matter pursuits, such as listening closely, asking questions, and engaging in sustained dialogue and arguing claims. In the table that appears below, the Framework offers a useful conceptualization of the multiple features of students' and teachers' language use in the disciplines while engaged in the *learning* of key practices of the CCSS and

> *State ELP standards should reference different types of communicative activities embedded in subject matter pursuits, such as listening closely, asking questions, and engaging in sustained dialogue and arguing claims.*

NGSS. The table attempts to provide a better understanding of what is currently being referred to as *academic language* and *academic literacy* by describing and illustrating some of the ways that language is used in diverse classrooms to break down traditional dichotomies between social and academic language.[29]

The two major columns of Tables 7-9 suggest unique elements of classroom language for both teachers and students. To elaborate upon students' language use and tasks, columns are subdivided into oral and written language in the classroom, and further subdivided into receptive and productive elements. The first major row in Tables 7-9 highlights multiple aspects of **modality**[30] in an attempt to move beyond lexical or structural definitions of language as vocabulary or grammatical correctness. Language used in the classroom involves interactions between teacher, students, and other adults in a variety of formats that include communication between individuals in pairs (one-to-one) or small groups (one-to-group), by students or teachers with the entire class (one-to-many), and by students with various written materials through oral, written, and multimodal communication. The second row indicates that embedded within these various modalities are distinct language-related tasks and activities that require unique registers of language,[31]

> *Language used in the classroom involves interactions between teacher, students, and other adults in a variety of formats that include communication between individuals in pairs (one-to-one) or small groups (one-to-group), by students or teachers with the entire class (one-to-many), and by students with various written materials through oral, written, and multimodal communication.*

including oral and written communication intrinsic to each disciplinary practice. The third row identifies some of the registers relevant to teachers' language use and students' oral and written language use.[32] Lastly, note that some areas within the tables (e.g., language tasks) are meant to be representative and not exhaustive.

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[29] The notion of "discipline-specific language in the K-12 classroom" applies to both secondary and elementary levels. Even in the early years of schooling, children are being socialized into forms of language and knowledge particular to various subject-area disciplines (math, science, English language arts). At the same time, however, it must be noted that these relate to *classroom* disciplines, rather than the disciplines themselves. In this sense, K-12 students are learning, for example, language appropriate for K-12 classroom learners of sciences rather than language appropriate for professional scientists themselves.

[30] **Modality:** Characteristics of the "channels" through which language is used, as in oral and written language versus receptive and productive language skills.

[31] Elements of register include colloquial and classroom registers, discipline-specific language and terminology, and disciplinary discourse conventions.

[32] It should be noted that these are selected examples only and do not attempt to reflect the full range and complexity of classroom registers.

Table 7: Discipline-specific Language in the K-12 ELA Classroom

Features of classroom language	Teachers' Receptive and Productive language use and associated language tasks	Students' language use and associated language tasks		
		Oral Receptive and Productive	**Written**	
			Receptive	**Productive**
Modality	Explanations and presentations (one-to-many, many to many)	Whole-class participation (one-to-many)	Comprehension of classroom-based and school-based formal and informal written and multimodal communication	Production of written classroom and school-based formal and informal written communication:
	Communication with small groups (one-to-group)	Small group participation (one-to-group)		» explanations » arguments » analyses » narratives » other ELA learner genres
	Communication with individual students (one-to-one)	Interaction with individual peers (one-to-one)	Interpretation of a range of literary and informational texts	
	Communication with parents (one-to-one)	Interaction with adults within school contexts (one-to-one)		Use increasingly precise terminology and ELA disciplinary conventions in writing
Registers	Colloquial + classroom registers + discipline-specific language and terminology	Colloquial + classroom registers + discipline-specific language and terminology	ELA written registers + discipline-specific language and terminology + disciplinary discourse conventions	
Examples of Registers	Classroom registers used by teachers for several goals or purposes • Asking guiding questions • Checking for understanding • Facilitating discussions ELA classroom discourse registers used by teachers for several goals or purposes • Explaining concepts, rephrasing, or amplifying • Constructing arguments	Classroom registers used by students for several goals or purposes • Comprehending teacher's explanations • Asking for clarification • Participating in discussions Learner appropriate discourse registers and conventions used by students for several goals or purposes • Making inferences about texts • Constructing arguments and explanations • Listening to and interpreting contributions of others, and responding appropriately • Comparing, contrasting, and synthesizing information from texts	Classroom, school, and ELA-learner written texts of multiple types (and expressed through language in certain registers) • Grade-level texts and textbooks • Teacher handouts/worksheets/syllabi • Labeling of items in drawings, models, diagrams and other visuals • Internet materials • Writing by other students • School announcements • Formal documents (e.g., grades, assignments, and assessment results)	

Table 8: Discipline-specific Language in the K-12 Mathematics Classroom

Features of classroom language	Teachers' Receptive and Productive language use and associated language tasks	Students' language use and associated language tasks		
		Oral Receptive and Productive	**Written**	
			Receptive	**Productive**
Modality	Explanations and presentations (one-to-many, many-to-many)	Whole-class participation (one-to-many)	Comprehension of classroom-based and school-based formal and informal written and multimodal communication	Production of classroom-based and school-based formal and informal written communication, such as
	Communication with small groups (one-to-group)	Small group participation (one-to-group)		• Explanations of word problems
	Communication with individual students (one-to-one)	Interaction with individual peers (one-to-one)		• Descriptions of one's own reasoning, solutions, or strategies
	Communication with parents (one-to-one)	Interaction with adults within school contexts (one-to-one)		• Descriptions of others' reasoning, solutions, or strategies
Registers	Colloquial + classroom registers + discipline-specific language and terminology	Colloquial + classroom registers + discipline-specific language and terminology	Math-learner written registers + discipline-specific language and terminology + disciplinary discourse conventions	

Examples of Registers	Classroom registers used by teachers for several goals or purposes • Giving directions • Guiding processes • Checking for understanding • Facilitating discussions • Exploring concepts • Presenting Math discourse registers used by teachers for several goals or purposes • Describing models, patterns, and structures • Explaining relationships between quantities and representations • Explaining reasoning • Constructing and defending arguments	Classroom registers used by students for several goals or purposes • Comprehending oral directions • Asking for clarification • Participating in discussions • Participating in exploratory talk • Participating in presentational talk Learner-appropriate math discourse registers and conventions used by students for several goals or purposes • Describing models, patterns, and structures • Explaining relationships between quantities and representations • Explaining solutions and strategies • Explaining one's own or others' reasoning • Constructing, defending, and critiquing arguments, reasoning, and solutions	Classroom, school, and science-learner written texts are of multiple types (and expressed through language in certain registers) • Grade-level texts and textbooks • Teacher handouts/worksheets • Labeling of items in diagrams and other visuals • Writing by other students • Internet materials • Math press articles • Syllabi • School announcements • Formal documents (e.g., grades, assignments, and assessment results)

Table 9: Discipline-specific Language in the K-12 Science Classroom

Features of classroom language	Teachers' Receptive and Productive language use and associated language tasks	Students' language use and tasks		
		Oral Receptive and Productive Whole-class participation (one-to-many)	Written	
			Receptive	Productive
Modality	Explanations and presentations (one-to-many, many-to-many)		Comprehension of classroom-based and school-based formal and informal written and multimodal communication	Production of classroom-based and school-based formal and informal written and multimodal communication, such as: written reports science journal entries
	Communication with small groups (one-to-group)	Small group participation (one-to-group)		
	Communication with individual students (one-to-one)	Interaction with individual peers (one-to-one)		
	Communication with parents (one-to-one)	Interaction with adults within school contexts (one-to-one)		
Registers	Colloquial + classroom registers + discipline-specific language and terminology	Colloquial + classroom registers + discipline-specific language and terminology	Science-learner written registers + discipline-specific language and terminology + disciplinary discourse conventions	
Examples of Registers	Classroom registers used by teachers for several goals or purposes Giving directions Checking for understanding Facilitating discussions Science discourse registers used by teachers for several goals or purposes Describing models Constructing and defending arguments Providing written or verbal explanation of a phenomenon or system	Classroom registers used by students for several goals or purposes Comprehending oral directions Asking for clarification Participating in discussions Learner-appropriate science classroom discourse registers and conventions used by students for several goals or purposes Describing models Constructing arguments Providing oral explanations of a phenomenon or system	Classroom, school, and science-learner written texts are of multiple types (and expressed through language in certain registers) Textbooks Lab or equipment manuals Writing by other students Internet materials Science-oriented trade books Science press articles Syllabi School announcements Formal documents (e.g., class assignment, quarterly grades, and assessment results)	

Section 3: Alignment Protocol

The alignment protocol presented below is offered as a guide to support states in examining the relationship between their ELPD standards and the Framework (and thereby the CCSS and NGSS).[33] The particular methodology employed here focuses on the four key areas identified in the Framework:

Section 3.1: Foundations: the degree to which the ELP standards transparently articulate the theoretical foundations (e.g. theory of action) upon which they are based as well as the degree to which the standards are organized according to the foundational theories employed.

Section 3.2: Progression: the degree to which the sequence or progression of language development found in the ELP standards is consistent with the theoretical foundations upon which the standards are based.

Section 3.3: Standards Match: the degree to which the ELP standards reflect the language expectations and underlying language practices embedded within the CCSS and NGSS standards found in the ELA, mathematics, and science tables.

Section 3.4: Classroom Match: the degree to which the ELP standards outline how they will be used to support classroom instruction.

Once the state ELP standards are examined for evidence of each question, each key area can be rated for its degree of alignment. A key area is aligned when the ELP standards contain clear, substantial evidence of the key area's descriptors, exemplifying the qualities suggested by the tables below. ELP standards deemed not to meet all the descriptors across the four key areas should be revised in light of feedback provided regarding areas of strength and areas in need of improvement.

The graphic below identifies the major components of this alignment protocol:

_____

[33] The alignment protocol uses an evidence-centered design format organized around a series of questions about the four key areas identified above. The goal of the ELPD Framework is to provide states with a tool by which they can determine how well their ELP standards capture the insights and key shifts found in the CCSS and NCSS. The relationship between the ELP standards and the CCSS and NCSS is mediated by the ELPD Framework. By fully *aligning* to the Framework, ELP standards will then *correspond* to the CCSS and NGSS (see Section 7.1 for the distinction between alignment and correspondence).

• What is the language development theory underlying the ELP standards

Foundations

• How does the progression of the ELP standards reflect the language development theory?

Progression

Classroom Match

• How do the ELP standards inform and guide language use in the classroom?

Standards Match

• How are the key language practices in the CCSS and NGSS addressed in the ELP standards?
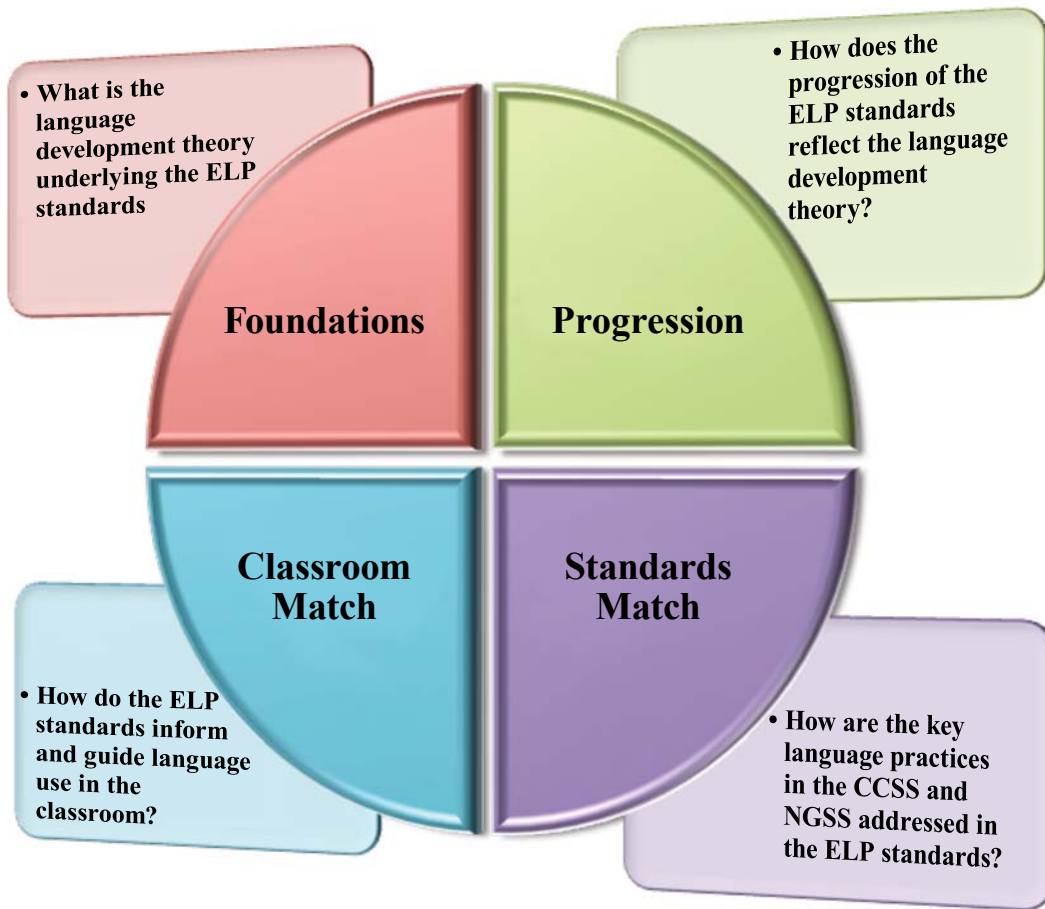
Figure 1: Alignment Protocol Components

Section 3.1: Foundations

This section of the alignment process requires the identification and description of the theoretical foundations behind the ELP standards, recognizing that there may be many theories regarding second language development or acquisition that serve as anchors for ELP standards. It is expected that theories are based on evidence found in the literatures on child and adolescent language development and second language acquisition and that the associated reference materials (i.e., research syntheses, reviews of the literature, or body of research studies) are found in ELP standards' documentation. Evidence should be offered as to the sequence of language development found within its ELP standards and how the language developmental sequences or progressions of the ELP standards are connected to underlying theories.

Table 10: Foundations Evidence

Element	Guidance Regarding Possible Evidence
1.1 What are the theoretical foundations of the ELP standards? 　A. How is language conceptualized? 　B. How is the second language acquisition process conceptualized?	A detailed presentation of conceptualizations supported by references to the theoretical literature in appropriate fields is included (e.g., applied linguistics and second language acquisition).
1.2 Are the theoretical foundations differentiated by age/grade, educational background? If so, how? How do theoretical foundations address socio-cultural background, primary language, and language proficiency level?	A justification of the applicability of the theoretical foundations to different ages or grade spans supported by research is outlined (e.g., syntheses, reviews of the literature, and body of research studies that support claims made).
1.3 How have the theoretical foundations been communicated?	Standards include a section in which theoretical foundations are presented with sufficient detail (and appropriate references) to allow professionals to understand how they fit into existing knowledge about second language acquisition and development.
1.4 What procedures are in place to validate the theoretical foundations of the ELP standards?	Procedures are described for validating standards (e.g., external experts' papers or briefs on the theoretical foundations, and empirical evidence showing how standards align to theoretical foundations).

Section 3.2: Progression

Evidence should be offered as to the sequence of language development found within its ELP standards and how the language developmental sequences or progressions of the ELP standards are connected to underlying theories. Language development is seldom linear and sequential, and individual ELLs seldom have the same developmental pathway due to differences in backgrounds and the type, quantity, and quality of English interactions. Thus the ELP standards must reflect the variations in the progression different ELLs acquire language, and model how levels of proficiency are envisioned within the standards. Evidence for progression of the standards should also show how the developmental sequences are distinct and can support assessment.

> *The ELP standards must reflect the variations in the progression different ELLs acquire language, and model how levels of proficiency are envisioned within the standards.*

Table 11: Progression Evidence

Element	Guidance Regarding Possible Evidence
How are the ELP standards organized such that they…	
2.1 Identify varying levels of students' English language proficiency?	Proficiency levels are organized to show a combination of "intuitive, qualitative and quantitative methods."[34] They include both productive and receptive language and make evident how stated proficiencies are related to disciplinary practices described in the Framework. If levels are being tentatively established as part of an ongoing validation process, methods for refining categories and descriptors should be specified.
2.2 Communicate students' ability to manage cognitively demanding tasks across language proficiency levels?	Examples show how students will demonstrate and express higher order thinking at each proficiency level. A range of higher order thinking skills is included at each proficiency level.
2.3 Support the ELP standards' theoretical foundations?	The progression of the standards is based on theoretical foundations including methodologies for scaling and developing descriptions of language proficiency, which have been cited and researched. Expectations are consistent with stated conceptualizations of language and second language acquisition.
2.4 Support the development of assessment and measurement tools?	Justification is provided for the number of levels adopted. Evidence is provided to support how these levels represent distinctions that can reasonably be measured and are based on actual student performance.

Section 3.3: Standards Match

This component requires the identification and description of the overlap between ELP standards and the key practices found in Tables 1-6 of Section 2.3 of the Framework (note that the unpacking of the key practices within Tables 2, 4 and 6 is meant to be representative and not exhaustive). Substantial overlap between the Framework's tables and state ELP standards is evidence that the standards provide sufficient support for the language underlying the CCSS and NGSS.[35]

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[34]   Adapted from the Common European Framework of Reference for Languages (CFER) criteria for descriptors of common reference levels.

[35]   The last question in this section (Element 3.4) highlights the need to identify how other non-English language arts, mathematics, or science related content is reflected in the ELP standards. The Framework does not describe key practices, analytic tasks, or productive and receptive language functions in these areas beyond these three; however, it should be understood that such practices, analytical tasks, and language functions should be part of states' ELP standards.

Table 12: Standards Match Evidence

Element	Guidance Regarding Possible Evidence
3.1 How are the key practices, as identified in Tables 1-6 of the CCSS and NGSS, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework in English language arts, mathematics, and science is clearly identified.
3.2 How are analytical tasks, as outlined in Tables 2, 4, & 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework's analytical tasks, on one hand, and ELP standards, on the other hand, is identified with links clearly identified.
3.3 How are language functions, as outlined in Tables 2, 4, & 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework's content practices and productive and receptive language functions, on one hand, and ELP standards, on the other hand, is identified with links clearly identified.
3.4 How are non-CCSS or NGSS standards addressed in the ELP standards? For example A. Social studies? B. Fine arts? C. Technical education? D. Physical education?	A description of the language associated with non-CCSS or NGSS standards is evidenced in the ELP standards.

Section 3.4: Classroom Match

This component of the alignment process requires the identification and description of the overlap between ELP standards and the modalities, registers, content practices, and language functions found in Tables 7-9 of Section 2.4 of the Framework. (Note that some areas within the tables (e.g., language functions) are meant to be representative and not exhaustive.)

Table 13: Classroom Match Evidence Table

Element	Guidance Regarding Possible Evidence
4.1 How are the modalities of classroom language, as outlined in Tables 7-9 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match in modalities between the Framework in English language arts, mathematics, and science and ELP standards is clearly identified. ELP standards' links to both teachers' and students' language uses and tasks are clearly indicated.
4.2 How are the registers of classroom language, as outlined in Tables 7-9 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Common and unique registers are specified precisely in the ELP standards. Links to standards are clearly indicated.
4.3 To what degree are all elements within Tables 7-9 of the Framework covered by the ELP standards?	A description of how well all elements within the Framework are covered by ELP standards is spelled out (e.g., the proportion of modalities, registers, language uses, and associated language tasks that are covered in ELP standards by each content area).

Section 4: Sample Models of Selective ELP Standards Aligned to the Framework

Section 4.1: Introduction to the Models

The purpose in presenting the following models is neither to present fully formed ELP standards nor recommend a particular format for those standards to appear within. They are intended merely as guidance for readers of the Framework to see how it could be fruitfully used in leading the construction and/or evaluation of state ELP standards. As such, the models are intentionally and explicitly incomplete, offering instead a snapshot of the Framework in action.

> These sample models are intended merely as guidance for readers of the Framework to see how it could be fruitfully used in leading the construction and/or evaluation of state ELP standards:
>
> > The first model balances the roles of both language functions (what people "do" using language) and forms (the language structures used to communicate) with the emphasis being given to those aspects of language that support the language necessary to meet the CCSS and NGSS.
> >
> > The second model conceives language proficiency expectations as a synthesis between two language development theories: systemic functional linguistics and processability theory.

The first model balances the roles of both language functions (what people "do" using language) and forms (the language structures used to communicate) with the emphasis being given to those aspects of language that support the language necessary to meet the CCSS and NGSS. They illustrate how one might integrate legal requirements for the measurement of listening, speaking, reading, and writing with progressions drawn from discursive activities within the standards. Finally, they suggest what instruction might do to enable students to meet such standards without focusing exclusively or primarily on aspects of grammatical competence (i.e., phonology, morphology, syntax, and lexis).

The second model conceives language proficiency expectations as a synthesis between two language development theories: systemic functional linguistics and processability theory. This model focuses specifically on the language of mathematics in middle school. Additionally, it provides a more detailed set of productive and receptive language functions and offers a crosswalk between these detailed functions and the Framework's productive and receptive functions in mathematics.

Section 4.2: Understanding Language Task Force Model

MEETING THE LANGUAGE DEMANDS OF
COMMON CORE STATE STANDARDS:

SAMPLE ENGLISH LANGUAGE PROFICIENCY DESCRIPTORS

Understanding Language Task Force

Valdés, G., Walqui, A., Kibler, A., and Alvarez. L.

PART 1: INTRODUCTION

The Understanding Language Initiative

The *Understanding Language Initiative* led by Kenji Hakuta and Maria Santos has as its purpose bringing attention to English language learners and to the second language acquisition process in the context of the new *Common Core State Standards* (CCSS) and the *Next Generation Science Standards* (NGSS). As pointed out on the website announcing the launch of the online community and providing information about their work (http://ell.stanford.edu/policy-news/understanding-language-initiative-launch), the long-term goal of the initiative is to help educators understand the new standards and recognize the ways in which participation in rich standards-based instruction can support the acquisition of language in English language learners.

As a first step in its work, the initiative commissioned a set of papers (now available on the above website) that focused on the language and literacy issues found in the standards and identified both challenges and opportunities for English language learners. In addressing these challenges, three principal shifts in perspective were identified in the commissioned papers:

1. Language acquisition, rather than an individual cognitive process, is a social process through which language is acquired in social contexts.

2.. The acquisition process, rather than involving primarily the sequenced building of forms and structures and vocabulary aimed at accuracy, fluency and complexity, is a non-linear and complex developmental process aimed at comprehension and communication.

3.. Participation in activity simultaneously develops conceptual understanding and language use.

English Language Proficiency Descriptors Supporting the Common Core State Standards

Key Principles

The model descriptors presented here have as their purpose illustrating a different approach to the organization of second language acquisition progressions than is currently in use in many assessor-

oriented ELD scales and descriptors in the United States. The approach illustrated here draws most directly from the *Common European Framework for Languages (CEFR)* which includes user-oriented and constructor-oriented proficiency scales focusing on *what the learner can do* rather than *how well the learner performs*. CEFR has been used widely in the EU as a basis for recognition of language qualifications, curriculum development, and assessment. [36]

These model descriptors were created by a special task force drawn from the Understanding Language Initiative Steering Committee in order to inform the development of English Language Proficiency (ELP) standards in ways that are consistent with the following premises:

A. They <u>correspond in a meaningful way to the CCSS</u>, with "meaningful" being defined in an explicit way that can support systemic attention to ELLs (i.e., supports standards, assessments, materials, teacher preparation, leadership capacity, etc.).

B. They are <u>supported by research and best practice in second language acquisition</u> with respect to: aspects of language that are supportive of the variety of language functions present in schooling, and developmental progressions of language development that account for differences in the varied social and linguistic settings in which ELLs learn.

C. They balance the roles of both language functions (what people "do" using language) and forms (the language structures used to communicate), with the <u>emphasis being given to those aspects of language that support the language necessary to meet the content standards.</u>

D. They illustrate how one might <u>integrate legal requirements</u> for the measurement of listening, speaking, reading, and writing <u>with progressions drawn from discursive activities within the standards.</u>

E. They suggest what instruction might do to <u>get students to meet such standards without focusing exclusively or primarily on aspects of grammatical competence</u> (i.e., phonology, morphology, syntax, and lexis).

Organization of the Standards

Because these descriptors are illustrative only, they focus on only two key language "practices:" (1) <u>construct explanations</u> and (2) <u>argue from evidence,</u> practices that are found in the CCSS in the areas of mathematics (Standards for Mathematical Practice 1, 3) and English language arts (Writing Standards 1, 2) as well as the Next Generation Science Standards (Scientific and Engineering Practices 6, 7). A full set of descriptors would require thorough analysis of and descriptor development for *all* key language practices found in the standards.

We present a listing of progressions (supported by instructional examples and student performance descriptions). We first include an at-a-glance look at the way that these progressions are organized for students at grades K-3 and 9-12. We then provide more detailed descriptors as well as examples

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[36]   Information about the Common European Framework of Reference for Languages is available at <u>http://www.coe.int/t/dg4/linguistic/cadre_en.asp.</u>

of instruction and student sample student performance for K-3 and 9-12. A full set of descriptors would require articulation of progressions for *all* grades, regardless of how grades are clustered into various bands.

Descriptors are divided into three levels, which have two important characteristics. First, they are individual-developmental rather than class-based-instructional levels, meaning that levels are designed to document individual student progress and should *not* be interpreted as describing the content of leveled courses for ELLs. Second, the levels outlined here describe students' first three stages of development while participating in CCSS/NGSS instruction; the decision was made—for purposes of this exemplar—to focus on early stages only, and multiple additional levels could be articulated. Because this model is suggestive rather than comprehensive, levels would need to be developed and refined further before such a model could be implemented.

Finally, it is important to note the descriptors are based upon expectations that

- Students will complete language practices outlined in the descriptors with "developing English," which does not impede their ability to engage in the practices successfully;

- Students will encounter texts that are not only written, but also visual and/or multimodal; and

- Texts are age-appropriate for students, regardless of their English proficiency level.

How to Read this Document

This document has the following sections, which can be read in any order:

- **Part 1: Introduction** – this section provides a rationale for the descriptors and an overview of their key principles and organization.

- **Part 2: Descriptors of ELP Standards** – this section presents descriptors for grade bands K-3 and 9-12, first in brief form and then in extended form with instructional examples.

- **Part 3: Alignment** – this section explains how the descriptors align to the Framework using the Alignment Protocol provided in the Framework document.

PART 2: DESCRIPTORS OF ELP STANDARDS

Sample Brief English Language Proficiency Descriptors Supporting the Common Core State Standards

This section presents descriptors for grade bands K-3 and 9-12, first in brief form
and then in extended form with instructional examples.

Brief Descriptors K-3

Level	Modality		Selected Language Practices Identified in the CCSS	
			Construct Explanations (ELA, Math, Science)	**Argue from Evidence** (ELA, Math, Science)
Level 1	**Oral**	**Receptive**	• Can begin to guess intelligently at topic. Continues to listen past frustration to make sense of incoming speech.	• Can comprehend that speakers disagree by relying on his/her experience in L1 interaction.
		Productive	• Can respond to choice questions in which an explanation is presented.	• Can begin to express agreement or disagreement with gestures, basic utterances, memorized chunks, L1, and intonation.
	Written	**Receptive**	• Can guess intelligently at the topic of written explanations when these are accompanied by illustrations.	• No examples of this practice at this age-band.
		Productive	• Can reproduce drawings or diagrams of known items or ideas used in class that explain how something works.	• No examples of this practice at this age-band.
Level 2	**Oral**	**Receptive**	• Can comprehend most teacher explanations if supported by gestures, illustrations, and other scaffolds.	• Can comprehend main points of others' arguments if provided with background information and other scaffolds.
		Productive	• Can draw from and build upon others' explanations using gestures, pictures, and memorized language chunks.	• Can ask questions for clarification about others' arguments. Can draw from and build upon segments of others' arguments.
	Written	**Receptive**	• Can comprehend written explanations when he/she has knowledge about the topic and can draw from images.	• Can identify argument and evidence given in a text if provided with support and examples.
		Productive	• Can draw from and build upon basic illustrated written explanations if provided with examples.	• Can draw from and build upon written arguments and statements presenting evidence if provided with examples.
Level 3	**Oral**	**Receptive**	• Can comprehend almost all key points of teacher explanations that are not supported by gestures or other scaffolds.	• Can comprehend almost all points of disagreement in a discussion. Can distinguish arguments not supported by evidence.
		Productive	• Can draw from and build upon explanations produced by other students, using appropriate disciplinary terminology.	• Can draw from and build upon others' arguments and statements that provide evidence using gestures, pictures, memorized language chunks and other communicative strategies.
	Written	**Receptive**	• Can comprehend written explanations of topics covered in class. Will rely to some degree on illustrations and other graphic materials.	• Can comprehend arguments and identify evidence in age-appropriate written texts on topics covered in class. Will rely to some degree on illustrations and other graphic materials.
		Productive	• Can produce written explanations of processes with the support of examples, can begin to rely less on illustrations.	• Can write out the arguments and supporting evidence he/she can produce orally. Can continue to draw from and build upon examples.

Sample Brief English Language Proficiency Descriptors Supporting the Common Core State Standards

Brief Descriptors 9-12
(Extended 9-12 descriptors begin on page 55.)

Level	Modality		Selected Language Practices Identified in the CCSS	
			Construct explanations (ELA, Math, Science)	Argue from Evidence (ELA, Math, Science)
Level 1	Oral	Receptive	• Can begin to guess intelligently at a speaker's explanation of ideas, actions, or processes if the topic is known and students have been previously alerted to the function of discourse markers in explanation. Can explicitly understand the relation in English between reasons and consequences.	• Can begin to guess intelligently at a speaker's main argument. • Can draw on resources, including the L1, to understand the main point of arguments.
		Productive	• Following an example of a relevant explanation, student can describe reasons in different but known situations.	• Can begin to express agreement or disagreement with gestures, basic utterances, memorized chunks, L1, and intonation. • Can make statements to fill interactional turns regarding own or other's argument.
	Written	Receptive	• Can identify, follow, and partially comprehend explanatory statements in a text if made aware of the structure of these texts and the markers that characterize explanations (such as causal connectors).	• Can identify statements or segments of a text that provide arguments.
		Productive	• Given a clear example, students can use causes and reasons to explain in writing why something is the case or happened.	• Can describe an argument by drawing and labeling.
Level 2	Oral	Receptive	• Can understand a speaker's explanation of ideas, actions, or processes in topics that are known without prior examples.	• Can understand most main arguments presented by teacher if supported by gestures, illustrations, and other scaffolds.
		Productive	• Can construct and articulate reasons and consequences related to situations that they know about.	• Can use examples, gestures, pictures, memorized language chunks, and basic language structures (I think xxx) as well as some L1 to make an argument related to subject matter, including claims and reasons/supporting evidence.
	Written	Receptive	• Can understand simple written explanations related to known topics. • Are able to relate their understanding to others in their L1.	• Can comprehend written arguments he/she reads when he/she has relevant background knowledge and can draw from accompanying images to support comprehension. May miss details related to reasons/evidence.
		Productive	• Can plan and express in writing, with the help of relevant examples, explanatory texts about known topics, using appropriate connecting words and phrases.	• Guided by a model text, can write a basic argument with claims and reasoning/evidence, using developing English structures.

Level 3	**Oral**	**Receptive**	• Can understand a speaker's explanation of ideas, actions, or processes in topics that are novel if the explanation is scaffolded.	• Can understand teacher and some peer arguments about subject matter if supported by gestures, illustrations, background knowledge, and other scaffolds.
		Productive	• Can plan, construct, and articulate reasons and consequences related to novel situations with appropriate interactional **scaffolding**[37] from peers or teacher.	• Can make argument on known topic including claims, reasons/evidence, and counterclaims and using developing English structures.
	Written	**Receptive**	• Can understand written explanations about unknown topics with appropriate scaffolding. Can relate their understanding to others mostly in English.	• Can comprehend written arguments, claims reasons/evidence, and counterclaims he/she reads when he/she has relevant background knowledge and can draw from accompanying images to support comprehension.
		Productive	• Can plan and produce explanatory texts on unknown topics provided with appropriate scaffolding from the teacher or peers, mostly in English.	• Using a model text can create an original argument about a related topic including claims, reasons/evidence, and counterclaims and using developing English.

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37 **Scaffolding:** Pedagogically, a scaffold is the support offered students so that they can successfully engage in activity beyond their current ability to perform independently. Specific scaffolds temporarily support the development of understandings, as well as disciplinary (and language) practices. Once development takes place, scaffolds are removed and new ones are erected to support new needed developmental work. There are two aspects of pedagogical scaffolding: structure and process.

Sample Extended Functional Descriptors

Construct Explanations: K-3

Level	Modality		Construct Explanations (ELA, Mathematics, Science)
Level 1	Oral	Receptive	• Can begin to guess intelligently at topic of teacher explanations if provided guided listening instruction in monitoring and improving his/her comprehension. Will rely greatly on gestures, illustrations, advanced organizers, and/or background knowledge. • Can respond to instructional questions and activities about explanations in ways that signal emerging comprehension. • Can activate comprehension strategies on which s/he has been instructed to continue to listen and observe.
		Productive	• Can begin to draw from and build upon others' statements that explain their observations. (Kittens are like big cats.) • Can request information or clarification using memorized chunks or expressions. • Can use gestures, pictures, and memorized language chunks, as well as some L1, to communicate his/her original meanings.
	Written	Receptive	• Can identify topic of texts that explain known concepts (parts of the body, plants and animals grow and change), such as texts jointly constructed by the class and/or read repeatedly by the teacher and others.
		Productive	• Can explain how something works by drawing and labeling similar drawings used in class. • May attempt to write what he/she can say if provided examples of written explanations.
Level 2	Oral	Receptive	• Can comprehend most teacher explanations if supported by gestures, illustrations, connections to background knowledge, and other scaffolds. May miss some details. • Can strategically ignore what s/he does not understand and focus on what s/he does understand. Will manifest growth in ability to anticipate developments, revise misunderstandings, and fill in gaps. Will increase in ability to continue listening when confused or frustrated.
		Productive	• Can make statements that explain his/her observations and communicate original meaning by imitating the language of others and by using other communicative strategies (e.g., gestures, pictures, memorized language chunks, and basic language structures (This is xxx), as well as some L1. (The animal mastica the food with the teeth). Main ideas can be understood by teacher or peers in the child's classroom. • Can request information or clarification drawing from language used by others.
	Written	Receptive	• Can use features common to explanatory texts (headings, images) to make predictions about content. • Can comprehend written explanations he/she reads when he/she has relevant background knowledge and can draw from accompanying images to support comprehension. May miss some details. • Can ask clarification questions that demonstrate comprehension of some aspects of the written explanation.
		Productive	• Can produce an illustrated explanation if provided with an example. Will write what he/she can say but will also draw from and build upon other language contained in the example. Will label elements of the explanation of the observed phenomenon accurately if such terminology has been taught.

Level 3	**Oral**	**Receptive**	• Can comprehend almost all key points of an un-supported teacher explanation. Still profits enormously from explanations supported by gestures, illustrations, connections to background knowledge, and other scaffolds. • Can manifest comprehension by posing questions using various communicative strategies, including memorized utterances, gestures, facial expressions and intonation.
		Productive	• Can use information obtained from observations to construct an explanation. Will draw from and build upon others' language and use memorized utterances and a combination of other communicative strategies. Explanation can be understood by teachers and peers familiar with the student's classroom context and/or the focus of student's observations. • Can use disciplinary terminology taught in class in his/her explanation (liquid, solid, gas).
	Written	**Receptive**	• Can use features common to explanatory texts (headings, bolding, captions, images) to focus on main ideas and key details. • Can identify the relationship between explanation and information about phenomena. Can draw from accompanying images to support comprehension. • Can elicit clarification or further explanation about aspects of text he/she does not understand or is interested in. Questions demonstrate comprehension of aspects of explanation. • Can make relevant connections between multiple related explanations.
		Productive	• Using a sample text, can create an original explanation about a similar set of observations drawing on what s/he can say as well as from other written materials and the speech of others.

Instructional scenario and examples of student participation and competencies: Level 1

The teacher has been guiding students in listening and observing carefully. As part of a unit on plants and animals, she draws the life cycle of a pumpkin as she explains and labels the different stages. When asked what the teacher is explaining, a student can show his understanding by

- Responding in L1 "how a pumpkin grows"

- Creating his or her own drawing of a pumpkin's life cycle and labeling it appropriately (e.g., seed, flower, pumpkin)

- Responding to questions about what he has heard (e.g., *What does the seed need to grow? Water)*

He uses his drawing of the pumpkin's life cycle to explain the process himself, while pointing to each stage: "*This seed. This plant. This flower. Little, this is pumpkin little. Big. And seed.*"

The class jointly constructs a written text explaining the life cycle of a pumpkin. Each child then receives a copy of the text to read and illustrate.

Finally, each student draws the life cycle of another plant or animal the class has studied and uses resources in the classroom to label different stages. Using the class' jointly constructed book as a mentor text, the student creates a book describing the life cycle of his chosen plant:

"This is the seed. And the plant is grow. And the flower. And the tomato. And the seed."

Table 3: Discipline-specific Language in K-3 Instructional Scenario: Level 1 (Construct Explanations)

Features of classroom language	Teachers' language use and associated language tasks	Students' language use and associated language tasks			
		Oral		Written	
		Receptive	Productive	Receptive	Productive
Modality	Explanations and presentations (one-to-many, many to many) Teacher guides the class through a video presentation of the life cycle of the pumpkin. Teacher draws and explains the life cycle of the pumpkin on the white board and labels parts of the process.	Whole-class participation (one-to-many) Students ask questions about pumpkins, their color, their size, and where they grow. Students discuss what they know about plants and how they grow and what they would like to know, using a KWL chart. Students respond to teacher's questions on details of what she explained. After video and teacher presentation, the class returns to their KWL chart and discusses which questions they can now answer. They also review the information they listed as known, to confirm its accuracy.		Comprehension of classroom-based and school-based formal and informal written and multimodal communication: Each child uses the text constructed by the class and reads and illustrates it. Each child selects a book on the life cycle of another plant or animal to look through, examine the illustrations, and read.	Production of written classroom and school-based formal and informal written communication: The class jointly constructs a written text explaining the life cycle of a pumpkin. Each student draws the life cycle of another plant or animal the class has studied and uses resources in the classroom to label different stages. Using the class' jointly constructed book as a mentor text, the student creates a book describing the life cycle of his chosen plant.
	Communication with small groups (one-to-group) Teacher breaks students into groups to draw life cycles of the pumpkin and gives instructions.	Small group participation (one-to-group) Student draws life cycle of pumpkin and explains the process to peers in his group.			
	Communication with individual students (one-to-one) Teacher clarifies life cycle process for student, repeats, uses gestures, draws and patiently scaffolds student's attempt to ask questions.	Interaction with individual peers (one-to-one) Student asks a peer for assistance in drawing the life cycle of another plant or animal and labeling parts of the process.			
	Communication with parents (one-to-one)	Interaction with adults within school contexts (one-to-one)			

Argue from Evidence: K-3

Level	Modality		Argue from Evidence (ELA, Math, Science)
Level 1	**Oral**	Receptive	• Can understand that a speaker disagrees by relying on his/her experience in L1 interaction.
		Productive	• Can express agreement or disagreement with gesture, basic utterances, memorized chunks, L1, and intonation.
	Written	Receptive	• No examples of this practice at this age band.
		Productive	• No examples of this practice at this age band.
Level 2	**Oral**	Receptive	• Can comprehend main points of others' arguments if supported by gestures, illustrations, connections to background knowledge, and other scaffolds. May miss some details. • Can strategically ignore what s/he does not understand and focus on what s/he does understand. Will manifest growth in ability to anticipate arguments and evidence, revise misunderstandings, and fill in gaps. Will increase in ability to continue listening when confused or frustrated. • Can answer questions about evidence included in others' arguments and engage in follow-up activities in ways that communicate basic understanding.
		Productive	• Can ask questions about others' arguments. • Can draw from and build upon segments of others' arguments and also use gestures, pictures, and memorized language utterances to communicate meaning.
	Written	Receptive	• Can identify arguments and evidence given in a text if provided with support and examples. • Can sort statements into for and against positions. • Can ask clarification questions or respond to text in ways that demonstrate some comprehension of the written argument.
		Productive	• Can produce a written argument and provide supporting evidence by closely imitating a sample text. Will draw on segments of others' speech in the classroom as well as on memorized chunks and expressions.
Level 3	**Oral**	Receptive	• Understands almost all points of disagreement in a discussion. Still profits enormously from explanations supported by gestures, illustrations, connections to background knowledge, and other scaffolds. • Elicits clarification or comments on discussion. Questions or responses provide evidence of comprehension of discussion.
		Productive	• Can draw from and build upon others' arguments and statements that provide evidence and also gestures, pictures, memorized language chunks and other communicative strategies to communicate meaning. • Can present arguments and evidence that can be understood by teachers and peers familiar with the student's classroom context and or the focus of students' area of focus.
	Written	Receptive	• Can comprehend arguments and identify evidence in age-appropriate written texts on topics covered in class. • Can comprehend and relate written arguments to one another, with support of background knowledge or accompanying illustrations. • Can elicit clarification or respond to text in ways that indicate comprehension.
		Productive	• Can write the arguments s/he can produce orally and provide supporting evidence using illustrations, drawings, and other devices that communicate meaning. Will draw substantially from written examples provided as well as from language of teacher and peers.

Instructional scenario and examples of student participation and competencies: Level 3

As part of a unit on geometry, the class is using "guess the shape" riddles to learn about the attributes of different shapes. The teacher presents a riddle to the class. "This shape has four corners. It also has four equal sides and four right angles." The class looks at different shapes, and students present arguments about the shape they think it is.

A student can follow the discussion, as her peers debate whether it is a square or a parallelogram. She asks, "Is this a parallelogram?" (pointing to a shape in the room), to elicit clarification. She listens to her peers presenting their opinions and giving evidence and then gives her own opinion with evidence: "It's a square. Right angle is like this (making a right angle with her fingers). The parallelogram sides is different."

The teacher presents contradictory written arguments about another "guess the shape" riddle. The student is able to note the difference between the two arguments, choose the one he/she agrees with, and state a reason why in English.

Using the mentor texts above, she writes an argument about a different riddle, providing evidence for her argument: "I think the riddle is about a triangle. A triangle has 3 sides and 3 angles. Together two triangles = square. You can do a square with 2 rectangles, but rectangle have 4 sides." She draws a picture to illustrate how two triangles can be combined into a square.

SAMPLE EXTENDED FUNCTIONAL DESCRIPTORS

Construct Explanations: 9-12

Level	Modality		Construct Explanations (ELA, Math, Science)
Level 1	Oral	Receptive	• Can discuss the purpose of explanatory texts in English if provided with assistance—including the use of his/her L1. Can discuss in her/his L1 the purpose of these texts, their typical organization, and can recognize linguistic markers of the genre in English. • Can explicitly understand the relation in English between reasons and consequences, which has been presented with the assistance of the L1. • Can begin to guess intelligently at a speaker's explanation of ideas, actions or processes, if the topic is known. • Can locate markers that help construct explanations in oral English if helped by careful teacher scaffolding. • Can be encouraged to deal with ambiguity and to persevere in their efforts to understand oral explanations. • Can begin to identify the purpose of oral explanatory texts. • Can practice inquiring about the purpose of oral explanatory texts.
		Productive	• Can describe sequences of reasons and consequences in different but known situations if they are provided with a model of a relevant explanation. Can request information or clarification using memorized chunks or expressions. • Can use examples, gestures, pictures, and memorized language chunks, as well as some L1, to construct oral explanations.
	Written	Receptive	• Can identify, follow, and partially comprehend explanatory statements in a text if made aware of the structure of these texts and the markers that characterize explanations in writing (such as causal connectors).
		Productive	• Given a clear example, can use causes and reasons to explain in writing why something known is the case. • Can work collaboratively (ideally in language alike groups so they can help each other in their L1) following instructions to create written explanations about known topics.

Level 2	**Oral**	**Receptive**	• Can understand the key reasons that motivate known and some unknown actions after practicing listening to model explanations. • Can understand a speaker's explanation of ideas, actions, or processes in topics that are known without prior modeling. • Provided scaffolding, such as a couple of focus questions, student can outline or fill in a graphic organizer delineating reasons and consequences in specific oral texts. • Can tolerate more easily what he/she does not understand in a text, focusing on what is understood. • Can be a willing guesser of oral explanatory texts, anticipating developments, revising misunderstandings, and filling in gaps. • Can answer questions about reasons expressed in a text. • Can be an increasingly accurate guesser when listening to explanatory texts and can demonstrate listening stamina.
		Productive	• Can construct and articulate reasons and consequences related to situations known if provided the right scaffolds, for example if provided with formulaic expressions to begin his/her report. • Can understand main ideas but these ideas are expressed with limitations. • Can express her/his progress in being able to construct explanatory texts.
	Written	**Receptive**	• Can understand simple written explanations related to known topics. • Can relate understanding to others in their L1 and their emerging English.
		Productive	• Can plan and express in writing, with the help of relevant examples, explanatory texts about known topics using appropriate connecting words or phrases. • Can discuss her/his awareness of developing skill in constructing explanatory texts in emerging English. Can demonstrate increasing internalization of criteria for what counts as a successful explanatory text. • Can handle inability to write explanatory texts in English easily and can persevere with a first draft and subsequent revisions.
Level 3	**Oral**	**Receptive**	• Can understand a speaker's explanation of ideas, actions or processes in topics that are novel if the explanation is well supported by using diagrams, graphic organizers, elaborations, etc. • Can engage in intensive listening of a recorded explanatory text with the help of teacher who prompts the listening with questions and elaborations that focus on understanding the explanations presented and how they are constructed in English. • Can engage in global listening of recorded explanatory texts with the assistance of the teacher. After listening to the text twice without interruption, student can outline the reasons given for why something is the case.
		Productive	• Can plan, construct, and articulate explanations related to novel situations with appropriate interactional scaffolding (questions, diagrams, pointing to markers of explanations in English) from peers or teachers.
	Written	**Receptive**	• Can understand written explanations about novel topics with appropriate scaffolding. • Can fill out graphic organizers that outline explanations for a variety of phenomena. • Can relate understanding of explanations to others mostly in English.
		Productive	• Can plan and produce explanatory texts on new topics provided with appropriate scaffolding from the teacher or peers, mostly in English. • Can persevere in trying to arrive at a successful text that explains a situation adequately.

Instructional scenario and examples of student participation and competencies: Level 3

After reading Frost's *The Road not Taken,* students are asked to construct a collaborative poster. Each table is assigned a different stanza from the poem and the teacher sets the requirements for the task. The poster must communicate the main ideas in the stanza by using a relevant quote, an original statement that the students need to construct jointly, a symbol, and a picture. In the following transcript the students have misunderstood the requirements and decide that their original phrase must rhyme.

S1: I know. The quote can be, "I need to look more than a road"?

S2: It's supposed to be like a decision…We should write a little bit like a hard word, you know?…How about this, "And then looked down far as I could…How about this, how about, "I looked far for the right decision"? No, it has to rhyme!

S2: How about this, "I'm Robert Frost, I've got to decide, which path to take, right or wrong." No, "right or wrong" ruined it. (begins writing in a notebook) "I'm Robert Frost, I have to choose, but it's difficult for me, Robert Frost, to find the truth."

S3: I don't know, write it, write it. Write all of it, then we can fix it.

S2: "I'm Robert Frost, I have a path to choose. It's hard for me,"

S3: "Robert Frost,"

S2: "to find the truth." It's like a rap.

S3   Let me see (reading from the notebook), "I'm Robert Frost, I have a path to choose,"

S2: "it's hard for me to find the truth." Like, "truth" and "Frost" kind of go together…

S3: "I'm Robert Frost, I have a path to choose,"

S2: Oh, oh! "to choose the good or to choose the wrong."

S3: Uh, "to choose the right or to choose the wrong."

S2: Yeah, yeah, "to choose the right or to choose the wrong."

S3: But he doesn't know which one is wrong…

S2: Okay, "I'm Robert Frost, I have a path to choose, (writing the new ending) it's up to me to find the truth."

S3: Better. I think this one makes more sense and it explains more.

S2: Yeah, but he still needs to choose, "to choose the right or to choose the wrong."

S3: Wait.

S2: No, no, now it doesn't make sense, "to choose the right or to choose the wrong."

S3: It doesn't make sense because he doesn't know which one is right, which one is wrong. That's the point of asking himself which way to go.

S2: How about, "I gotta choose now, or I might be"

S3: The other one is better.

S2: Okay, how about this, "I might choose one, but I might be wrong."

S3: Yeah. Write it, and write it fast. "I might choose one, but I might be wrong."

S2: (writing) Keep repeating it.

S3: "I might choose right, but I might be wrong."

S2: "I'm Robert Frost, I have a path to choose. I might choose the right, but I might be" (puzzled)

S3: "wrong."

S2: Okay, "I'm Robert Frost, I have a path to choose. I might choose the right, but I might be…?

S3: (pointing to notebook) This is good until this part. We have to think up of the ending.

S2: "I might choose the right, but I might be…" Only "wrong" goes there.

S3: Where's the dictionary? (S2 leaves group)

The boys have finished their illustration and become interested in the problem completing the original quote.

S4: Rhyme something with "right" instead of "wrong."

S3: Yes, I know.

S1: And it gotta rhyme. (S2 returns with the teacher)

S3: We think that after the "right" part, it's right, but we don't know.

S2: (reading) "I'm Robert Frost, I have a path to choose. I might choose the right,"

T: "but it might be wrong."

S3: But it doesn't rhyme.

T: You want it to rhyme?

S2: Yeah.

T: "I might choose the right," the path that's right? Uhm, why don't you use homophones? What's a homophone for right?

S2: (writing in the air) Write.

T: So what did he do in his life?

S2: "I might choose the right, but I might be…"

S1: "I might choose the right road so I can write."

T: (the teacher leaves)

S3: "I might choose the right that might help me write."

Table 3: Discipline-specific Language in 9-12 Instructional Scenario: Level 3 (Argue from Evidence)

Features of classroom language	Teachers' language use and associated language tasks		Students' language use and associated language tasks			
			Oral		Written	
	Receptive	Productive	Receptive	Productive	Receptive	Productive
Modality	Explanations and presentations (one-to-many, many to many) Teacher guides the class through simultaneous group collaborative readings (reading is shared in four voices, signaled in the poem by diverse fonts) of *The Road Not Taken*. Teacher invites each group to create a collaborative poster about an assigned stanza. To capture the essence of the stanza each poster should include a quote, an original phrase (created by the group), a picture, and a symbol.		Whole-class participation (one-to-many) Students ask questions about the poem. Students respond to teacher's questions on details of what she explained.		Comprehension of classroom-based and school-based formal and informal written and multimodal communication: Students read the poem. Students read collaborative posters constructed by their group and other groups about their assigned stanza.	Production of written classroom and school-based formal and informal written communication: Groups jointly construct a written text explaining the main ideas of a stanza from the poem using a relevant quote and original statement, along with a symbol and picture.
	Communication with small groups (one-to-group) Teacher responds to group queries about poster and poem by asking questions and making suggestions.		Small group participation (one-to-group) Students negotiate with group members possible quotes, original statements, symbols, and pictures for the collaborative poster, suggesting own and responding to peers' ideas about their assigned stanza.			
	Communication with individual students (one-to-one) Teacher responds to individual concerns about poster and poem by posing those questions back to the group.		Interaction with individual peers (one-to-one) Students ask peers for assistance in writing down text suggested by their peers.			
	Communication with parents (one-to-one)		Interaction with adults within school contexts (one-to-one)			

Argue from Evidence: 9-12

Level	Modality		Argue from Evidence (ELA, Math, Science)
Level 1	**Oral**	**Receptive**	• Can begin to guess intelligently at the main argument provided by teacher if given guided listening instruction in monitoring and improving comprehension and with the support of gestures, illustrations, advanced organizers, and background knowledge including the L1. • Can draw on resources to respond to comprehension check questions or activities.
		Productive	• Can make statements to fill interactional turns in which an argument is expected by using basic structures, single words, gestures, and L1. • Can request information or clarification using memorized chunks or expressions. • Can use models, gestures, pictures, and memorized language chunks, as well as some L1, to explain own or other's argument.
	Written	**Receptive**	• With support and text at reading level, can identify statements or segments of the text that make an argument. • Can read and comprehend texts that explain known concepts, such as texts jointly constructed by the class and/or read repeatedly. • Can display information obtained from texts writing in his/her L1 if receiving instruction in this language.
		Productive	• Can explain an argument by drawing and labeling. • Can follow a simple example to write an argument, using developing English structures. With support, can copy and then produce original simple statements using developing English structures and L1.
Level 2	**Oral**	**Receptive**	• Can understand most main arguments presented by teacher if supported by gestures, illustrations, and other scaffolds. • Can differentiate between some claims and reasons/supporting evidence, but may miss details related to the latter. • Can respond appropriately to comprehension check questions or activities to communicate basic understanding of claims and evidence supporting an argument.
		Productive	• Can use models, gestures, pictures, memorized language chunks, and basic language structures (I think xxx) as well as some L1 to make an argument related to subject matter, including claims and reasons/supporting evidence.
	Written	**Receptive**	• Can comprehend written arguments he/she reads when he/she has relevant background knowledge and can draw from accompanying images to support comprehension. May miss details related to reasons/evidence. • Can ask clarification questions that demonstrate comprehension of some aspects of the written argument.
		Productive	• Guided by an example, can write a basic argument with claims and reasoning/evidence, using developing English structures. • Can write argumentative texts what student can produce orally. • Can create graphic representations to record comprehension of written arguments and their component parts.

Level 3	Oral	Receptive	• Can understand teacher and some peer arguments about subject matter if supported by gestures, illustrations, background knowledge, and other supports. • Can differentiate between most claims, reasons/supporting evidence, and counterclaims, but may not comprehend all of them. • Can elicit clarification or further evidence/reasoning by posing questions with developing English structures. Questions provide evidence of some comprehension.
		Productive	• Can express arguments on themes known (through experience and texts) including claims, reasons/evidence, and counterclaims and using developing English structures. Argument can be understood by an interlocutor familiar with the student's classroom context. • Can incorporate or approximate discipline-specific language that has been modeled in instruction (for example, typical transitions in argumentation) • Can use formulaic and repetitive phrases to connect sections of text and conclude it. • Can include evidence drawn from written and oral sources appropriate to proficiency level. • Can ask questions about arguments offered by others.
	Written	Receptive	• Can comprehend written arguments, claims reasons/evidence, and counterclaims he/she reads when he/she has relevant background knowledge and can draw from accompanying images to support comprehension. • Can elicit clarification or further explanation about aspects of text he/she does not understand or is interested in. Questions demonstrate comprehension of aspects of argumentation. • Can make relevant connections between multiple related arguments.
		Productive	• Using a model text, can create an original argument about a related topic including claims, reasons/evidence, and counterclaims and using developing English. Given appropriate opportunities for modeling, discussion, interaction with peer and teacher, and analysis of sample texts: » Can include some discipline-specific language or approximations of that language which has been modeled. » Can draw from background experiences, personal opinions, and some resources at reading level to describe evidence in support of a claim. » Can respond to counterclaims. » Can use formulaic and repetitive phrases to connect sections of the text and draw it to a conclusion. » Can anticipate audiences' knowledge and concerns to a limited degree, depending on background knowledge. » Can use evidence drawn from written and oral sources appropriate to proficiency level.

Instructional scenario and examples of student participation and competencies: Level 2

A class of high school students reads a short story (appropriate to level 2 proficiency) about the effects of industrialization on a rural family. After several pre-reading activities to establish sufficient background knowledge, students begin to read and discuss the book using paired reading techniques and teacher-led discussion on key concepts, characters, and plot complications in the story. They also use a journal to keep track of their initial reactions to the story and the questions they have as they read it.

After reading, students read and analyze several models of argumentative paragraphs about industrialization's benefits and drawbacks, including models that show claims, reasons/evidence, and counterclaims. After creating a paragraph as a whole class and brainstorming topics about which they could write, students explain their ideas aloud to a partner (in English or a shared home language), who gives them feedback on their argument.

Students at this level can produce writing such as the following, drawing from and building upon models and peer suggestions: "First The local economy became worse. The factory pay more money to the people but the store rise their prices. Making people to stop working in their fields. Although they may say that is not their foulth but if their factory will not be in the land. The owner of the store could keep their low prices."

PART 3: ALIGNMENT

Table 1: Foundations Evidence

Element	Possible Evidence	Evidence
1.1 What are the theoretical foundations of the ELPD standards? A. How is language conceptualized? B. How is the second language acquisition process conceptualized?	A detailed presentation of conceptualizations supported by references to the theoretical literature in appropriate fields (e.g., applied linguistics and second language acquisition)	The theoretical models informing the *Sample English Language Proficiency Descriptors* include the models of communicative competence developed by Canale & Swain (1980 and 1981); Canale (1983a and 1983b); Bachman (1990); Bachman & Palmer (1996); and Celce-Murcia et al. (1995). From the perspective of these models (differing in some details), communicative competence includes: discourse (textual), sociocultural (sociolinguistic), pragmatic, strategic, and linguistic competencies. Drawing to different degrees from work on language functions (Halliday, 1973), speech act theory (Austin, 1962), and interactional competence (Kramsch, 1986), these models take the position that linguistic knowledge is only one small part of communicative competence and that meaning is created by individuals in interaction (Heritage, 2004; Hymes, 1964 and 1972; Sacks et al., 1974; Schegloff, 2007; Schlegloff et al., 1977). Within the field of second language acquisition (SLA), the perspective underlying the *Descriptors* draws from social (as opposed to cognitive) explanations of learning referred in the literature as "alternative approaches to L2 acquisition" (Atkinson, 2011). Second language acquisition is conceptualized as a process in which (1) acquisition and use are inseparable (Bloome & Clark, 2006; Firth & Wagner, 2007) and (2) interaction is fundamental (Hall, 1993; Kramsch, 1986; Young, 2000 and 2003). Language acquisition is considered to take place in a social context and ideally to involve legitimate participation in a community of practice (Lave & Wenger, 1991) and to proceed through "intent community participation" rather than through "assembly-line learning" (Paradise & Rogoff, 2009; Rogoff et al, 2003). Finally, grammar is viewed as a by-product of communication and as a dynamic set of patterns that emerges from use over time (Larsen-Freeman, 2010 and 2011). It is important to emphasize that SLA, from the perspective of both the cognitivist and socio-interactional perspectives, has had very little to say about a process of L2 acquisition as it takes place through and over time. Reviewing the longitudinal SLA research literature and concluding that discussions about longitudinal research are rare, Ortega and Iberri-Shea (2005) advocate for "the diversity and accumulation of recent and future longitudinal research" that they hope "will help chart the development of advanced L2 capacities and help us understand the appropriate timing, duration, and content of optimal educational practices for L2 learning across educational settings and multilingual contexts" (p. 43). To date, a second language index of development such as that called for by Larsen-Freeman (1978) has not been created which "will allow us to give a number value to different points along a second language developmental continuum…as learners proceed towards full acquisition of a target language" (p. 440).

1.2 Are the theoretical foundations differentiated by age/grade background? If so, how? How do theoretical foundations address socio-cultural background, primary language, and language proficiency level?	A justification of the applicability of the theoretical foundations to different ages or grade spans supported by research (e.g., syntheses, reviews of the literature, and body of research studies that support claims made).	The participation metaphor that is common to alternative approaches to SLA draws from the work of Lave & Wenger, 1991 as well as from socialization theory (Schieffelin & Ochs, 1986; Duff, 2010; Duff & Talmy, 2011) and sociocultural theory (Lantolf & Thorne, 2006). Interaction, apprenticeship and use are seen as applicable to different ages and grade spans. Supporting work for these approaches at various age levels includes research on young children (Wong Fillmore, 1976) and secondary-school students (Talmy, 2008 and 2009; Swain et al., 2002; Swain & Lapkin, 1998), making evident the importance of access and interaction to the acquisition process for all age levels. Recent work on language and literacy development over the years of schooling (Christie, 2012) from a systemic functional linguistics perspective proposes four overlapping phases which account for a gradual shift from the immediate and the commonsense to the more distant and un-commonsense in the discourse of schooling.
1.3 How have the theoretical foundations been communicated?	Standards include a section in which theoretical foundations are presented with sufficient detail (and appropriate references) to allow professionals to understand how they fit into existing knowledge about second language acquisition and development.	If these descriptors are developed further, the brief summary included in this document will be expanded into a full scholarly paper with full references that situates the theoretical foundations within the fields of second language acquisition and applied linguistics.
1.4 What procedures are in place to validate the theoretical foundations of the ELP standards?	Procedures are described for validating standards, e.g., external experts' papers or briefs on the theoretical foundations, empirical evidence showing how standards align to theoretical foundations.	If these descriptors are developed further, external experts who carry out research on language as a social practice (e.g., Dwight Atkinson, Leo van Lier, Clare Kramsch, Diane Larsen-Freeman, Beverly Derewianka, Mary Schleppegrell, Pauline Gibbons, Jenny Hammond) will be consulted in examining both the initial intuitive hypotheses about the development of selected practices as well as the steps to be taken in conducting qualitative (and in time quantitative) research on developmental trajectories.

Table 2: Progression Evidence

Element	Possible Evidence	Evidence
How are the ELP standards organized such that they…		
2.1 Identify varying levels of students' English language proficiency?	Proficiency levels are organized to show functional, and/or grammatical proficiency using a combination of "intuitive, qualitative and quantitative methods."[38] They include both productive and receptive language and make evident how stated proficiencies are related to disciplinary practices described in the Framework. If levels are being tentatively established as part of an ongoing validation process, methods for refining categories and descriptors should be specified.	Proficiency levels are organized to show functional proficiency using intuitive methods that will later be validated using both qualitative and quantitative methodologies accepted in the development of stages and descriptors (Council of Europe, 2001). As pointed out in 1.1, existing views about the order and sequence in which learners acquire a second language are based on scales developed for assessment purpose that reflect language curricula rather than empirical studies of language acquisition over time. These descriptors, although they may appear unrealistic to some practitioners, are equally as hypothetical as those that are more familiar to them. We propose to engage in a validation process that was advocated by Larsen-Freeman & Long (1991) and Bachman (1998) and described by Clahsen (1985) that can address both language development and variation. This is important, because according to Bachman (1998), "accuracy will vary as a function of both the regular developmental sequence and individual variations across that sequence" (p. 190).
2.2 Communicate students' ability to manage cognitively demanding tasks across language proficiency levels?	Examples show how students will demonstrate and express higher order thinking at each proficiency level. A range of higher order thinking skills are modeled for (at) each proficiency level.	Proficiency descriptors are developed using higher order thinking skills (argue from evidence, construct explanations) embedded in the CCSS. It is not considered that thinking skills are related to language proficiency, although analytical competencies are certainly related to age. Thus, practices considered at the first level of English language proficiency engage students in critical thinking and meta-processes.
2.3 Support the ELP Standards' theoretical foundations?	The organization of the standards is based on theoretical foundations including methodologies for scaling and developing descriptions of language proficiency, which have been cited and researched. Expectations are consistent with stated conceptualizations of language and second language acquisition.	Organization is based on experienced language teachers' hypotheses about language development and supported by theoretical foundations about language use and acquisition. Scaling is tentative at this point, but is consistent with the work currently conducted in Australia (Derewianka, 2011; Christie, 2012). If developed further, it will be subjected to accepted methodologies for scaling such descriptors.

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[38] Adapted from CEFR- Criteria for descriptors of common reference levels.

2.4 Support the development of assessment and measurement tools?	Justification should be provided for the number of levels adopted. Evidence should be provided that these levels represent distinctions that can reasonably be measured and are based on actual student performance.	It is expected that when developed further, the number of levels (currently 3) may be expanded in order to make better distinctions in the range of performances seen at each level. Evidence from research carried out in developing these descriptors further will be provided.

Table 3: Standards Match Evidence

Element	Possible Evidence	Evidence
3.1 How are the key practices, as identified in Tables 1-6 of the CCSS and NGSS, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework in English language arts, mathematics, and science is clearly identified.	Standards are framed around the disciplinary practices and performances outlined in Table 1 for ELA, mathematics, and science, which are themselves embedded within Disciplinary Core Ideas (ELA, mathematics, and science) and Cross-Cutting Concepts (science only) presented in Table 1, such as the practices "argue from evidence" and "construct an explanation."
3.2 How are analytical tasks, as outlined in Tables 2, 4, and 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework's analytical tasks, on one hand, and ELP standards, on the other hand, is identified with links clearly identified.	This approach does not separate out the content fields. Rather, in keeping with Table 2, it focuses on analytical tasks embedded within the content practices "argue from evidence" and "construct an explanation" (CCSS for Mathematical Practice 1 and 3; CCSS English Language Arts Writing Standards 1 and 2; NGSS Scientific and Engineering Practices 6 and 7) that are common across classroom subject matter areas.
3.3 How are language functions, as outlined in Tables 2, 4, and 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match between the Framework's content practices and productive and receptive language functions, on one hand, and ELP standards, on the other hand, is identified with links clearly identified.	This approach does not separate out the content fields. Rather, in keeping with Table 2, it focuses on productive and receptive cross-discipline-specific language functions that are common across classroom language and subject matter areas when engaging in analytical tasks related to practices such as "argue from evidence" and "construct an explanation."

Table 4: Classroom Match Evidence

Element	Possible Evidence	Evidence
4.1 How are the modalities of classroom language, as outlined in Tables 7-9 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	The match in modalities between the Framework in English language arts, mathematics, and science and ELP standards is clearly identified. ELP standards link to both teachers' and students' language uses and task are clearly indicated.	Oral and written language as outlined in CCSS document is identified and a clear relationship between the disciplinary practices of each subject matter area (e.g., argue from evidence and obtain information) and the development of proficiencies required to carry out those practices is delineated. Consistent with Table 3, the ELP standards acknowledge receptive and productive activities in both oral and written forms: see instructional scenarios' narrative and use of Table 3 for conceptualization of the use of modalities in standards-based instruction and language activity.
4.2 How are the registers of classroom language, as outlined in Tables 7-9 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Common and unique registers are specified precisely in the ELP standards. Links to standards are clearly indicated.	Classroom language in ELA, mathematics, and science includes the use of oral and written language to, for example, explain concepts and construct arguments. These registers take different forms in each discipline, and students are required to comprehend and produce discipline-appropriate explanations and arguments in oral and written form. In keeping with the registers outlined in Table 3, the descriptors here included exemplify students' increasing sophistication with these genres in English over time. They provide examples of how students can be supported to engage with these registers as they participate in disciplinary practices and make links between students' development of receptive and productive competence. They also offer examples of student performance of classroom language registers at different proficiency levels and grade spans.

| 4.3 To what degree are all elements within the Framework covered by the ELP standards? | A description of how well all elements within the ELPD Framework or covered by ELP standards (e.g., the proportion of modalities, registers, content practices, and language functions are covered in ELP standards by each content area). | All elements included in the Framework are covered by the full Descriptors document.

The Descriptors and accompanying instructional examples are as follows:

1. Support the development of the *language practices* needed to engage with the content found in the CCSS and the NGSS.

2. Facilitate the development of *discipline-specific* **language competencies**[39] to help students integrate their language development with the conceptual understanding they are acquiring within different disciplines and to increase their academic performance.

3. Respect and build on the language and culture of students by leveraging the *linguistic and cultural resources* they bring to the classroom.

4. Include *different types of communicative activities* embedded in academic settings and promote quality interactions.

5. Afford opportunities for students to engage in *meta-linguistic and meta-cognitive processes.*

6. Support the *academic rigor* as demanded by the CCSS and the NGSS.

» Are organized in meaningful ways to help teachers *scaffold* (assist) students' ability to engage in sophisticated content knowledge practices as they develop their conceptual, academic, and linguistic skills.

» Are supported by *research and best practice* in child and adolescent second language acquisition with respect to aspects of language that support the variety of language functions and discourse elements present in schooling. |

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[39] **Language competencies:** The ability and capacity to use language to communicate ideas, knowledge and information orally, in written form, or through semiotic representations.

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Section 4.3: Formative Language Assessment Records (FLARE) Model

MEETING THE LANGUAGE DEMANDS OF
COMMON CORE STATE STANDARDS:

SAMPLE ENGLISH LANGUAGE PROFICIENCY DESCRIPTORS

FOR

MATHEMATICS IN GRADES 6-8

H. Gary Cook, Paula White, Mariana Castro, Melissa Patton, and Barbara Bird

PART 1: INTRODUCTION

The Formative Language Assessment Records for ELLs (FLARE) Project

The sample performance descriptors provided here are adapted from the Formative Language Assessment Records for ELLs (FLARE) Project, a grant funded by the Carnegie Corporation of New York. The FLARE project seeks to assist teachers in measuring student progress in the development of essential academic language skills needed for success in middle and high school. The FLARE project provides an integrated system of language learning progressions, formative assessment tools and exemplars, professional development materials, and on-line formative assessment tracking and reporting software.

FLARE's materials were initially based on national college readiness studies prior to the publication of the Common Core State Standards (CCSS). These materials have since been adapted to support the CCSS. FLARE is literacy-based and framed by the four linguistic components (language functions, vocabulary, grammar, and discourse) in four subject areas: English language arts, mathematics, science, and social studies. FLARE's language learning progressions are designed to support English learners' language learning goals in relation to formative/classroom assessment. Here, they have been adapted to serve as an example of English language proficiency descriptors. Only the reading and writing mathematics progressions are provided. For more information on these and other FLARE learning progressions, see www.flareassessment.org.

> *FLARE's language learning progressions are designed to support English learners' language learning goals in relation to formative/ classroom assessment*

Key ideas

The development of language is a social process; hence, its instruction should not be divorced from socio-cultural contexts. The isolation and instruction of specific elements of language (e.g., vocabulary or grammar, absent of context, purpose, or audience) is neither productive nor endorsed

here. Language development is a non-linear process where learners progressively expand their comprehension and communication skills in the learned language. Each language development profile is unique to the individual learner. Therefore, language progressions or sequences are generalizations of how language is learned. They are provided as guides and should not be interpreted as "the way" all students learn the English used in US schools.

The performance descriptors presented here are illustrative in nature and aim to

- correspond to the CCSS,

- be founded on research in second language development,

- balance the roles between language function and form, and

- guide instruction by highlighting the interdependence of socio-cultural context, discourse, and the functional and structural nature of language.

One final note, the English language performance descriptors provided here address only the development of mathematics language (specifically literacy) in middle school. This is done by design. These sample descriptors serve as an example and a heuristic of how state ELP standards might be created and or adapted relative to the ELPD Framework.

Organization of Sample Descriptors

FLARE's English language proficiency descriptors are anchored by nine language functions: identify, describe, sequence, categorize/classify, summarize, compare/contrast, cause/effect, evaluate, and infer. The table below briefly defines these nine functions and provides common grammar features and examples. Neither the grammar features nor examples are exhaustive. The examples in the last column of the table below are at the phrase and sentence level, which should not imply that these language functions are meant to be limited only to phrasal or sentence boundaries.

> *FLARE's English language proficiency descriptors are anchored by nine language functions: identify, describe, sequence, categorize/classify, summarize, compare/contrast, cause/effect, evaluate, and infer.*

Table A: FLARE's Language Functions

Language Function	Definition	Typical Grammar Features	Examples
Identify	To identify, recognize, name, or select	Simple declarative sentences Simple Wh-words & sentences	A rectangle is at the bottom of this worksheet. The period between 500 and 1400 AD in Europe is often called the Middle Ages.
Describe	To explain, give directions, or present details	Descriptive adjectives Prepositions	Place the small cup next to the petri dish. The sharp green color of the grass caught her attention.
Categorize / Classify	To put into organized groups or identify relationship or membership	Adjectives and complex noun-phrases (e.g., relative clauses) Prepositional phrases Subordinate clauses	Dogs belong to the category mammal because they are warm-blooded, Any angle that measures between 0 and 90° is an acute angle.
Sequence	To order events, parts, or elements	Adverbs of time and frequency Verb tenses	First, …, second, …, third…. Initially, …, next,…, finally,…. To begin,…, following this,…., to end….
Cause / Effect	To connect causes to effects	Conjunctive adverbs Adverb clauses Verb tenses	The flooding was caused by excessive rain. Mary studied hard for the test; consequently, she got an "A." If…., then ….
Compare / Contrast	To express similarities and differences	Comparatives and superlatives Conjunctive adverbs Adverb clauses	This is bigger than…. …similar to this is… ….;however, …. On the other hand, ….
Summarize	To capture main point, main idea, or main issue	Adverbs of time and frequency Adjective and complex noun phrases	To summarize,… The main point is….
Evaluate	To judge and/or critique	Subordinate clauses Conjunctive adverbs Comparatives and superlatives	I believe this is better, because …. This will take several weeks; therefore….
Infer	To guess, posit, or predict	Modal auxiliaries Adjective and complex noun phrases Complex verb phases	While not stated, it is clear that …. From what was said, we can guess that….

Many of the productive and receptive language functions presented in the Framework describe broader, overarching notions of what EL students do with language compared to FLARE's language functions. The figure below shows how select FLARE language functions are subsumed under an overarching productive language function from Key Mathematics Practice #1 from the Framework. The key productive language function for this mathematics practice is to "explain relationships between quantities and representations." In order to explain this, ELLs might need to engage in language that describes quantities and relationships, possibly to sequence quantities or representations, etc.
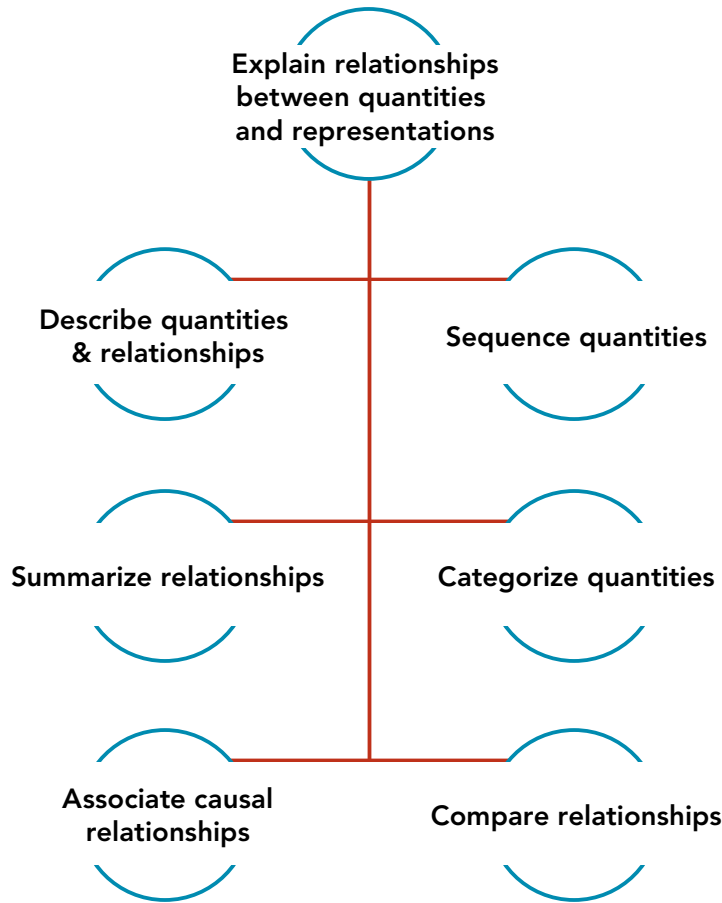
Figure 1: Breakdown of Key Mathematics Projective Language Functions and Select FLARE Language Functions

The sequencing of the language functions, discourse, grammar, and vocabulary elements are based on theories of language development, specifically processability theory (Pienemann, 2008), systemic functional linguistics (Eggins, 2004) and functional grammar (Halliday and Matthiessen, 2004; Thompson, 2004). The underlying organizational sequence presumes that ELLs at higher proficiency levels can process more sophisticated language than ELLs at lower proficiency levels. The descriptor sequences are operationalized such that lower levels are presumed to be easier for ELLs to process than higher levels.

Table B maps the nine FLARE language functions onto the Framework's key mathematics productive and receptive language functions. The aim of this table is to show how the sample grade 6-8 mathematics performance descriptors map onto the Framework's mathematics.

Mapping FLARE Language Functions onto Framework's Productive and Receptive Language Functions

Table B: Mapping the Framework's Productive & Receptive Language Functions to an Expanded Set of Language Functions

CCSS Key Mathematics Practices	Framework Receptive & Productive Overarching Language Functions[40]	Expanded Set of Language Functions								
		Identify	Describe	Sequence	Summarize	Categorize/Classify	Cause/Effect	Compare/Contrast	Evaluate	Infer
Practice 1: Make sense of problems and persevere in solving them	Comprehend the meaning of problem as presented in spoken language, texts, and diagrams	x		x	x	x	x	x		
	Comprehend others' talk about their problems and approaches	x		x	x	x	x	x		
	Coordinate texts and representations	x		x		x		x		
	Create and label written representations of a problem		x	x		x				
	Explain (or draw diagrams that show) relationships between quantities and representations (such as objects, drawings, words, math symbols, graphs, equations, tables)		x	x	x	x	x	x		
	Present information and explanations to others		x	x	x	x	x	x		
	Respond to questions or critiques from others		x	x	x	x	x	x	x	
	Ask questions about others' approaches		x	x	x	x	x	x	x	

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40   Analytical tasks forthcoming in the next draft.

CCSS Key Mathematics Practices	Framework Receptive & Productive Overarching Language Functions[40]	Expanded Set of Language Functions								
		Identify	Describe	Sequence	Summarize	Categorize/Classify	Cause/Effect	Compare/Contrast	Evaluate	Infer
Practice 2: Reason abstractly and quantitatively	Comprehend the meaning of situation, problem, and quantities as presented in spoken language, texts, and diagrams	x		x	x	x	x	x		
	Comprehend others' talk about the situation, problem, and quantities	x		x	x	x	x	x		
	Coordinate texts and representations	x		x		x		x		
	Explain reasoning as it relates to situation, problem, and quantities		x	x	x	x	x	x		
	Create and label coherent representation of the problem at hand		x	x		x				
	Ask questions to contextualize the situation, problem, or quantities		x	x	x	x	x	x		
Practice 3: Construct viable arguments and critique the reasoning of others	Comprehend questions and critiques	x		x	x	x	x	x	x	
	Comprehend explanations offered by others (peers or teachers)	x		x	x	x	x	x		
	Comprehend explanations offered by texts	x		x	x	x	x	x		
	Provide written or verbal explanation of an argument through logical progression of statements, using concrete referents or more formal means		x	x		x	x	x		
	Justify conclusions and respond to counterarguments		x	x	x	x	x	x	x	
	Recognize and use counterexamples		x	x	x	x	x	x		
	Respond to questions by amplifying explanation		x	x	x	x	x	x		
	Respond to critiques by countering with further explanation or by accepting as needing further thought		x	x	x	x	x	x	x	
	Critique or support explanations or designs offered by others		x	x	x	x	x	x	x	

CCSS Key Mathematics Practices	Framework Receptive & Productive Overarching Language Functions[40]	Expanded Set of Language Functions								
		Identify	Describe	Sequence	Summarize	Categorize/Classify	Cause/Effect	Compare/Contrast	Evaluate	Infer
Practice 4: Model with mathematics	Comprehend others' spoken language that describes, defends, and discusses their models	x		x	x	x	x	x	x	
	Comprehend the meaning of models presented in texts, diagrams, and visual media	x		x	x	x	x	x		
	Label (or create and label) diagrams of a model and make lists of parts		x	x		x				
	Describe and defend a model using words and pictures		x	x	x	x	x	x	x	
	Describe and define how a model relates to a phenomenon or system		x	x	x	x	x	x		
	Ask questions and hypothesize about others' models		x	x	x	x	x	x		x
Practice 5: Use appropriate tools strategically	Comprehend others' spoken language that describes purposes and functions of tools and other resources	x		x	x	x	x	x		
	Comprehend the purposes and functions of tools and other resources as presented in texts, diagrams, and visual media	x		x	x	x	x	x		
	Ask questions regarding purpose and functions of tools and others' use of them		x	x	x	x	x	x		
	Explain own use of tools and outcomes of tool use		x	x	x	x	x	x		

CCSS Key Mathematics Practices	Framework Receptive & Productive Overarching Language Functions[40]	Expanded Set of Language Functions								
		Identify	Describe	Sequence	Summarize	Categorize/Classify	Cause/Effect	Compare/Contrast	Evaluate	Infer
Practice 6: Attend to precision	Comprehend others' spoken language regarding definitions, meaning of symbols, etc.	x		x	x	x	x	x		
	Comprehend the meaning and features of precision of definitions, symbols meanings, units of measure, and visual representations as presented in texts, diagrams, and visual media	x		x	x	x	x	x		
	Define key terms and concepts		x							
	Explain meaning of symbols		x							
	Specify units of measure		x							
	Label (or create and label) visual representations		x							
	Ask questions to clarify precision of others' statements or representations		x	x	x	x	x	x		
	Make specific claims and evaluate constraints		x	x	x	x	x	x	x	
Practice 7: Look for and make use of structure	Comprehend the meaning of patterns or structures found in a situation, problem, or mathematical expression as presented in spoken language, texts, and diagrams	x		x	x	x	x	x		
	Comprehend others' talk about patterns and structures	x		x	x	x	x	x		
	Create and label representations of patterns or structures		x	x		x				
	Describe patterns or structures		x	x		x				
	Ask questions about others' use of patterns or structures		x	x	x	x	x	x		

CCSS Key Mathematics Practices	Framework Receptive & Productive Overarching Language Functions[40]	Expanded Set of Language Functions								
		Identify	Describe	Sequence	Summarize	Categorize/Classify	Cause/Effect	Compare/Contrast	Evaluate	Infer
Practice 8: Look for and express regularity in repeated reasoning	Comprehend others' spoken language regarding repetition of calculations, methods used, and evaluation of intermediate and final results	x		x	x	x	x	x	x	
	Comprehend repeated patterns, discussions of methods, and evaluations of intermediate results as presented in texts, diagrams, and visual media	x		x	x	x	x	x	x	
	Ask questions about others' use of repetition, methods, and evaluation of intermediate and final results		x	x	x	x	x	x	x	
	Explain patterns, discuss methods used, and evaluations of results		x	x	x	x	x	x	x	

PART 2: SAMPLE PERFORMANCE DESCRIPTORS

Five levels are represented in these sample performance descriptors:

Level 1: Pre-basic - unprocessed use of language

Level 2: Formulaic - contextual use of language pieces

Level 3: Unpacking - contextual use of language and beginning productive use

Level 4: Expanding - productive use of language and beginning generative use

Level 5: Fine-tuning - productive and generative use of language

Table C: Grade 6-8 Mathematics READING Language Proficiency Descriptors (Levels 1-3)

	Level 1 [Pre-basic]	Level 2 [Formulaic]	Level 3 [Unpacking]
Language Function	**Identify** common mathematical symbols and their related words (e.g., match "equal" to "=") **Identify** common mathematics figures or shapes (e.g., match shapes with their names)	**Identify** information from simple mathematics texts, graphs, or figures	
		Sequence simple directions from a mathematics activity or simple text	**Sequence** values (e.g., fractions, percentages, numbers, and weight) from smallest to largest
		Summarize information from simple mathematics texts, graphs, or figures	**Summarize** the primary concept or question in a short mathematics problem or activity
	Categorize/Classify values (e.g., fractions, decimals, whole numbers)	**Categorize/Classify** common mathematics symbols, expressions, shapes, of figures (e.g., categorize triangles according to type)	**Categorize/Classify** word problems according to their mathematic operations (e.g., sort addition versus subtraction word problems)
			Identify **cause/effect** relationships involving mathematical function or variable(s) and a problem's result
Sample Task	Students read chunks of text to **identify** common mathematical terms and figures, and organize this information in a graphic organizer (e.g., T-Chart).	Students read a simple story problem and then use a flow chart to **identify** and **sequence** necessary mathematical operations.	Students read an exercise and use a graphic organizer to **sequence** mathematical values from smallest to largest. They then **summarize** the basic rules to sequencing different values (e.g., fractions, percentages, and whole numbers)

Discourse Level	• short math sentences comprised of simple or predictable sentences with supports (e.g., connected illustrations)	• short, simple math descriptions in text or word problems with redundancy and supports (e.g., connected illustrations) • multiple related simple sentences	• short-sized math texts (e.g., a chapter preview for a math unit) • multiple related paragraphs with supports
Sentence Level	• basic verb forms, adverbs of sequence and adjectives • simple grammatical constructions (e.g. commands, WH-questions, declaratives) • common social - instructional patterns or forms	• simple and expanded sentences with emerging complexity • repetitive phrasal and sentence patterns	• variety of sentence lengths of varying linguistic complexity • compound and some complex (e.g., noun phrase, verb phrase, and prepositional phrase) grammatical constructions
Word Level	• high-frequency math terms	• general math terms, including idiomatic expressions • social / instructional words across content areas	• specific mathematics terms, including cognates and expressions • emerging awareness of collocations, multiple meaning words and multiple meanings of content-specific words, across related math topics

Grade 6-8 Mathematics READING Language Proficiency Descriptors (Levels 4-5)

		Level 4 [Expanding]	Level 5 [Fine-tuning]
Language Function		**Summarize** the primary concepts or parts in a word problem (e.g., identify the order of operations in a multi-step problem)	**Summarize** the main ideas of a story problem
		Categorize/Classify different types of mathematical equations, graphs, or figures into common groups (e.g., group equations into linear and non-linear)	**Categorize/Classify** types of word problems by context or solution strategy (e.g., distance/rate/time problems, solving a ratio)
		Connect **cause/effect** relationships between mathematic functions or variables and a problem's outcome	Describe **cause/effect** relationships between mathematic functions or variables and a problem's outcome (e.g., connect this function to an outcome: If the width of a rectangle is doubled, how will its area change?)
		Evaluate the best method to solve a mathematical problem or activity	**Evaluate** methods to solve a mathematical problem or activity
Sample Task		**Infer** the outcome of a mathematical problem or activity with a visual representation	**Infer** the outcome of a mathematical operation when the variables are changed
Discourse Level		• chapter-length math units text with guided support • connected discourse with a variety of sentences	• grade-level math text (e.g., multi-unit length material) and extended reading passages • rich descriptive discourse with complex and idiomatic ideas and notions

Sentence Level	• variety of sentence structures with varying complexity • sentence patterns characteristic of math and math related areas	• variety of sentence structures and levels of complexity • compound, complex grammatical constructions • broad range of idiomatic and unique sentence patterns characteristic of content areas
Word Level	• specific and math technical content-related vocabulary (e.g., congruency) • multiple meanings of words or expressions across content areas	• general, specific, technical and abstract content-related vocabulary, including content-specific collocations • shades of meaning of words and expressions across content areas

Table D: Grade 6-8 Mathematics WRITING Language Proficiency Descriptors (Levels 1-3)

	Level 1 [Pre-basic]	Level 2 [Formulaic]	Level 3 [Unpacking]
Language Function	**Describe** common mathematics-related terms (e.g., products, equals, multiply, divide, add, and subtract)	**Describe** features of mathematics expressions, symbols, graphs, or figures (e.g., This triangle has a 45 degree angle)	
			Sequence values (e.g., fractions, percentages, numbers, and weight) in order of size or frequency
			Describe the **cause/ effect** relationships between a mathematic function or variable(s) and a problem's result
		Compare/Contrast mathematics expressions, symbols, functions, shapes, graphs, or figures	**Compare/Contrast** values (e.g., fractions, percentages, numbers, and weight)
	Describe common mathematics-related terms (e.g., products, equals, multiply, divide, add, and subtract)	**Describe** features of mathematics expressions, symbols, graphs, or figures (e.g., This triangle has a 45 degree angle)	
Sample Task	Students create a vocabulary list of terms and figures in a mathematics textbook chapter and then **describe** each item or label the terms to associated symbols, figures, or models.	Students produce several sentences to identify and **describe** a series of mathematical shapes using key vocabulary.	Students arrange values in a compare/contrast organizer. They then write complex sentences in which they **compare and contrast** the series of values using key descriptive vocabulary.
Discourse Level	• math word lists, simple phrases with supports • short chunks of simple language • set phrases	• short statements and sentences describing math ideas with supports (e.g., a sentence frame) • some organization and connecting sentences	• paragraph-sized statements in response to math assignments • simple and expanded sentences with emerging complexity

Sentence Level	• phrase-level grammatical structures • phrasal patterns associated with common social - instructional situations	• phrases and short sentences • chunks of language • copied and adapted text • repetitive phrasal and sentence patterns	• repetitive grammatical structures • sentence patterns across content areas and social/ instructional situations
Word Level	• high-frequency vocabulary from school and content areas • everyday social and instructional words and phrases	• general math terms • social and instructional words and phrases used in math classes	• specific math terms, including cognates and expressions • multiple meanings of words or expressions used across content areas

Grade 6-8 Mathematics WRITING Language Proficiency Descriptors (Levels 4-5)

	Level 4 [Expanding]	Level 5 [Fine-tuning]
Language Function	**Summarize** the primary concepts or parts in a word problem (e.g., identify the order of operations in a multi-step problem)	**Summarize** the main ideas of a story problem
	Categorize/Classify different types of mathematical equations, graphs, or figures into common groups (e.g., group equations into linear and non-linear)	**Categorize/Classify** types of word problems by context or solution strategy (e.g., distance/rate/time problems, solving a ratio)
	Connect **cause/effect** relationships between mathematic functions or variables and a problem's outcome	Describe **cause/effect** relationships between mathematic functions or variables and a problem's outcome (e.g., connect this function to an outcome: If the width of a rectangle is doubled, how will its area change?)
	Evaluate the best method to solve a mathematical problem or activity	**Evaluate** methods to solve a mathematical problem or activity
Sample Task	**Infer** the outcome of a mathematical problem or activity with a visual representation	**Infer** the outcome of a mathematical operation when the variables are changed
Discourse Level	• multi-paragraph text, sentences of varying lengths and levels of complexity • organized expression of ideas with emerging cohesion	• grade-level math text materials • multiple complex sentences in connected discourse • organized, cohesive, and coherent expression of ideas • variety of sentence lengths with varying levels of linguistic complexity
Sentence Level	• variety of grammatical structures • sentence patterns characteristic of particular content areas	• variety of grammatical structures matched to purpose • broad range of idiomatic and unique sentence patterns characteristic of content areas
Word Level	• specific math vocabulary and some math related technical terms with limited control • emerging use of collocations and nuanced language	• technical and abstract math language, including math-specific collocations and nuanced language • shades of meaning of words and expressions across content areas

PART 3: ALIGNMENT OF SAMPLE PERFORMANCE DESCRIPTORS

Table 1: Foundations Evidence

Element	Guidance Regarding Possible Evidence
1.1 What are the theoretical foundations of the ELPD standards? A. How is language conceptualized? B. How is the second language acquisition process conceptualized?	The conceptual model presented here is based upon a Processability Theory approach to language learning (Pienemann, 2008). According to processability theory, language learners acquire language based on their ability to process and use it. The theory seeks to predict language learners' language developmental profile. The performance descriptors shown here incorporate other language development theoretical perspectives as well. The model assumes that language and language learning is not exclusively defined by the domain of "grammatical competence" (i.e., vocabulary and grammar), but also incorporates discourse and sociolinguistic competencies (Bachmann, 1990; Bachmann and Palmer, 1996). The model incorporates language functions (Halliday, 1973; Halliday and Matthiessen, 2004), supports a functional linguistic perspective (Eggins, 2004; Harder, 2007; Schleppegrell, 2004; Thompson, 2004), and includes discourse elements that outline the context in which interactions take place (Gee, 2004).
1.2 Are the theoretical foundations differentiated by age/grade, educational? If so, how? How do theoretical foundations address socio-cultural background, primary language, and language proficiency level?	The processability model of language development hinges on the capacity to process language, which strongly associates with students' cognitive development and age and grade. Underlying model assumptions is the understanding that second language learning and development occurs within a social context. The goal is to develop communicative competence (Canale & Swain, 1980) and facility with language not the appropriation of specific linguistic forms. While specific language elements are listed in this model, it should be understood that they act together and should not be thought of as separate elements acquired in isolation.
1.3 How have the theoretical foundations been communicated?	Teachers, schools, and district that have used FLARE's language learning progressions as expressed in these performance descriptors have received training on the theory behind their development. Several public documents have been provided to explain development of descriptors (see http://www.flareassessment.org/resources). Were these performance descriptors adopted as standards, communication materials outlining foundations would have to be developed.
1.4 What procedures are in place to validate the theoretical foundations of the ELP standards?	Validation of the descriptors could occur in three stages. The first stage would examine how performance descriptors associate with actual classroom language expectations and requirements. Are ELLs classified at a particular level exhibiting characteristics of that level? Both qualitative and quantitative data would be collected to examine this association. The second stage would examine the assessment created from the performance descriptors. How well is the assessment aligned to the descriptors? Do student scores generated from this assessment distribute as expected. Do the underlying constructs measured by the assessment reflect the descriptors? The final stage looks at how descriptors are used at the classroom, school, and district and how well the assessment manifests student growth and predicts student success. How have the standards influenced instruction? Does growth on the assessment exhibit expected characteristics? Does the assessment predict student success in language acquisition?

Table 2: Progression Evidence

Element	Guidance Regarding Possible Evidence
2 How are the ELP standards organized such that they…	
2.1 Identify varying levels of students' English language proficiency?	The levels of English proficiency are framed by processability theory and systemic functional linguistics (Harder, 2007; Pienemann, 2008; Schleppegrell, 2004; Thompson, 2004) in that language and/or socio-cultural interactions requiring a greater degree of processing by ELLs would be placed at higher proficiency levels. The ordering of language features in the descriptors is provisional and requires further validation.
2.2 Communicate students' ability to manage cognitively demanding tasks across language proficiency levels?	The mapping of the nine language functions to the Frameworks highlights how demanding cognitive tasks could be supported by descriptors.
2.3 Support the ELP standards' theoretical foundations?	See 2.1 above.
2.4 Support the development of a wide range of assessment uses?	The language proficiency descriptors have associated assessment frameworks, which were developed with a focus on formative, interim, and summative assessments. Basic test specification documents have also been created to support the development of a wide range of assessments.

Table 3: Standards Match Evidence

Element	Guidance Regarding Possible Evidence
3.1 How are the key practices and performances, as identified in Tables 1-6 of the CCSS and NGSS, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Table B, above, highlights the relationship between the English language performance level descriptors (Table C) for middle school mathematics with the ELPD Framework's CCSS key practices and performances in mathematics. English language arts and science key practices and performances are not provided with this sample.
3.2 How are analytical tasks, as outlined in Tables 2, 4, & 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Analytical tasks, as outlined in Tables 2, 4, & 6, associate with the productive and receptive language functions for each key practice and performance in mathematics. Accordingly, the information displayed in Table B provides evidence for this link.

Element	Guidance Regarding Possible Evidence
3.3 How are language functions, as outlined in Tables 2, 4, & 6 of the Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Table B, above, highlights the relationship between the English language performance level descriptors (Table C) for middle school mathematics with the ELPD Framework's CCSS language functions in mathematics. English language arts and science language functions are not provided with this sample.
3.4 How are non-CCSS or NGSS standards addressed in the ELP standards? For example A. Social studies B. Fine arts? C. Technical education?	The FLARE learning progressions are also provided for social studies. However, other non-CCSS or NGSS areas have not been developed. Were these descriptors to be used as standards, they would be insufficient. The language of other school related areas (e.g., social instructional language and fine arts) would have to be created.

Table 4: Classroom Match Evidence

Element	Guidance Regarding Possible Evidence
4.1 How are the modalities of classroom language, as outlined in Tables 7-9 of the ELPD Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Example not provided in sample model.
4.2 How are the registers of classroom language, as outlined in Tables 7-9 of the ELPD Framework, addressed in the ELP standards for A. English language arts? B. Mathematics? C. Science?	Example not provided in sample model.
4.3 To what degree are all elements within Tables 7-9 of the Framework covered by the ELP standards?	Example not provided in sample model.

Alignment References for the FLARE Model

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Section 5: Conclusion

The CCSS and the anticipated NGSS set a high linguistic bar for students to cross in their pursuit of grasping these content areas. The Framework helps educators prepare ELLs for the specific language demands of these standards and outlines a procedure for creating and/or evaluating state ELP standards for their fidelity to these standards. The Framework also encourages states to adopt a simultaneous "theory of action" so that ELP and the CCSS and NGSS are mutually reinforcing (rather than sequential and separate) such that students are learning the language knowledge and skills they need as they access the CCSS and NGSS. The goal of the Framework is to ensure that states have an easy-to-use resource to assist them in reviewing and/or developing well-crafted ELP standards such that the developing language needs of ELLs are met and all ELLs receive the rigorous and systematic education they need to graduate from high school as college and career ready. To that end, the Framework outlines expectations that states should align to in the key areas of theoretical foundations, progression of language development, links to the standards, and classroom language use.

Section 6: Glossary

Academic registers: Registers of language typically found in formal academic settings (e.g., primary or secondary schools). See *registers*.

Analytical tasks: Subcomponents of disciplinary practices that outline the intellectual activities in which students engage.

Content area practices or performances: See *disciplinary practices or performances.*

Discipline-specific language: The language used, orally or in writing, to communicate ideas, concepts, and information or to engage in activities in particular subject areas (e.g., science).

Disciplinary practices or performances: The activities in which students and teachers engage to construct knowledge, concepts, and skills in particular subject areas (e.g., science). In the NGSS and CCSS for mathematics, these are known as "practices." ELA does not define these explicitly, so a set of ELA "performances" has been developed for this project to align with the notion of "practices." These are also known as *content area practices* or *performances.*

Discourse practices: See *language practices.*

Discourse elements: The language features involved in communication. These include word level features (e.g. words and phrases), sentence level features (e.g., language forms and conventions) and supra-sentence level features (e.g., organization, text types, and genre) and are guided by the demands of the context (e.g., audience, registers, task or situation, roles, and identities).

Domain-specific: See discipline specific.

Language competencies: The ability and capacity to use language to communicate ideas, knowledge, and information orally, in written form, or through **semiotic representations**.

Language demands: The types of language embedded in and therefore necessary to engage in disciplinary practices or performances.

Language practices or performances: A combination of communicative acts (e.g., saying, writing, doing, and being) used in the transmission of ideas, concepts, and information in a **socially mediated** context.

Language proficiency: A socially constructed notion of the ability or capacity of individuals to use language for specific purposes.

Meta-linguistic processes: The systematic series of mental actions directed at thinking about the use of language. Specifically, these include: 1) reflecting on language and its use, and 2) intentionally monitoring and planning methods of language comprehension and production (Gombert, 1992, p. 13).

Meta-cognitive processes: The systematic series of mental actions directed at thinking about learning and the reasoning of information, concepts, and ideas. Specifically, these include: 1) individuals' introspective, conscious knowledge of their own cognitive processes; and 2) the ability to intentionally monitor and plan their own cognitive processes to realize a goal or objective (Gombert, 1992, p. 13).

Modality: Characteristics of the "channels" through which language is used, as in oral and written language versus receptive and **productive language skills**. See Section 2.

Productive language skills: Skills involved in producing language in spoken or written form (ACTFL, 2012).

Receptive language skills: Skills involved in interpreting and comprehending spoken or written messages (ACTFL, 2012).

Registers: Distinguishable patterns of communication based upon well-established language practices, such as the language used in subject-area classrooms. A "recognizable kind of language" (p. 155) particular to specific functions and situations: a well-known non-academic example is "sports announcer talk" (Ferguson, 1983).

Scaffolding: Pedagogically, a scaffold is the support offered students so that they can successfully engage in activity beyond their current ability to perform independently. Specific scaffolds temporarily support the development of understandings, as well as disciplinary (and language) practices. Once development takes place, scaffolds are removed and new ones are erected to support new needed developmental work. There are two aspects of pedagogical scaffolding: structure and process.

Semiotic representations: The use of symbols, signs, or pictures to communicate ideas (e.g., numbers, road signs, and graphical representations).

Socially mediated: Agreements on ways of acting or behaving made by large social groups either explicitly or implicitly.

Section 7: Supplementary Materials

Section 7.1: The Distinction between Alignment and Correspondence

The precise nature of the correspondence relationship between state ELP standards and the CCSS and NGSS merits comment by way of distinguishing between alignment and correspondence.

A comparison that results in *alignment* refers to a comparison between equivalent artifacts, be they standards, curricula, or assessments.[41] A comparison between "like" artifacts such as standards and a test designed to measure those standards results in alignment. For example, a comparison of NAEP's fourth grade mathematics frameworks to the fourth grade CCSS mathematics standards would result in an alignment. Similarly, the protocol articulated in this document creates a procedure that can be used to align ELP state standards to the ELPD Framework, because all four key areas of the ELPD Framework should be reflected in state ELP standards.[42]

> *State ELP standards align to the ELPD Framework but only correspond to the CCSS and NGSS.*

However, a comparison between non-equivalent artifacts results not in alignment but rather in *correspondence*. For example, a comparison of state achievement standards for students with significant cognitive disabilities to the state's content and performance standards would result in correspondence, because alternate performance standards for students with significant cognitive disabilities do not encompass the entire range of a state's content expectations. Similarly, the ELPD Framework corresponds to the CCSS and NGSS, because the focus on language practices does not encompass the whole range of standards found in the CCSS and NGSS.

Based on the distinction between alignment and correspondence, state ELP standards *align* to the ELPD Framework but only *correspond* to the CCSS and NGSS.

Section 7.2: Premises Guiding the Development of the Framework

> *The premises frame the principles that guided the creation of the Framework. They articulate the necessary elements of any ELP standards that will correspond to the CCSS and NGSS, while articulating critical additional criteria essential for successful ELP standards to incorporate.*

The eight premises listed below frame the principles that guided the creation of the Framework. They articulate the necessary elements of any ELP standards that will correspond to the CCSS and NGSS, while articulating critical additional criteria essential for successful ELP standards to incorporate

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[41]   For more on this, see Webb, 2002; Cook, 2005; or Bailey, Butler, and Sato (2007).

[42]   It is expected that states will align their ELP assessments to their ELP standards.

(e.g., **meta-linguistic**[43] and **meta-cognitive processes**[44]). Underlying these expectations is the fundamental supposition that teachers will use developmentally appropriate pedagogy in creating content-rich environments in which students acquire language by participating in meaningful activities.

1. ELP standards support the development of the *language practices* needed to engage with the content found in Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS).

   • ELP standards map the language proficiency that students will develop to engage successfully in meaningful subject matter activities at all stages of language acquisition.

   • ELP standards conceptualize language as involving pragmatic, textual, grammatical, and sociolinguistic command of language.[45]

   • ELP standards uncover and delineate the language practices embedded within the CCSS and NGSS including interactional, interpersonal, instructional, and discipline-specific language uses.

2. ELP standards facilitate the development of *discipline-specific language practices* to help students integrate their language development with the conceptual understanding they are acquiring within different disciplines and to increase their academic performance.

   • ELP standards specify key discourse practices and elements that students must acquire and weave into a variety of functions to perform academic work closely tied to the CCSS and the NGSS.

   • ELP standards cultivate a deeper knowledge of the discipline-specific language that ELLs need, and help them grow in using it.

   • ELP standards explicitly discuss the characteristics of texts and discourse in the discipline.

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[43] **Meta-linguistic processes:** The systematic series of mental actions directed at thinking about the use of language. Specifically, these include: 1) reflecting on language and its use, and 2) intentionally monitoring and planning methods of language comprehension and production (Gombert, 1992, p. 13).

[44] **Meta-cognitive processes:** The systematic series of mental actions directed at thinking about learning and the reasoning of information, concepts, and ideas. Specifically, these include: 1) individuals' introspective, conscious knowledge of their own cognitive processes; and 2) the ability to intentionally monitor and plan their own cognitive processes to realize a goal or objective (Gombert, 1992, p. 13).

[45] Linguistic analysis divides the complexity of language into several dimensions. Pragmatics refers to the analysis of how structures are used in order to attain communicative goals (e.g., asking someone to perform an action). Textual competence refers to the (usually) print version of language with its distinct formal conventions. Grammar generally refers to the structural properties of sounds, words, sentences, and structural coordination across sentences. Sociolinguistics analyzes the ways in which language varies as a function of the setting (e.g., lab work, pair-share, and choral reading) as well as the social position of the person, (e.g., teacher v. student).

3. ELP standards respect and build on the language and culture of students by leveraging primary language (and other) *linguistic and cultural resources* they bring to the classroom.

   • ELP standards explicitly discuss the transfer of literacy skills from the first language (L1) to the second language (L2).

   • ELP standards explicitly discuss linguistic and cultural resources and how they might be built upon (e.g., discourse practices).

4. ELP standards include *different types of communicative activities* embedded in disciplinary contexts and which promote quality interactions.

   • ELP standards foster sustained dialogue among teachers, students, and peers.

   • ELP standards promote talk about the subject matter of disciplines and encourage students to reason, argue, and ask questions.

   • ELP standards encourage students to produce extended oral and written discourse and engage with different **academic registers.**[46]

   • ELP standards support students in listening closely and participating in classroom discussions.

5. ELP standards afford opportunities for students to engage in *meta-linguistic* and *meta-cognitive processes*.

   • ELP standards invite students to gain awareness of and use strategies that help them engage in grade-level content knowledge as well as reflect on and monitor their own performance.

   • ELP standards provide students with opportunities to apply and transfer what they know to other contexts.

6. ELP standards support the *academic rigor* demanded by the CCSS and the NGSS.

   • ELP standards create clear and explicit criteria for high expectations and what constitutes quality performance at varying levels of English language proficiency.

   • ELP standards promote higher order thinking skills, such as the ability to analyze, synthesize, and generalize, and recognize that they must be taught simultaneously with (instead only after acquisition of) language skills at all levels of English language proficiency.

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[46] **Academic registers:** Registers of language typically found in formal academic settings (e.g., primary or secondary schools). See *registers*.

- ELP standards explicitly cultivate students' ability to comprehend and communicate about complex text in oral, written, visual, and multimodal forms independently and to support their thinking with evidence.

- ELP standards are tied explicitly to the CCSS and NGSS such that a teacher can use them to help students acquire language practices necessary to demonstrate mastery of grade-level content.

- ELP standards articulate the importance of strategically withdrawing scaffolds and supports as students develop independence and language proficiency.

7. ELP standards are responsive to students' linguistic, academic, and developmental levels and organized in meaningful ways to help teachers *scaffold* (assist) students' ability to engage in sophisticated disciplinary practices as they develop their conceptual, academic, and linguistic skills at all stages of second language acquisition.

8. ELP standards are supported by *research* and *best practice* in child and adolescent second language acquisition with respect to aspects of language that support the variety of language practices and discourse elements present in schooling.

Section 7.3: Implications for Assessment

The Framework (in slightly adapted form) should be used to inform items/test specifications for the CCSS. Item specifications guide item writers in the span of possible content, item formats, and item foils (distractors and answers). Concepts from the Framework, for instance, like the key practices, analytical tasks, and language functions could be fashioned into checklists or rubrics that guide the selection of material for items. The two standards models (and their progressions) also could be refashioned to guide writers in determining how complex the language in test material is for ELLs across the

> *The Framework (in slightly adapted form) should be used to inform items/test specifications for the CCSS.*

proficiency range. Or even more simply, a rubric that helps writers in assigning linguistic (language) density to items could be created. If the construct being measured by an item doesn't require complex language, simpler language should be employed, and item writers would have guides on what that might look like.

As with item developers, materials from the Framework also would be helpful in guiding item and bias review by committee members to determine the sensitivity of items to ELLs across language proficiency levels. Also, if linguistic density is assigned *a priori*, Differential Item Functioning (DIF) analysis should be examined for low level and high level ELLs who participate in field-testing. DIF is relevant to math and science in addition to ELA. If the assessed concept doesn't require a heavy language load, high DIF will suggest that another approach to the language of an item might be in order (e.g., a semiotic approach [see ONPAR]). Essentially, the item review phase of test development should be informed by the Framework.

Section 7.4: References for Framework

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