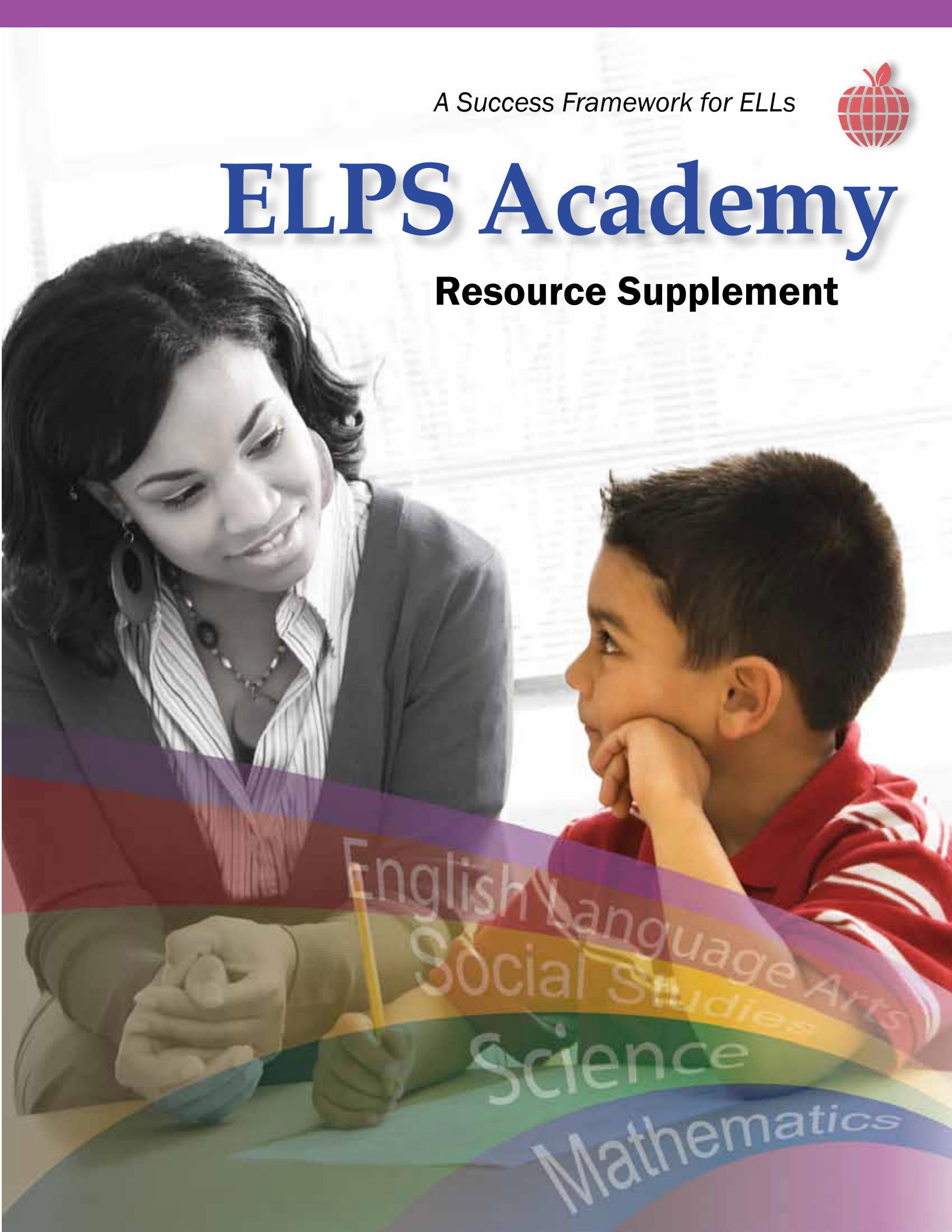
A Success Framework for ELLs

ELPS Academy

Resource Supplement



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2 Tex. Edu. Code § 28.008 Advancement of College Readiness in Curriculum

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Chapter 74.4
English Language Proficiency Standards

(a) Introduction.

(1) The English language proficiency standards in this section outline English language proficiency level descriptors and student expectations for English language learners (ELLs). School districts shall implement this section as an integral part of each subject in the required curriculum. The English language proficiency standards are to be published along with the Texas Essential Knowledge and Skills (TEKS) for each subject in the required curriculum.

(2) In order for ELLs to be successful, they must acquire both social and academic language proficiency in English. Social language proficiency in English consists of the English needed for daily social interactions. Academic language proficiency consists of the English needed to think critically, understand and learn new concepts, process complex academic material, and interact and communicate in English academic settings.

(3) Classroom instruction that effectively integrates second language acquisition with quality content area instruction ensures that ELLs acquire social and academic language proficiency in English, learn the knowledge and skills in the TEKS, and reach their full academic potential.

(4) Effective instruction in second language acquisition involves giving ELLs opportunities to listen, speak, read, and write at their current levels of English development while gradually increasing the linguistic complexity of the English they read and hear, and are expected to speak and write.

(5) The cross-curricular second language acquisition skills in subsection (c) of this section apply to ELLs in Kindergarten-Grade 12.

(6) The English language proficiency levels of beginning, intermediate, advanced, and advanced high are not grade-specific. ELLs may exhibit different proficiency levels within the language domains of listening, speaking, reading, and writing. The proficiency level descriptors outlined in subsection (d) of this section show the progression of second language acquisition from one proficiency level to the next and serve as a road map to help content area teachers instruct ELLs commensurate with students' linguistic needs.

(b) School district responsibilities. In fulfilling the requirements of this section, school districts shall:

(1) identify the student's English language proficiency levels in the domains of listening, speaking, reading, and writing in accordance with the proficiency level descriptors for the beginning, intermediate, advanced, and advanced high levels delineated in subsection (d) of this section;

(2) provide instruction in the knowledge and skills of the foundation and enrichment curriculum in a manner that is linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's levels of English language proficiency to ensure that the student learns the knowledge and skills in the required curriculum;

(3) provide content-based instruction including the cross-curricular second language acquisition essential knowledge and skills in subsection (c) of this section in a manner that is linguistically accommodated to help the student acquire English language proficiency; and

(4) provide intensive and ongoing foundational second language acquisition instruction to ELLs in Grade 3 or higher who are at the beginning or intermediate level of English language proficiency in listening, speaking, reading, and/or writing as determined by the state's English language proficiency

assessment system. These ELLs require focused, targeted, and systematic second language acquisition instruction to provide them with the foundation of English language vocabulary, grammar, syntax, and English mechanics necessary to support content-based instruction and accelerated learning of English.

(c) Cross-curricular second language acquisition essential knowledge and skills.

(1) Cross-curricular second language acquisition/learning strategies. The ELL uses language learning strategies to develop an awareness of his or her own learning processes in all content areas. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:

(A) use prior knowledge and experiences to understand meanings in English;

(B) monitor oral and written language production and employ self-corrective techniques or other resources;

(C) use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire basic and grade-level vocabulary;

(D) speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known);

(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment;

(F) use accessible language and learn new and essential language in the process;

(G) demonstrate an increasing ability to distinguish between formal and informal English and an increasing knowledge of when to use each one commensurate with grade-level learning expectations; and

(H) develop and expand repertoire of learning strategies such as reasoning inductively or deductively, looking for patterns in language, and analyzing sayings and expressions commensurate with grade-level learning expectations.

(2) Cross-curricular second language acquisition/listening. The ELL listens to a variety of speakers including teachers, peers, and electronic media to gain an increasing level of comprehension of newly acquired language in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in listening. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:

(A) distinguish sounds and intonation patterns of English with increasing ease;

(B) recognize elements of the English sound system in newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters;

(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions;

(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed;

(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language;

(F) listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment;

(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar;

(H) understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations; and

(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs.

(3) Cross-curricular second language acquisition/speaking. The ELL speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using vocabulary with increasing fluency and accuracy in language arts and all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in speaking. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:

(A) practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible;

(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication;

(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired;

(D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency;

(E) share information in cooperative learning interactions;

(F) ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments;

(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics;

(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired;

(I) adapt spoken language appropriately for formal and informal purposes; and

(J) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment.

(4) Cross-curricular second language acquisition/reading. The ELL reads a variety of texts for a variety of purposes with an increasing level of comprehension in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For Kindergarten and Grade 1, certain of these student expectations apply to text read aloud for students not yet at the stage of decoding written text. The student is expected to:

(A) learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates, affixes, roots, and base words;

(B) recognize directionality of English reading such as left to right and top to bottom;

(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials;
(D) use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text;

(E) read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned;

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H) read silently with increasing ease and comprehension for longer periods;

(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;

(J) demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs; and

(K) demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade-level needs.

(5) Cross-curricular second language acquisition/writing. The ELL writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. In order for the ELL to meet grade-level learning expectations across foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For Kindergarten and Grade 1, certain of these student expectations do not apply until the student has reached the stage of generating original written text using a standard writing system. The student is expected to:

(A) learn relationships between sounds and letters of the English language to represent sounds when writing in English;

(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary;

(C) spell familiar English words with increasing accuracy, and employ English spelling patterns and rules with increasing accuracy as more English is acquired;

(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired;

(E) employ increasingly complex grammatical structures in content area writing commensurate with grade-level expectations, such as:

(i) using correct verbs, tenses, and pronouns/antecedents;

(ii) using possessive case (apostrophe s) correctly; and

(iii) using negatives and contractions correctly;

(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired; and

(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired.

(d) Proficiency level descriptors.

(1) Listening, Kindergarten-Grade 12. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in listening. The following proficiency level descriptors for listening are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction.

(A) Beginning. Beginning ELLs have little or no ability to understand spoken English in academic and social settings. These students:

(i) struggle to understand simple conversations and simple discussions even when the topics are familiar and the speaker uses linguistic supports such as visuals, slower speech and other verbal cues, and gestures;

(ii) struggle to identify and distinguish individual words and phrases during social and instructional interactions that have not been intentionally modified for ELLs; and

(iii) may not seek clarification in English when failing to comprehend the English they hear; frequently remain silent, watching others for cues.

(B) Intermediate. Intermediate ELLs have the ability to understand simple, high-frequency spoken English used in routine academic and social settings. These students:

(i) usually understand simple or routine directions, as well as short, simple conversations and short, simple discussions on familiar topics; when topics are unfamiliar, require extensive linguistic supports and adaptations such as visuals, slower speech and other verbal cues, simplified language, gestures, and preteaching to preview or build topic-related vocabulary;

(ii) often identify and distinguish key words and phrases necessary to understand the general meaning during social and basic instructional interactions that have not been intentionally modified for ELLs; and

(iii) have the ability to seek clarification in English when failing to comprehend the English they hear by requiring/requesting the speaker to repeat, slow down, or rephrase speech.

(C) Advanced. Advanced ELLs have the ability to understand, with second language acquisition support, grade-appropriate spoken English used in academic and social settings. These students:

(i) usually understand longer, more elaborated directions, conversations, and discussions on familiar and some unfamiliar topics, but sometimes need processing time and sometimes depend on visuals, verbal cues, and gestures to support understanding;

(ii) understand most main points, most important details, and some implicit information during social and basic instructional interactions that have not been intentionally modified for ELLs; and

(iii) occasionally require/request the speaker to repeat, slow down, or rephrase to clarify the meaning of the English they hear.

(D) Advanced high. Advanced high ELLs have the ability to understand, with minimal second language acquisition support, grade-appropriate spoken English used in academic and social settings. These students:

(i) understand longer, elaborated directions, conversations, and discussions on familiar and unfamiliar topics with occasional need for processing time and with little dependence on visuals, verbal cues, and gestures; some exceptions when complex academic or highly specialized language is used;

(ii) understand main points, important details, and implicit information at a level nearly comparable to native English-speaking peers during social and instructional interactions; and

(iii) rarely require/request the speaker to repeat, slow down, or rephrase to clarify the meaning of the English they hear.

(2) Speaking, Kindergarten-Grade 12. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in speaking. The following proficiency level descriptors for speaking are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction.

(A) Beginning. Beginning ELLs have little or no ability to speak English in academic and social settings. These students:

(i) mainly speak using single words and short phrases consisting of recently practiced, memorized, or highly familiar material to get immediate needs met; may be hesitant to speak and often give up in their attempts to communicate;

(ii) speak using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts;

(iii) lack the knowledge of English grammar necessary to connect ideas and speak in sentences; can sometimes produce sentences using recently practiced, memorized, or highly familiar material;

(iv) exhibit second language acquisition errors that may hinder overall communication, particularly when trying to convey information beyond memorized, practiced, or highly familiar material; and

(v) typically use pronunciation that significantly inhibits communication.

(B) Intermediate. Intermediate ELLs have the ability to speak in a simple manner using English commonly heard in routine academic and social settings. These students:

(i) are able to express simple, original messages, speak using sentences, and participate in short conversations and classroom interactions; may hesitate frequently and for long periods to think about how to communicate desired meaning;

(ii) speak simply using basic vocabulary needed in everyday social interactions and routine academic contexts; rarely have vocabulary to speak in detail;

(iii) exhibit an emerging awareness of English grammar and speak using mostly simple sentence structures and simple tenses; are most comfortable speaking in present tense;

(iv) exhibit second language acquisition errors that may hinder overall communication when trying to use complex or less familiar English; and

(v) use pronunciation that can usually be understood by people accustomed to interacting with ELLs.

(C) Advanced. Advanced ELLs have the ability to speak using grade-appropriate English, with second language acquisition support, in academic and social settings. These students:

(i) are able to participate comfortably in most conversations and academic discussions on familiar topics, with some pauses to restate, repeat, or search for words and phrases to clarify meaning;

(ii) discuss familiar academic topics using content-based terms and common abstract vocabulary; can usually speak in some detail on familiar topics;

(iii) have a grasp of basic grammar features, including a basic ability to narrate and describe in present, past, and future tenses; have an emerging ability to use complex sentences and complex grammar features;
(iv) make errors that interfere somewhat with communication when using complex grammar structures, long sentences, and less familiar words and expressions; and

(v) may mispronounce words, but use pronunciation that can usually be understood by people not accustomed to interacting with ELLs.

(D) Advanced high. Advanced high ELLs have the ability to speak using grade-appropriate English, with minimal second language acquisition support, in academic and social settings. These students:

(i) are able to participate in extended discussions on a variety of social and grade-appropriate academic topics with only occasional disruptions, hesitations, or pauses;

(ii) communicate effectively using abstract and content-based vocabulary during classroom instructional tasks, with some exceptions when low-frequency or academically demanding vocabulary is needed; use many of the same idioms and colloquialisms as their native English-speaking peers;

(iii) can use English grammar structures and complex sentences to narrate and describe at a level nearly comparable to native English-speaking peers;

(iv) make few second language acquisition errors that interfere with overall communication; and

(v) may mispronounce words, but rarely use pronunciation that interferes with overall communication.

(3) Reading, Kindergarten-Grade 1. ELLs in Kindergarten and Grade 1 may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. The following proficiency level descriptors for reading are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction and should take into account developmental stages of emergent readers.

(A) Beginning. Beginning ELLs have little or no ability to use the English language to build foundational reading skills. These students:

(i) derive little or no meaning from grade-appropriate stories read aloud in English, unless the stories are:

(I) read in short "chunks;"

(II) controlled to include the little English they know such as language that is high frequency, concrete, and recently practiced; and

(III) accompanied by ample visual supports such as illustrations, gestures, pantomime, and objects and by linguistic supports such as careful enunciation and slower speech;

(ii) begin to recognize and understand environmental print in English such as signs, labeled items, names of peers, and logos; and

(iii) have difficulty decoding most grade-appropriate English text because they:

(I) understand the meaning of very few words in English; and

(II) struggle significantly with sounds in spoken English words and with sound-symbol relationships due to differences between their primary language and English.

(B) Intermediate. Intermediate ELLs have a limited ability to use the English language to build foundational reading skills. These students:

(i) demonstrate limited comprehension (key words and general meaning) of grade-appropriate stories read aloud in English, unless the stories include:

(I) predictable story lines;

(II) highly familiar topics;

(III) primarily high-frequency, concrete vocabulary;

(IV) short, simple sentences; and

(V) visual and linguistic supports;

(ii) regularly recognize and understand common environmental print in English such as signs, labeled items, names of peers, logos; and

(iii) have difficulty decoding grade-appropriate English text because they:

(I) understand the meaning of only those English words they hear frequently; and

(II) struggle with some sounds in English words and some sound-symbol relationships due to differences between their primary language and English.

(C) Advanced. Advanced ELLs have the ability to use the English language, with second language acquisition support, to build foundational reading skills. These students:

(i) demonstrate comprehension of most main points and most supporting ideas in grade-appropriate stories read aloud in English, although they may still depend on visual and linguistic supports to gain or confirm meaning;

(ii) recognize some basic English vocabulary and high-frequency words in isolated print; and

(iii) with second language acquisition support, are able to decode most grade-appropriate English text because they:

(I) understand the meaning of most grade-appropriate English words; and

(II) have little difficulty with English sounds and sound-symbol relationships that result from differences between their primary language and English.

(D) Advanced high. Advanced high ELLs have the ability to use the English language, with minimal second language acquisition support, to build foundational reading skills. These students:

(i) demonstrate, with minimal second language acquisition support and at a level nearly comparable to native English-speaking peers, comprehension of main points and supporting ideas (explicit and implicit) in grade-appropriate stories read aloud in English;

(ii) with some exceptions, recognize sight vocabulary and high-frequency words to a degree nearly comparable to that of native English-speaking peers; and

(iii) with minimal second language acquisition support, have an ability to decode and understand grade-appropriate English text at a level nearly comparable to native English-speaking peers.

(4) Reading, Grades 2-12. ELLs in Grades 2-12 may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. The following proficiency level descriptors for reading are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction.

(A) Beginning. Beginning ELLs have little or no ability to read and understand English used in academic and social contexts. These students:

(i) read and understand the very limited recently practiced, memorized, or highly familiar English they have learned; vocabulary predominantly includes:

(I) environmental print;

(II) some very high-frequency words; and

(III) concrete words that can be represented by pictures;

(ii) read slowly, word by word;

(iii) have a very limited sense of English language structures;

(iv) comprehend predominantly isolated familiar words and phrases; comprehend some sentences in highly routine contexts or recently practiced, highly familiar text;

(v) are highly dependent on visuals and prior knowledge to derive meaning from text in English; and

(vi) are able to apply reading comprehension skills in English only when reading texts written for this level.

(B) Intermediate. Intermediate ELLs have the ability to read and understand simple, high-frequency English used in routine academic and social contexts. These students:

(i) read and understand English vocabulary on a somewhat wider range of topics and with increased depth; vocabulary predominantly includes:

(I) everyday oral language;

(II) literal meanings of common words;

(III) routine academic language and terms; and

(IV) commonly used abstract language such as terms used to describe basic feelings;

(ii) often read slowly and in short phrases; may re-read to clarify meaning;

(iii) have a growing understanding of basic, routinely used English language structures;

(iv) understand simple sentences in short, connected texts, but are dependent on visual cues, topic familiarity, prior knowledge, pretaught topic-related vocabulary, story predictability, and teacher/peer assistance to sustain comprehension;

(v) struggle to independently read and understand grade-level texts; and

(vi) are able to apply basic and some higher-order comprehension skills when reading texts that are linguistically accommodated and/or simplified for this level.

(C) Advanced. Advanced ELLs have the ability to read and understand, with second language acquisition support, grade-appropriate English used in academic and social contexts. These students:

(i) read and understand, with second language acquisition support, a variety of grade-appropriate English vocabulary used in social and academic contexts:

(I) with second language acquisition support, read and understand grade-appropriate concrete and abstract vocabulary, but have difficulty with less commonly encountered words;

(II) demonstrate an emerging ability to understand words and phrases beyond their literal meaning; and

(III) understand multiple meanings of commonly used words;

(ii) read longer phrases and simple sentences from familiar text with appropriate rate and speed;

(iii) are developing skill in using their growing familiarity with English language structures to construct meaning of grade-appropriate text; and

(iv) are able to apply basic and higher-order comprehension skills when reading grade-appropriate text, but are still occasionally dependent on visuals, teacher/peer assistance, and other linguistically accommodated text features to determine or clarify meaning, particularly with unfamiliar topics.

(D) Advanced high. Advanced high ELLs have the ability to read and understand, with minimal second language acquisition support, grade-appropriate English used in academic and social contexts. These students:

(i) read and understand vocabulary at a level nearly comparable to that of their native English-speaking peers, with some exceptions when low-frequency or specialized vocabulary is used;

(ii) generally read grade-appropriate, familiar text with appropriate rate, speed, intonation, and expression;

(iii) are able to, at a level nearly comparable to native English-speaking peers, use their familiarity with English language structures to construct meaning of grade-appropriate text; and

(iv) are able to apply, with minimal second language acquisition support and at a level nearly comparable to native English-speaking peers, basic and higher-order comprehension skills when reading grade-appropriate text.

(5) Writing, Kindergarten-Grade 1. ELLs in Kindergarten and Grade 1 may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. The following proficiency level descriptors for writing are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction and should take into account developmental stages of emergent writers.

(A) Beginning. Beginning ELLs have little or no ability to use the English language to build foundational writing skills. These students:

(i) are unable to use English to explain self-generated writing such as stories they have created or other personal expressions, including emergent forms of writing (pictures, letter-like forms, mock words, scribbling, etc.);

(ii) know too little English to participate meaningfully in grade-appropriate shared writing activities using the English language;

(iii) cannot express themselves meaningfully in self-generated, connected written text in English beyond the level of high-frequency, concrete words, phrases, or short sentences that have been recently practiced and/or memorized; and

(iv) may demonstrate little or no awareness of English print conventions.

(B) Intermediate. Intermediate ELLs have a limited ability to use the English language to build foundational writing skills. These students:

(i) know enough English to explain briefly and simply self-generated writing, including emergent forms of writing, as long as the topic is highly familiar and concrete and requires very high-frequency English;

(ii) can participate meaningfully in grade-appropriate shared writing activities using the English language only when the writing topic is highly familiar and concrete and requires very high-frequency English;

(iii) express themselves meaningfully in self-generated, connected written text in English when their writing is limited to short sentences featuring simple, concrete English used frequently in class; and

(iv) frequently exhibit features of their primary language when writing in English such as primary language words, spelling patterns, word order, and literal translating.

(C) Advanced. Advanced ELLs have the ability to use the English language to build, with second language acquisition support, foundational writing skills. These students:

(i) use predominantly grade-appropriate English to explain, in some detail, most self-generated writing, including emergent forms of writing;

(ii) can participate meaningfully, with second language acquisition support, in most grade-appropriate shared writing activities using the English language;

(iii) although second language acquisition support is needed, have an emerging ability to express themselves in self-generated, connected written text in English in a grade-appropriate manner; and

(iv) occasionally exhibit second language acquisition errors when writing in English.

(D) Advanced high. Advanced high ELLs have the ability to use the English language to build, with minimal second language acquisition support, foundational writing skills. These students:

(i) use English at a level of complexity and detail nearly comparable to that of native English-speaking peers when explaining self-generated writing, including emergent forms of writing;

(ii) can participate meaningfully in most grade-appropriate shared writing activities using the English language; and

(iii) although minimal second language acquisition support may be needed, express themselves in self-generated, connected written text in English in a manner nearly comparable to their native English-speaking peers.

(6) Writing, Grades 2-12. ELLs in Grades 2-12 may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. The following proficiency level descriptors for writing are sufficient to describe the overall English language proficiency levels of ELLs in this language domain in order to linguistically accommodate their instruction.

(A) Beginning. Beginning ELLs lack the English vocabulary and grasp of English language structures necessary to address grade-appropriate writing tasks meaningfully. These students:

(i) have little or no ability to use the English language to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction;

(ii) lack the English necessary to develop or demonstrate elements of grade-appropriate writing such as focus and coherence, conventions, organization, voice, and development of ideas in English; and

(iii) exhibit writing features typical at this level, including:

(I) ability to label, list, and copy;

(II) high-frequency words/phrases and short, simple sentences (or even short paragraphs) based primarily on recently practiced, memorized, or highly familiar material; this type of writing may be quite accurate;
(III) present tense used primarily; and

(IV) frequent primary language features (spelling patterns, word order, literal translations, and words from the student's primary language) and other errors associated with second language acquisition may significantly hinder or prevent understanding, even for individuals accustomed to the writing of ELLs.

(B) Intermediate. Intermediate ELLs have enough English vocabulary and enough grasp of English language structures to address grade-appropriate writing tasks in a limited way. These students:

(i) have a limited ability to use the English language to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction;

(ii) are limited in their ability to develop or demonstrate elements of grade-appropriate writing in English; communicate best when topics are highly familiar and concrete, and require simple, high-frequency English; and

(iii) exhibit writing features typical at this level, including:

(I) simple, original messages consisting of short, simple sentences; frequent inaccuracies occur when creating or taking risks beyond familiar English;

(II) high-frequency vocabulary; academic writing often has an oral tone;

(III) loosely connected text with limited use of cohesive devices or repetitive use, which may cause gaps in meaning;

(IV) repetition of ideas due to lack of vocabulary and language structures;

(V) present tense used most accurately; simple future and past tenses, if attempted, are used inconsistently or with frequent inaccuracies;

(VI) undetailed descriptions, explanations, and narrations; difficulty expressing abstract ideas;

(VII) primary language features and errors associated with second language acquisition may be frequent; and

(VIII) some writing may be understood only by individuals accustomed to the writing of ELLs; parts of the writing may be hard to understand even for individuals accustomed to ELL writing.

(C) Advanced. Advanced ELLs have enough English vocabulary and command of English language structures to address grade-appropriate writing tasks, although second language acquisition support is needed. These students:

(i) are able to use the English language, with second language acquisition support, to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction;

(ii) know enough English to be able to develop or demonstrate elements of grade-appropriate writing in English, although second language acquisition support is particularly needed when topics are abstract, academically challenging, or unfamiliar; and

(iii) exhibit writing features typical at this level, including:

(I) grasp of basic verbs, tenses, grammar features, and sentence patterns; partial grasp of more complex verbs, tenses, grammar features, and sentence patterns;

(II) emerging grade-appropriate vocabulary; academic writing has a more academic tone;

(III) use of a variety of common cohesive devices, although some redundancy may occur;

(IV) narrations, explanations, and descriptions developed in some detail with emerging clarity; quality or quantity declines when abstract ideas are expressed, academic demands are high, or low-frequency vocabulary is required;

(V) occasional second language acquisition errors; and

(VI) communications are usually understood by individuals not accustomed to the writing of ELLs.

(D) Advanced high. Advanced high ELLs have acquired the English vocabulary and command of English language structures necessary to address grade-appropriate writing tasks with minimal second language acquisition support. These students:

(i) are able to use the English language, with minimal second language acquisition support, to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction;

(ii) know enough English to be able to develop or demonstrate, with minimal second language acquisition support, elements of grade-appropriate writing in English; and

(iii) exhibit writing features typical at this level, including:

(I) nearly comparable to writing of native English-speaking peers in clarity and precision with regard to English vocabulary and language structures, with occasional exceptions when writing about academically complex ideas, abstract ideas, or topics requiring low-frequency vocabulary;

(II) occasional difficulty with naturalness of phrasing and expression; and

(III) errors associated with second language acquisition are minor and usually limited to low-frequency words and structures; errors rarely interfere with communication.

(e) Effective date. The provisions of this section supersede the ESL standards specified in Chapter 128 of this title (relating to Texas Essential Knowledge and Skills for Spanish Language Arts and English as a Second Language) upon the effective date of this section.

Source: The provisions of this §74.4 adopted to be effective December 25, 2007, 32 TexReg 9615.

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Summaries of ELPS Introduction, District Responsibilities and Student Expectations* (subsection a,b,c)

ELPS Introduction

a1: Part of required curriculum for each subject including **proficiency standards** and **level descriptors**

a2: ELLs need **social and academic English** language proficiency to be successful

a3: Instruction must integrate social and academic English in content areas

a4: ELLs must read, write, listen, and speak in increasing complexity

a5: Student Expectations of ELPS apply to K-12 students

a6: Level descriptors are not grade specific and serve as a road map

District Responsibilities

b1: Identify students' proficiency levels using proficiency level descriptors

b2: Provide **linguistically accommodated** content instruction (communicated, sequenced, scaffolded)

b3: Provide linguistically accommodated content-based language instruction

b4: Focused, targeted, and systematic language instruction for beginning and intermediate ELLs (Grade 3 or higher)

Student Expectations

Learning Strategies

c1A: Use prior knowledge to learn new language

c1B: Monitor language with self-corrective techniques

c1C: Use techniques to learn new vocabulary

c1D: Speak using learning strategies

c1E: Use and reuse new basic and academic language to internalize language

c1F: Use accessible language to learn new language

c1G: Distinguish formal and informal English

c1H: Expand repertoire of language learning strategies

Listening

c2A: Distinguish sound and intonation

c2B: Recognize English sound system in new vocabulary

c2C: Learn new language heard in classroom interactions and instruction

c2D: Monitor understanding and seek clarification

c2E: Use visual, contextual linguistic support to confirm and enhance understanding

c2F: Derive meaning from a variety of media

c2G: Understand general meaning, main points, and details

c2H: Understand implicit ideas and information

c2I: Demonstrate listening comprehension

Speaking

c3A: Practice using English sound system in new vocabulary

c3B: Use new vocabulary in stories, descriptions, and classroom communication

c3C: Speak using a variety of sentence structures

c3D: Speak using grade level content area vocabulary in context

c3E: Share in cooperative groups

c3F: Ask and give information using high-frequency and content area vocabulary

c3G: Express opinions, ideas and feelings

c3H: Narrate, describe and explain

c3I: Adapt spoken language for formal and informal purposes

c3J: Respond orally to information from a variety of media sources

Reading

c4A: Learn relationships of sounds and letters in English

c4B: Recognize directionality of English text

c4C: Develop sight vocabulary and language structures

c4D: Use prereading supports

c4E: Read linguistically accommodated content area materials

c4F: Use visual and contextual supports to read text

c4G: Show comprehension of English text individually and in groups

c4H: Read silently with comprehension

c4I: Show comprehension through basic reading skills

c4J: Show comprehension through inferential skills

c4K: Show comprehension through analytical skills

Writing

c5A: Learn relationships between sounds and letters when writing

c5B: Write using newly acquired vocabulary

c5C: Spell familiar English words

c5D: Edit writing

c5E: Employ complex grammatical structures

c5F: Write using variety of sentence structures and words

c5G: Narrate, describe, and explain in writing

**These summaries must be used in conjunction with actual cross curricular student expectations when planning instruction. Used with permission from Canter Press, 2008.*

Summaries of ELPS: Proficiency Level Descriptors

(subsection d)

LEVEL	Listening (d1: k-12) *The student comprehends...*	Speaking (d2: k-12) *The student speaks...*	Reading (d4: 2-12) *The student reads...*	Writing (d6: 2-12) *The student writes...*
Beginning (A)	**1A(i)** few **simple conversations** with linguistic support **1A(ii) modified conversation** **1A(iii)** few words, **does not seek clarification**, watches others for cues	**2A(i)** using **single words and short phrases** with practiced material; tends to give up on attempts **2A(ii)** using **limited bank of key vocabulary** **2A(iii)** with **recently practiced familiar material** **2A(iv)** with frequent **errors** that hinder communication **2A(v)** with **pronunciation that inhibits communication**	**4A(i)** little except recently practiced terms, **environmental print**, high frequency words, **concrete words represented by pictures** **4A(ii) slowly, word by word** **4A(iii)** with very limited sense of English structure **4A(iv)** with comprehension of **practiced, familiar text** **4A(v)** with need for **visuals and prior knowledge** **4A(vi)** modified and **adapted text**	**6A(i)** with **little ability to use English** **64A(ii) without focus** and coherence, conventions, organization, voice **6A(iii)** labels, lists, and copies of printed text and **high-frequency words/phrases,** short and simple, practiced sentences primarily in **present tense with frequent errors** that hinder or prevent understanding
Intermediate (B)	**1B(i)** unfamiliar language with **linguistic supports** and adaptations **1B(ii)** unmodified conversation with **key words** and phrases **1B(iii)** with **requests for clarification** by asking speaker to repeat, slow down, or rephrase speech	**2B(i)** with **simple messages** and hesitation to think about meaning **2B(ii)** using **basic vocabulary** **2B(iii)** with **simple sentence structures** and present tense **2B(iv)** with **errors** that inhibit unfamiliar communication **2B(v)** with **pronunciation generally understood** by those familiar with English language learners	**4B(i) wider range of topics**: and everyday academic language **4B(ii) slowly and rereads** **4B(iii)** basic language structures **4B(iv)** simple sentences **with visual cues, pretaught vocabulary and interaction** **4B(v) grade-level texts** with difficulty **4B(vi)** at high level with **linguistic accommodation**	**6B(i)** with **limited ability to use English** in content area writing **6B(ii)** best on **topics that are highly familiar** with simple English **6B(iii)** with **simple oral tone in messages**, high-frequency vocabulary, loosely connected text, repetition of ideas, **mostly in the present tense,** undetailed descriptions, and frequent errors
Advanced (C)	**1C(i)** with some processing time, **visuals, verbal cues, and gestures; for unfamiliar conversations** **1C(ii)** most unmodified interaction **1C(iii)** with occasional **requests** for the speaker to slow down, repeat, rephrase, and **clarify meaning**	**2C(i)** in conversations with some **pauses to restate, repeat, and clarify** **2C(ii)** using **content-based and abstract terms** on familiar topics **2C(iii)** with **past, present, and future** **2C(iv)** using **complex sentences** and grammar with some errors **2C(v)** with **pronunciation usually understood** by most	**4C(i)** abstract grade appropriate text **4C(ii) longer phrases and familiar sentences** appropriately **4C(iii)** while developing the ability to construct meaning from text **4C(iv)** at **high comprehension** level with **linguistic support** for unfamiliar topics and to clarify meaning	**6C(i)** grade appropriate **ideas with second language support** **6C(ii)** with extra need for second language **support when topics are technical and abstract** **6C(iii)** with a grasp of basic English usage and some understanding of complex usage with e**merging grade-appropriate vocabulary** and a more academic tone
Advanced High (D)	**1D(i)** longer **discussions on unfamiliar topics** **1D(ii)** spoken informati on nearly **comparable to native speaker** **1D(iii)** with few requests for speaker to slow down, repeat, or rephrase	**2D(i)** in **extended discussions** with few pauses **2D(ii)** using **abstract content-based vocabulary** except low frequency terms; using idioms **2D(iii)** with grammar **nearly comparable to native speaker** **2D(iv)** with **few errors** blocking communication **2D(v) occasional mispronunciation**	**4D(i) nearly comparable to native speakers** **4D(ii) grade appropriate familiar text** appropriately **4D(iii)** while constructing meaning at near native ability level **4D(iv)** with high level comprehension with **minimal linguistic support**	**6D(i)** grade appropriate **content area ideas with little need for** linguistic **support** **6D(ii)** develop and demonstrate **grade appropriate** writing **6D(iii)** nearly **comparable to native speakers** with clarity and precision, with **occasional difficulties** with naturalness of language

*These summaries are not appropriate to use in formally identifying student proficiency levels for TELPAS. TELPAS assessment and training materials are provided by the Texas Education Agency Student Assessment Division: http://www.tea.state.tx.us/index3.aspx?id=3300&menu_id3=793

Understanding the ELPS Framework: (1) Linguistically Accommodated Instruction

Curriculum for ELLs must be...	Communicated	Sequenced	Scaffolded
What is it?	Comprehensible input is used to convey the meaning of key concepts to students. (Krashen, 1983)	Instruction is differentiated to align with the progression of students' language development level. (Hill & Flynn, 2006)	ELLs receive structured support that leads to independent acquisition of language and content knowledge. (Echevarria, Vogt, Short, 2008)
Examples:	• Visuals, TPR (Total Physical Response) and other techniques to communicate key concepts • Clear explanation of academic tasks • Speech appropriate for language level • Use of Native Language Resources (Echevarria, Vogt, Short, 2008)	• Differentiating language and content instruction • Targeted use of supplementary materials and resources • Pre-teaching social and academic vocabulary necessary for interaction and classroom tasks (Hill & Flynn, 2006)	• Oral scaffolding: recasting, paraphrasing, wait time, etc. • Procedural scaffolding: moving from whole class, to group, to individual tasks. • Instructional scaffolding: providing students concrete structures such as sentence and paragraph frames, patterns, and models. (Echevarria, Vogt, & Short, 2008)

Why the ELPS?

English language learners benefit from...

...content area instruction that is accomodated to their need for comprehensible input (Krashen, 1983; Echevarria, Vogt & Short, 2008).

...academic language instruction integrated into content area instruction (August & Shanahan, 2006; Chamot & Omally, 1984; Crandall, 1987; Samway & McKeon, 2007; Snow et. al. 1989).

...programs that hold high expectations for students for academic success (Samway & McKeon 2007).

Language proficiency standards provide a common framework for integrating language and content instruction for English learners (Echevarria, Vogt & Short, 2008).

Language Objectives Aligned to Cross-Curricular Student Expectations (subsection c)

Student Expectations

Learning Strategies

1A: Use what they know about ___ to predict the meaning of ...

1B: Check how well they are able to say ...

1C: Use ___ to learn new vocabulary about...

1D: Use strategies such as ___ to discuss...

1E: Use and reuse the words/phrases ___ in a discussion/writing activity about...

1F: Use the phrase ___ to learn the meaning of ...

1G: Use formal/informal English to describe...

1H: Use strategies such as ___ to learn the meaning of...

Listening

2A: Recognize correct pronunciation of ....

2B: Recognize sounds used in the words ...

2C: Identify words and phrases heard in a discussion about ...

2D: Check for understanding by ..../Seek help by ...

2E: Use supports such as ____ to enhance understanding of...

2F: Use ___ (media source) to learn/review ....

2G: Describe general meaning, main points, and details heard in ...

2H: Identify implicit ideas and information heard in ...

2I: Demonstrate listening comprehension by...

Speaking

3A: Pronounce the words ___ correctly...

3B: Use new vocabulary about ___ in stories, pictures, descriptions, and/or classroom communication ...

3C: Speak using a variety of types of sentence stems about ...

3D: Speak using the words___ about...

3E: Share in cooperative groups about ...

3F: Ask and give information using the words...

3G: Express opinions, ideas and feelings about ___ using the words/phrases...

3H: Narrate, describe and explain ....

3I: Use formal/informal English to say ...

3J: Respond orally to information from a variety of media sources about...

Reading

4A: Identify relationships between sounds and letters by...

4B: Recognize directionality of English text....

4C: Recognize the words/phrases....

4D: Use prereading supports such as ___ to understand...

4E: Read materials about ___ with support of simplified text/ visuals/word banks as needed...

4F: Use visual and contextual supports to read ...

4G: Show comprehension of English text about ...

4H: Demonstrate comprehension of text read silently by...

4I: Show comprehension of text about ___ through basic reading skills such as ...

4J: Show comprehension of text/graphic sources about __ through inferential skills such as ...

4K: Show comprehension of text about ___ through analytical skills such as ...

Writing

5A: Learn relationships between sounds and letters when writing about ...

5B: Write using newly acquired vocabulary about ...

5C: Spell English words such as ...

5D: Edit writing about ...

5E: Use simple and complex sentences to write about ...

5F: Write using a variety of sentence frames and selected vocabulary about ...

5G: Narrate, describe, and explain in writing about ...

Guidelines for Linguistic Accommodations for Each Proficiency Level*

Communicating and Scaffolding Instruction

Sequence of Language Development ↓

	Listening *Teachers...*	Speaking *Teachers...*	Reading *Teachers...*	Writing *Teachers...*
Beginning (A)	• Allow use of same language peer and native language support • Expect student to struggle to understand simple conversations • Use gestures and movement and other linguistic support to communicate language and expectations	• Provide short sentence stems and single words for practice before conversations • Allow some nonparticipation in simple conversations • Provide word bank of key vocabulary • Model pronunciation of social and academic language	• Organize reading in chunks • Practice high frequency, concrete terms • Use visual and linguistic supports • Explain classroom environmental print • Use adapted text	• Allow drawing and use of native language to express concepts • Allow student to use high frequency recently memorized, and short, simple, sentences • Provide short, simple sentence stems with present tense and high frequency vocabulary
Intermediate (B)	• Provide visuals, slower speech, verbal cues, simplified language • Preteach vocabulary before discussions and lectures • Teach phrases for student to request speakers repeat, slow down, or rephrase speech	• Allow extra processing time • Provide sentence stems with simple sentence structures and tenses • Model and provide practice in pronunciation of academic terms	• Allow wide range of reading • Allow grade-level comprehension and analysis of tasks including drawing and use of native language and peer collaboration • Provide high level of visual and linguistic supports with adapted text and pretaught vocabulary	• Allow drawing and use of native language to express academic concepts • Allow writing on familiar, concrete topics • Avoid assessment of language errors in content area writing • Provide simple sentence stems and scaffolded writing assignments
Advanced (C)	• Allow some processing time, visuals, verbal cues, and gestures for unfamiliar conversations • Provide opportunities for student to request clarification, repetition and rephrasing	• Allow extra time after pauses • Provide sentence stems with past, present, future, and complex grammar, and vocabulary with content-based and abstract terms	• Allow abstract grade-level reading comprehension and analysis with peer support • Provide visual and linguistic supports including adapted text for unfamiliar topics	• Provide grade-level appropriate writing tasks • Allow abstract and technical writing with linguistic support including teacher modeling and student interaction • Provide complex sentence stems for scaffolded writing assignments
Advanced High (D)	• Allow some extra time when academic material is complex and unfamiliar • Provide visuals, verbal cues, and gestures when material is complex and unfamiliar	• Opportunities for extended discussions • Provide sentence stems with past, present, future, and complex grammar and vocabulary with content-based and abstract terms	• Allow abstract grade-level reading • Provide minimal visual and linguistic supports • Allow grade level comprehension and analysis tasks with peer collaboration	• Provide complex grade-level appropriate writing tasks • Allow abstract and technical writing with minimal linguistic support • Use genre analysis to identify and use features of advanced English writing

*Guidelines at specific proficiency levels may be beneficial for students at all levels of proficiency depending on the context of instructional delivery, materials, and students' background knowledge. Used with permission from Canter Press, 2008.

ELPS-TELPAS Student Proficiency Profile

Teacher:	Grade Level/Course:

ELPS Cross-Curricular Student Expectations	Listening	Speaking	Reading	Writing
	c2A: Distinguish sound and intonation c2B: Recognize English sound system in new vocabulary c2C: Learn new language heard in classroom interactions and instruction c2D: Monitor understanding and seek clarification c2E: Use visual, contextual linguistic support to confirm and enhance understanding c2F: Derive meaning from a variety of media c2G: Understand general meaning, main points, and details c2H: Understand implicit ideas and information c2I: Demonstrate listening comprehension	c3A: Practice using English sound system in new vocabulary c3B: Use new vocabulary in stories, descriptions, and classroom communication c3C: Speak using a variety of sentence structures c3D: Speak using grade level content area vocabulary in context c3E: Share in cooperative groups c3F: Ask and give information using high-frequency and content area vocabulary c3G: Express opinions, ideas and feelings c3H: Narrate, describe and explain c3I: Adapt spoken language for formal and informal purposes c3J: Respond orally to information from a variety of media sources	c4A: Learn relationships of sounds and letters in English c4B: Recognize directionality of English text c4C: Develop sight vocabulary and language structures c4D: Use prereading supports c4E: Read linguistically accommodated content area materials c4F: Use visual and contextual supports to read text c4G: Show comprehension of English text individually and in groups c4H: Read silently with comprehension c4I: Show comprehension through basic reading skills c4J: Show comprehension through inferential skills c4K: Show comprehension through analytical skills	c5A: Learn relationships between sounds and letters when writing c5B: Write using newly acquired vocabulary c5C: Spell familiar English words c5D: Edit writing c5E: Employ complex grammatical structures c5F: Write using variety of sentence structures and words c5G: Narrate, describe, and explain in writing
TELPAS Proficiency Levels	Student Names	Student Names	Student Names	Student Names
Beginner	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____
Intermediate	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____
Advanced	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____
Advanced High	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____

ELPS Cross-Curricular Student Expectations summaries used with permission ©Canter Press.

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. The suggested list of activities is not intended to be exhaustive.

Grades K-12 Listening Activities

- Reacting to oral presentations
- Responding to text read aloud
- Following directions
- Cooperative group work
- Informal interactions with peers
- Large-group and small-group instructional interactions
- One-on-one interviews
- Individual student conferences

Grades K-12 Speaking Activities

- Cooperative group work
- Oral presentations
- Informal interactions with peers
- Large-group and small-group instructional interactions
- One-on-one interviews
- Classroom discussions
- Articulation of problem-solving strategies
- Individual student conferences

Grades K-12 Reading Activities

- Paired reading
- Sing-alongs and read-alongs, including chants and poems
- Shared reading with big books, charts, overhead transparencies, and other displays
- Guided reading with leveled readers
- Reading subject-area texts and related materials
- Independent reading
- Cooperative group work
- Reading-response journals
- Read and think aloud, using high-interest books relating to student's background

Grades K-12 Writing Activities

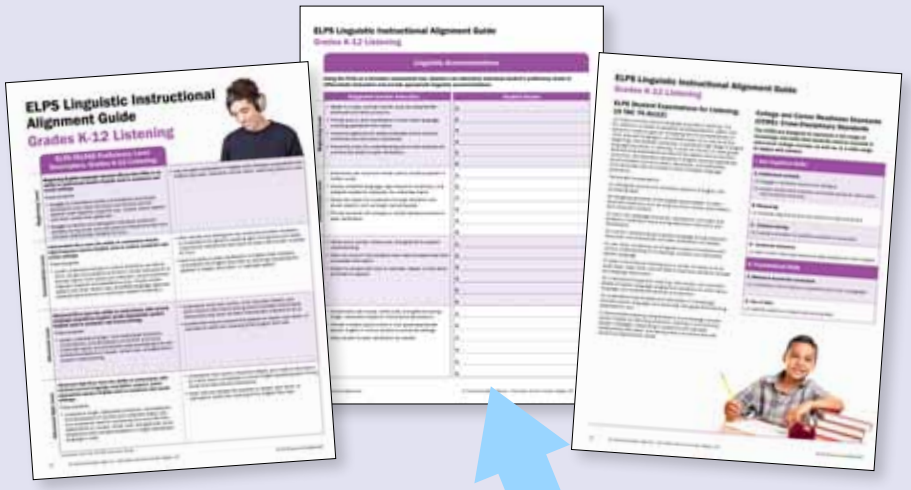
- Shared writing for literacy and content area development
- Language experience dictation
- Organization of thoughts and ideas through prewriting strategies
- Making lists for specific purposes
- Labeling pictures, objects, and items from projects
- Descriptive writing on a familiar topic or writing about a familiar process
- Narrative writing about a past event
- Reflective writing, such as journaling
- Extended writing from language arts classes
- Expository or procedural writing from science, mathematics, and social studies classes

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

The **ELPS Linguistic Instructional Alignment** documents allow teachers to see the connections between the ELPS, College and Career Readiness Standards (CCRS), TELPAS Proficiency Level Descriptors, and linguistic accommodations. The integration of these components is critical in lesson planning in order to meet the linguistic needs of English language learners.

To utilize these documents, print each set according to the grade span(s) taught.



As you refer to the standards and proficiency levels of your students, incorporating the suggested accommodations in lesson design and delivery will provide additional support to English language learners. Listing students' names highlights the correlation between proficiency levels and suggested teacher behaviors.

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Listening

	ELPS-TELPAS Proficiency Level Descriptors, Grades K-12 Listening	
Beginning Level	**Beginning English language learners (ELLs) have little or no ability to understand spoken English used in academic and social settings.** These students: • struggle to understand simple conversations and simple discussions even when the topics are familiar and the speaker uses linguistic supports (e.g., visuals, slower speech and other verbal cues, gestures) • struggle to identify and distinguish individual words and phrases during social and instructional interactions that have not been intentionally modified for ELLs	• may not seek clarification in English when failing to comprehend the English they hear; frequently remain silent, watching others for cues
Intermediate Level	**Intermediate ELLs have the ability to understand simple, high-frequency spoken English used in routine academic and social settings.** These students: • usually understand simple or routine directions, as well as short, simple conversations and short, simple discussions on familiar topics; when topics are unfamiliar, require extensive linguistic supports and adaptations (e.g., visuals, slower speech and other verbal cues, simplified language, gestures, preteaching to preview or build topic-related vocabulary)	• often identify and distinguish key words and phrases necessary to understand the general meaning (gist) during social and basic instructional interactions that have not been intentionally modified for ELLs • have the ability to seek clarification in English when failing to comprehend the English they hear by requiring/requesting the speaker to repeat, slow down, or rephrase speech
Advanced Level	**Advanced ELLs have the ability to understand, with second language acquisition support, grade-appropriate spoken English used in academic and social settings** These students: • usually understand longer, more elaborated directions, conversations, and discussions on familiar and some unfamiliar topics, but sometimes need processing time and sometimes depend on visuals, verbal cues, and gestures to support understanding	• understand most main points, most important details, and some implicit information during social and basic instructional interactions that have not been intentionally modified for ELLs • occasionally require/request the speaker to repeat, slow down, or rephrase to clarify the meaning of the English they hear
Advanced High Level	**Advanced high ELLs have the ability to understand, with minimal second language acquisition support, grade-appropriate spoken English used in academic and social settings.** These students: • understand longer, elaborated directions, conversations, and discussions on familiar and unfamiliar topics with only occasional need for processing time and with little dependence on visuals, verbal cues, and gestures; some exceptions when complex academic or highly specialized language is used	• understand main points, important details, and implicit information at a level nearly comparable to native English-speaking peers during social and instructional interactions • rarely require/request the speaker to repeat, slow down, or rephrase to clarify the meaning of the English they hear

Excerpted from the TEA Educator Guide to TELPAS.

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Listening

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.

If a student is at the . . . ↓

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Speak in a clear, concise manner, such as using shorter sentences and fewer pronouns. • Provide and/or allow clarification in their native language, including assistance from peers. • Implement gestures for added emphasis and to combine kinesthetic and phonemic awareness. • Frequently check for understanding since most students will not have the ability to seek clarification.	1. 2. 3. 4. 5. 6.
Intermediate Level	• Extensively use visual and verbal cues to reinforce spoken or written words. • Employ simplified language, high-frequency vocabulary, and preteach academic vocabulary for unfamiliar topics. • Stress key ideas and vocabulary through intonation and slower speech, such as longer natural pauses. • Provide students with phrases or simple sentence frames to seek clarification.	1. 2. 3. 4. 5. 6.
Advanced Level	• Utilize some visuals, verbal cues, and gestures to support understanding. • Take into account that students may need increased wait time to process information. • Expect to occasionally have to rephrase, repeat, or slow down at student's request.	1. 2. 3. 4. 5. 6.
Advanced High Level	• Occasionally use visuals, verbal cues, and gestures during longer, elaborated academic instructional discussions. • Provide multiple opportunities to hear grade-appropriate spoken English in various academic and social settings. • Allow student to seek clarification as needed.	1. 2. 3. 4. 5. 6.

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Listening

ELPS Student Expectations for Listening, 19 TAC 74.4(c)(2)

(2) Cross-curricular second language acquisition/listening. The ELL listens to a variety of speakers including teachers, peers, and electronic media to gain an increasing level of comprehension of newly acquired language in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in listening. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency.

The student is expected to:

(A) distinguish sounds and intonation patterns of English with increasing ease;

(B) recognize elements of the English sound system in newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters;

(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions;

(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed;

(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language;

(F) listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment;

(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar;

(H) understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations; and

(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs.

College and Career Readiness Standards (CCRS): Cross-Disciplinary Standards

The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as, in a wide range of majors and careers.

I. Key Cognitive Skills

A. Intellectual curiosity

(1) Engage in scholarly inquiry and dialogue.

(2) Accept constructive criticism and revise personal views when valid evidence warrants.

B. Reasoning

(1) Consider arguments and conclusions of self and others.

C. Problem solving

(1) Analyze a situation to identify a problem to be solved.

D. Academic behaviors

(1) Self-monitor learning needs and seek assistance when needed.

II. Foundational Skills

C. Research across the curriculum

(1) Understand which topics or questions are to be investigated.

D. Use of data

(1) Identify patterns or departures among data.

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Listening

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. *The suggested list of activities is not intended to be exhaustive.*

Grades K-12 Listening Activities

- Reacting to oral presentations
- Responding to text read aloud
- Following directions
- Cooperative group work
- Informal interactions with peers
- Large-group and small-group instructional interactions
- One-on-one interviews
- Individual student conferences

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Speaking

	ELPS-TELPAS Proficiency Level Descriptors, Grades K-12 Speaking	
Beginning Level	**Beginning English language learners (ELLs) have little or no ability to speak English in academic and social settings.** These students: • mainly speak using single words and short phrases consisting of recently practiced, memorized, or highly familiar material to get immediate needs met; may be hesitant to speak and often give up in their attempts to communicate • speak using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts	• lack the knowledge of English grammar necessary to connect ideas and speak in sentences; can sometimes produce sentences using recently practiced, memorized, or highly familiar material • exhibit second language acquisition errors that may hinder overall communication, particularly when trying to convey information beyond memorized, practiced, or highly familiar material • typically use pronunciation that significantly inhibits communication
Intermediate Level	**Intermediate ELLs have the ability to speak in a simple manner using English commonly heard in routine academic and social settings.** These students: • are able to express simple, original messages, speak using sentences, and participate in short conversations and classroom interactions; may hesitate frequently and for long periods to think about how to communicate desired meaning • speak simply using basic vocabulary needed in everyday social interactions and routine academic contexts; rarely have vocabulary to speak in detail	• exhibit an emerging awareness of English grammar and speak using mostly simple sentence structures and simple tenses; are most comfortable speaking in present tense • exhibit second language acquisition errors that may hinder overall communication when trying to use complex or less familiar English • use pronunciation that can usually be understood by people accustomed to interacting with ELLs
Advanced Level	**Advanced ELLs have the ability to speak using grade-appropriate English, with second language acquisition support, in academic and social settings.** These students: • are able to participate comfortably in most conversations and academic discussions on familiar topics, with some pauses to restate, repeat, or search for words and phrases to clarify meaning • discuss familiar academic topics using content-based terms and common abstract vocabulary; can usually speak in some detail on familiar topics	• have a grasp of basic grammar features, including a basic ability to narrate and describe in present, past, and future tenses; have an emerging ability to use complex sentences and complex grammar features • make errors that interfere somewhat with communication when using complex grammar structures, long sentences, and less familiar words and expressions • may mispronounce words, but use pronunciation that can usually be understood by people not accustomed to interacting with ELLs
Advanced High Level	**Advanced high ELLs have the ability to speak using grade-appropriate English, with minimal second language acquisition support, in academic and social settings.** These students: • are able to participate in extended discussions on a variety of social and grade-appropriate academic topics with only occasional disruptions, hesitations, or pauses • communicate effectively using abstract and content-based vocabulary during classroom instructional tasks, with some exceptions when low-frequency or academically demanding vocabulary is needed; use many of the same idioms and colloquialisms as their native English-speaking peers	• can use English grammar structures and complex sentences to narrate and describe at a level nearly comparable to native English-speaking peers • make few second language acquisition errors that interfere with overall communication • may mispronounce words, but rarely use pronunciation that interferes with overall communication

Excerpted from the TEA Educator Guide to TELPAS.

ELPS Linguistic Instructional Alignment Guide

Grades K-12 Speaking

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.

If a student is at the . . . ↓

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Respect a student's silent period and do not force them to speak if the student is hesitant to participate. • Accept responses consisting of single words and phrases from high familiar or memorized vocabulary. • Frequently model intonation and correct pronunciation in a variety of social and academic contexts. • Expect pronunciation errors that may inhibit communication.	**1.** **2.** **3.** **4.** **5.** **6.**
Intermediate Level	• Allow sufficient wait time so a student can process and communicate their response. • Provide simple sentence frames, answer choices, or graphic organizers for students to use in their response. • Focus on the content of student's response and not on pronunciation or grammatical errors. • Realize that students may speak mostly in simple, present tense sentences and rarely with any details.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced Level	• Assign oral presentations to practice using content-based terms and common abstract vocabulary. • Use graphic organizers to develop student's ability to use present, past, and future tenses and provide details while speaking. • Have student participate cooperative group work to support peer interactions.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced High Level	• Ask students to narrate and describe problem-solving strategies using complex sentences. • Introduce, model, practice, and review the use of idioms and colloquialisms in a variety of social and academic contexts. • Encourage students to participate in a variety of extended social and academic discussions.	**1.** **2.** **3.** **4.** **5.** **6.**

ELPS Linguistic Instructional Alignment Guide
Grades K-12 Speaking

ELPS Student Expectations for Speaking K-12, 19 TAC 74.4(c)(3)

(3) Cross-curricular second language acquisition/speaking. The ELL speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using vocabulary with increasing fluency and accuracy in language arts and all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in speaking. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency.

The student is expected to:

(A) practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible;

(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication;

(C) speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired;

(D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency;

(E) share information in cooperative learning interactions;

(F) ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments;

(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics;

(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired;

(I) adapt spoken language appropriately for formal and informal purposes; and

(J) respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment.

College and Career Readiness Standards (CCRS): Cross-Disciplinary Standards

The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as, in a wide range of majors and careers.

I. Key Cognitive Skills

A. Intellectual curiosity

(1) Engage in scholarly inquiry and dialogue.

(2) Accept constructive criticism and revise personal views when valid evidence warrants.

B. Reasoning

(2) Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions. .

D. Academic behaviors

(1) Self-monitor learning needs and seek assistance when needed.

F. Academic integrity

(1) Include the ideas of others and the complexities of the debate, issue, or problem.

II. Foundational Skills

C. Research across the curriculum

(8) Present final product.

D. Use of data

(3) Present analyzed data and communicate findings in a variety of formats.

E. Technology

(3) Use technology to communicate and display findings in a clear and coherent manner.

ELPS Linguistic Instructional Alignment Guide
Grades K-12 Speaking

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. *The suggested list of activities is not intended to be exhaustive.*

Grades K-12 Speaking Activities

- Cooperative group work
- Oral presentations
- Informal interactions with peers
- Large-group and small-group instructional interactions
- One-on-one interviews
- Classroom discussions
- Articulation of problem-solving strategies
- Individual student conferences

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Reading

	ELPS-TELPAS Proficiency Level Descriptors, Grades K-1 Reading	
Beginning Level	**Beginning English language learners (ELLs) have little or no ability to use the English language to build foundational reading skills.** These students: • derive little or no meaning from grade-appropriate stories read aloud in English, unless the stories are – read in short "chunks" – controlled to include the little English they know such as language that is high-frequency, concrete, and recently practiced – accompanied by ample visual supports such as illustrations, gestures, pantomime, and objects and by linguistic supports such as careful enunciation and slower speech	• begin to recognize and understand environmental print in English (e.g., signs, labeled items, names of peers, logos) • have difficulty decoding most grade-appropriate English text because they * – understand the meaning of very few words in English – struggle significantly with sounds in spoken English words and with sound-symbol relationships due to differences between their primary language and English
Intermediate Level	**Intermediate ELLs have a limited ability to use the English language to build foundational reading skills.** These students: • demonstrate limited comprehension (key words and general meaning) of grade-appropriate stories read aloud in English, unless the stories include – predictable story lines – highly familiar topics – primarily high-frequency, concrete vocabulary – short, simple sentences – visual and linguistic supports	• regularly recognize and understand common environmental print in English (e.g., signs, labeled items, names of peers, logos) • have difficulty decoding grade-appropriate English text because they* – understand the meaning of only those English words they hear frequently – struggle with some sounds in English words and some sound-symbol relationships due to differences between their primary language and English
Advanced Level	**Advanced ELLs have the ability to use the English language, with second language acquisition support, to build foundational reading skills.** These students: • demonstrate comprehension of most main points and most supporting ideas in grade-appropriate stories read aloud in English, although they may still depend on visual and linguistic supports to gain or confirm meaning • recognize some basic English vocabulary and high-frequency words in isolated print	• with second language acquisition support, are able to decode most grade-appropriate English text because they * – understand the meaning of most grade-appropriate English words – have little difficulty with English sounds and sound-symbol relationships that result from differences between their primary language and English
Advanced High Level	**Advanced high ELLs have the ability to use the English language, with minimal second language acquisition support, to build foundational reading skills.** These students: • demonstrate, with minimal second language acquisition support and at a level nearly comparable to native English-speaking peers, comprehension of main points and supporting ideas (explicit and implicit) in grade-appropriate stories read aloud in English	• with some exceptions, recognize sight vocabulary and high-frequency words to a degree nearly comparable to that of native English-speaking peers • with minimal second language acquisition support, have an ability to decode and understand grade-appropriate English text at a level nearly comparable to native English-speaking peers *

Excerpted from the TEA Educator Guide to TELPAS.

* The last descriptor applies only to students who are at the developmental stage of decoding written text (i.e., they have "cracked the code" necessary for learning to read).

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Reading

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.*

If a student is at the . . . ↓

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Provide multiple opportunities for shared reading, read alongs and sing alongs, including chants and poems. • Use big books and charts with extensive visuals such as illustrations, gestures, pantomime and objects. • Read stories in chunks, adjust enunciation, and use slower speech to stress sound-symbol relationships. • Display many examples of environmental print such as alphabet cards, signs, and labeling.	1. 2. 3. 4. 5. 6.
Intermediate Level	• Read predictable patterned books that may include rhyming words and repetition of key words. • Display environmental print including word walls, labeled pictures/items, and logos. • Allow students to retell stories orally, using pictures, or in short, simple sentences and/or phrases in journals. • Expect first language interference with some sound-symbol relationships in English.	1. 2. 3. 4. 5. 6.
Advanced Level	• Read and think aloud to focus on main points and details to provide visual and linguistic support. • Vary cooperative groups including partners, small groups, and whole class for shared reading. • Utilize guided reading with leveled readers to check student's comprehension, recognition of basic vocabulary, and difficulty with sound-symbol relationships.	1. 2. 3. 4. 5. 6.
Advanced High Level	• Read and think aloud using subject-area texts and related materials. • Check for student's comprehension of explicit and implicit ideas in stories read aloud in English. • Assign independent reading of grade-appropriate English text.	1. 2. 3. 4. 5. 6.

*Since K-1 students are in varying developmental stages of decoding written text, some linguistic accommodations may not apply to all students (TEA Educator Guide to TELPAS page 30)

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Reading

ELPS Student Expectations for Reading K–1, 19 TAC 74.4(c)(4)

(4) Cross-curricular second language acquisition/reading. The ELL reads a variety of texts for a variety of purposes with an increasing level of comprehension in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For Kindergarten and Grade 1, certain of these student expectations apply to text read aloud for students not yet at the stage of decoding written text.

The student is expected to:

(A) learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates,affixes, roots, and base words;

(B) recognize directionality of English reading such as left to right and top to bottom;

(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials;

(D) use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text;

(E) read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned;

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H) read silently with increasing ease and comprehension for longer periods;

(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;

(J) demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs; and

(K) demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade-level needs.

College and Career Readiness Standards (CCRS): Cross-Disciplinary Standards

The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as, in a wide range of majors and careers.

I. Key Cognitive Skills

B. Reasoning

(1) Consider arguments and conclusions of self and others.

(3) Gather evidence to support arguments, findings, or lines of reasoning.

(4) Support or modify claims based on the results of an inquiry

D. Academic behaviors

(1) Self-monitor learning needs and seek assistance when needed.

F. Academic integrity

(2) Evaluate sources for quality of content, validity, credibility, and relevance.

II. Foundational Skills

A. Reading across the curriculum

(1) Use effective prereading strategies.

(2) Use a variety of strategies to understand the meanings of new words.

(3) Identify the intended purpose and audience of the text.

(4) Identify the key information and supporting details.

(5) Analyze textual information critically.

(6) Annotate, summarize, paraphrase, and outline texts when appropriate.

(7) Adapt reading strategies according to structure of texts.

(8) Connect reading to historical and current events and personal interest.

D. Use of data

(1) Identify patterns or departures from patterns among data.

(2) Use statistical and probabilistic skills necessary for planning an investigation and collecting, analyzing, and interpreting data.

E. Technology

(1) Use technology to gather information.

(2) Use technology to organize, manage, and analyze information.

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Reading

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. *The suggested list of activities is not intended to be exhaustive.*

Grades K-1 Reading Activities

- Paired reading
- Sing-alongs and read-alongs, including chants and poems
- Shared reading with big books, charts, overhead transparencies, and other displays
- Guided reading with leveled readers
- Reading subject-area texts and related materials
- Independent reading
- Cooperative group work
- Reading-response journals

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Reading

ELPS-TELPAS Proficiency Level Descriptors, Grades 2-12 Reading		
Beginning Level	**Beginning English language learners (ELLs) have little or no ability to read and understand English used in academic and social contexts.** These students: • read and understand the very limited recently practiced, memorized, or highly familiar English they have learned; vocabulary predominantly includes - environmental print - some very high-frequency words - concrete words that can be represented by pictures • read slowly, word by word	• have a very limited sense of English language structures • comprehend predominantly isolated familiar words and phrases; comprehend some sentences in highly routine contexts or recently practiced, highly familiar text • are highly dependent on visuals and prior knowledge to derive meaning from text in English • are able to apply reading comprehension skills in English only when reading texts written for this level
Intermediate Level	**Intermediate ELLs have the ability to read and understand simple, high-frequency English used in routine academic and social contexts.** These students: • read and understand English vocabulary on a somewhat wider range of topics and with increased depth; vocabulary predominantly includes - everyday oral language - literal meanings of common words - routine academic language and terms - commonly used abstract language such as terms used to describe basic feelings • often read slowly and in short phrases; may re-read to clarify meaning	• have a growing understanding of basic, routinely used English language structures • understand simple sentences in short, connected texts, but are dependent on visual cues, topic familiarity, prior knowledge, pretaught topic-related vocabulary, story predictability, and teacher/peer assistance to sustain comprehension • struggle to independently read and understand grade-level texts • are able to apply basic and some higher-order comprehension skills when reading texts that are linguistically accommodated and/or simplified for this level
Advanced Level	**Advanced ELLs have the ability to read and understand, with second language acquisition support, grade-appropriate English used in academic and social contexts.** These students: • read and understand, with second language acquisition support, a variety of grade-appropriate English vocabulary used in social and academic contexts: - with second language acquisition support, read and understand grade-appropriate concrete and abstract vocabulary, but have difficulty with less commonly encountered words - demonstrate an emerging ability to understand words and phrases beyond their literal meaning - understand multiple meanings of commonly used words	• read longer phrases and simple sentences from familiar text with appropriate rate and speed • are developing skill in using their growing familiarity with English language structures to construct meaning of grade-appropriate text • are able to apply basic and higher-order comprehension skills when reading grade-appropriate text, but are still occasionally dependent on visuals, teacher/peer assistance, and other linguistically accommodated text features to determine or clarify meaning, particularly with unfamiliar topics
Advanced High Level	**Advanced high ELLs have the ability to read and understand, with minimal second language acquisition support, grade appropriate English used in academic and social contexts.** These students: • read and understand vocabulary at a level nearly comparable to that of their native English-speaking peers, with some exceptions when low-frequency or specialized vocabulary is used • generally read grade-appropriate, familiar text with appropriate rate, speed, intonation, and expression • are able to, at a level nearly comparable to native English-speaking peers, use their familiarity with English language structures to construct meaning of grade-appropriate text	• are able to apply, with minimal second language acquisition support and at a level nearly comparable to native English-speaking peers, basic and higher-order comprehension skills when reading grade-appropriate text

Excerpted from the TEA Educator Guide to TELPAS.

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Reading

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.

If a student is at the . . . ➧

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Display multiple examples of environmental print including but not limited to labels, signs, and logos. • Respect that students may not feel comfortable reading aloud since they may read slowly, word by word. • Read aloud to model enunciation and the use of English language structures. • Use simplified, decodable texts with visuals and highly-familiar English they have learned.	**1.** **2.** **3.** **4.** **5.** **6.**
Intermediate Level	• Allow students to read independently providing them with additional time to read slowly and reread for clarification. • Use high-interest texts that use common vocabulary used routinely in everyday oral and academic language. • Increase student's comprehension of text with visuals, peer support, pretaught topic-related vocabulary and predictable stories.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced Level	• Read and think aloud to focus on main points, details, context clues, and abstract vocabulary. • Preteach low-frequency and multiple-meaning vocabulary used in social and academic contexts. • Using varied cooperative groups to encourage and provide student with oral reading opportunities.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced High Level	• Use grade-appropriate texts that will promote vocabulary development of low-frequency or specialized, content-specific words. • Assign research projects that are grade and/or content specific. • Have students read texts that require higher-order comprehension skills such as understanding expository text, drawing conclusions and constructing meaning of unfamiliar concepts.	**1.** **2.** **3.** **4.** **5.** **6.**

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Reading

ELPS Student Expectations for Reading 2-12, 19 TAC 74.4(c)(4)

(4) Cross-curricular second language acquisition/reading. The ELL reads a variety of texts for a variety of purposes with an increasing level of comprehension in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For Kindergarten and Grade 1, certain of these student expectations apply to text read aloud for students not yet at the stage of decoding written text.

The student is expected to:

(A) learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates,affixes, roots, and base words;

(B) recognize directionality of English reading such as left to right and top to bottom;

(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials;

(D) use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text;

(E) read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned;

(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H) read silently with increasing ease and comprehension for longer periods;

(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;

(J) demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs; and

(K) demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade-level needs.

College and Career Readiness Standards (CCRS): Cross-Disciplinary Standards

The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as, in a wide range of majors and careers.

I. Key Cognitive Skills

B. Reasoning

(1) Consider arguments and conclusions of self and others.

(3) Gather evidence to support arguments, findings, or lines of reasoning.

(4) Support or modify claims based on the results of an inquiry.

D. Academic behaviors

(1) Self-monitor learning needs and seek assistance when needed.

F. Academic integrity

(2) Evaluate sources for quality of content, validity, credibility, and relevance.

II. Foundational Skills

A. Reading across the curriculum

(1) Use effective prereading strategies.

(2) Use a variety of strategies to understand the meanings of new words.

(3) Identify the intended purpose and audience of the text.

(4) Identify the key information and supporting details.

(5) Analyze textual information critically.

(6) Annotate, summarize, paraphrase, and outline texts when appropriate.

(7) Adapt reading strategies according to structure of texts.

(8) Connect reading to historical and current events and personal interest.

D. Use of data

(1) Identify patterns or departures from patterns among data.

(2) Use statistical and probabilistic skills necessary for planning an investigation and collecting, analyzing, and interpreting data.

E. Technology

(1) Use technology to gather information.

(2) Use technology to organize, manage, and analyze information.

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Reading

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. *The suggested list of activities is not intended to be exhaustive.*

Grades 2-12 Reading Activities

- Paired reading
- Read and think aloud, using high-interest books relating to student's background
- Shared reading with books, charts, overhead transparencies, and other displays
- Guided reading with leveled readers
- Reading subject-area texts and related materials
- Independent reading
- Cooperative group work
- Reading-response journals

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Writing

	ELPS-TELPAS Proficiency Level Descriptors, Grades K-1 Writing	
Beginning Level	**Beginning English language learners (ELLs) have little or no ability to use the English language to build foundational writing skills.** These students: • are unable to use English to explain self-generated writing (e.g., stories they have created or other personal expressions), including emergent forms of writing (pictures, letter-like forms, mock words, scribbling, etc.) • know too little English to participate meaningfully in grade-appropriate shared writing activities using the English language	• cannot express themselves meaningfully in self-generated, connected written text in English beyond the level of high-frequency, concrete words, phrases, or short sentences that have been recently practiced/memorized * • may demonstrate little or no awareness of English print conventions
Intermediate Level	**Intermediate ELLs have a limited ability to use the English language to build foundational writing skills.** These students: • know enough English to explain briefly and simply self-generated writing, including emergent forms of writing, as long as the topic is highly familiar and concrete and requires very high-frequency English • can participate meaningfully in grade-appropriate shared writing activities using the English language only when the writing topic is highly familiar and concrete and requires very high-frequency English	• express themselves meaningfully in self-generated, connected written text in English when their writing is limited to short sentences featuring simple, concrete English used frequently in class * • frequently exhibit features of their primary language when writing in English (e.g., primary language words, spelling patterns, word order, literal translating) *
Advanced Level	**Advanced ELLs have the ability to use the English language to build, with second language acquisition support, foundational writing skills.** These students: • use predominantly grade-appropriate English to explain, in some detail, most self-generated writing, including emergent forms of writing • can participate meaningfully, with second language acquisition support, in most grade-appropriate shared writing activities using the English language	• although second language acquisition support is needed, have an emerging ability to express themselves in self-generated, connected written text in English in a grade-appropriate manner * • occasionally exhibit second language acquisition errors when writing in English *
Advanced High Level	**Advanced high ELLs have the ability to use the English language to build, with minimal second language acquisition support, foundational writing skills.** These students: • use English at a level of complexity and detail nearly comparable to that of native English-speaking peers when explaining self-generated writing, including emergent forms of writing	• can participate meaningfully in most grade-appropriate shared writing activities using the English language • although minimal second language acquisition support may be needed, express themselves in self-generated, connected written text in English in a manner nearly comparable to their native English-speaking peers *

Excerpted from the TEA Educator Guide to TELPAS.

* These descriptors apply only to students who are at the developmental stage of generating original written text using a standard writing system.

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Writing

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.

If a student is at the . . . ↓

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Implement many shared writing activities to develop student's awareness of English print conventions. • Point to read each word when reading stories aloud and select letters and words to write on board or chart. • Provide labeled pictures and illustrations to develop basic and content-area, concrete vocabulary. • Allow students to use pictures, letter-like forms, mock words, scribbling or to dictate their personal reflections.	1. 2. 3. 4. 5. 6.
Intermediate Level	• Present, publish, and display whole class writing projects as examples of print conventions of high-frequency, concrete words and simple sentences. • Ask students to briefly explain their self-generated emergent writing. • Expect first language interference such as primary language words, spelling patterns, word order and literal translating in personal reflections.	1. 2. 3. 4. 5. 6.
Advanced Level	• Read and think aloud to focus on main points and details using grade-appropriate English. • Have students participate in shared writing activities by asking them to write on board or copy in journal. • Use concept mapping with whole class for vocabulary development and making personal connections to texts.	1. 2. 3. 4. 5. 6.
Advanced High Level	• Have students orally present and explain their written work. • Provide sentence strips so students can write sentences and cut them up to manipulate word order or concept. • Use graphic organizers to introduce and practice writing first drafts. • Assign independent writing in personal reflection journals on whole class or cooperative group tasks.	1. 2. 3. 4. 5. 6.

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Writing

ELPS Student Expectations for Writing K–1, 19 TAC 74.4(c)(5)

(5) Cross-curricular second language acquisition/writing. The ELL writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. In order for the ELL to meet grade-level learning expectations across foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For Kindergarten and Grade 1, certain of these student expectations do not apply until the student has reached the stage of generating original written text using a standard writing system.

The student is expected to:

(A) learn relationships between sounds and letters of the English language to represent sounds when writing in English;

(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary;

(C) spell familiar English words with increasing accuracy, and employ English spelling patterns and rules with increasing accuracy as more English is acquired;

(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired;

(E) employ increasingly complex grammatical structures in content area writing commensurate with grade-level expectations, such as:

(i) using correct verbs, tenses, and pronouns/antecedents;

(ii) using possessive case (apostrophe s) correctly; and

(iii) using negatives and contractions correctly.

(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired; and

(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired.

College and Career Readiness Standards (CCRS): Cross-Disciplinary Standards

The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as in a wide range of majors and careers.

I. Key Cognitive Skills

A. Intellectual curiosity

(2) Accept constructive criticism and revise personal views when valid evidence warrants.

B. Reasoning

(2) Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions.

(3) Gather evidence to support arguments, findings, or lines of reasoning.

(4) Support or modify claims based on the results of an inquiry.

F. Academic integrity

(1) Attribute ideas and information to source materials and people.

(3) Include the ideas of others and the complexities of the debate, issue, or problem.

II. Foundational Skills

B. Writing across the curriculum

(1) Writing clearly and coherently using standard writing conventions.

(2) Write in a variety of forms for various audiences and purposes.

(3) Compose and revise drafts.

D. Use of data

(3) Present analyzed data and communicate findings in a variety of formats.

E. Technology

(1) Use technology to gather information.

(2) Use technology to organize, manage, and analyze information.

(3) Use technology to communicate and display findings in clear and coherent manner.

(4) Use technology appropriately.

ELPS Linguistic Instructional Alignment Guide

Grades K-1 Writing

Performance-Based Activities

The following performance-based listening, speaking, reading, and writing activities are recommended for teachers to implement in their instruction as ways to gather information on how students are progressing in English language development. *The suggested list of activities is not intended to be exhaustive.*

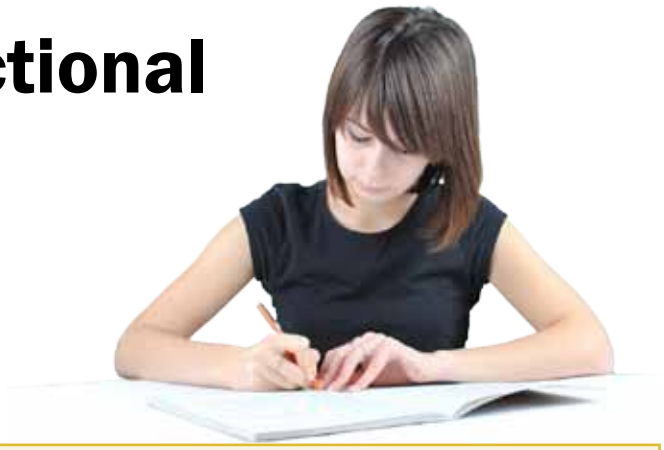
Grades K-1 Writing Activities

- Journal writing for personal reflections
- Shared writing for literacy and content area development
- Language experience dictation
- Organization of thoughts and ideas through prewriting strategies
- Publishing and presenting
- Making lists for specific purposes
- Labeling pictures, objects, and items from projects
- Cooperative group work
- First drafts

Excerpted from the TEA Educator Guide to TELPAS

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Writing



ELPS-TELPAS Proficiency Level Descriptors, Grades 2-12 Writing

Beginning Level	**Beginning English language learners (ELLs) lack the English vocabulary and grasp of English language structures necessary to address grade-appropriate writing tasks meaningfully.** These students: • have little or no ability to use the English language to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction • lack the English necessary to develop or demonstrate elements of grade-appropriate writing (e.g., focus and coherence, conventions, organization, voice, and development of ideas) in English	Typical writing features at this level: • ability to label, list, and copy • high-frequency words/phrases and short, simple sentences (or even short paragraphs) based primarily on recently practiced, memorized, or highly familiar material; this type of writing may be quite accurate • present tense used primarily • frequent primary language features (spelling patterns, word order, literal translations, and words from the student's primary language) and other errors associated with second language acquisition may significantly hinder or prevent understanding, even for individuals accustomed to the writing of ELLs
Intermediate Level	**Intermediate ELLs have enough English vocabulary and enough grasp of English language structures to address grade-appropriate writing tasks in a limited way.** These students: • have a limited ability to use the English language to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction • are limited in their ability to develop or demonstrate elements of grade-appropriate writing in English; communicate best when topics are highly familiar and concrete, and require simple, high-frequency English Typical writing features at this level: • simple, original messages consisting of short, simple sentences; frequent inaccuracies occur when creating or taking risks beyond familiar English	• high-frequency vocabulary; academic writing often has an oral tone • loosely connected text with limited use of cohesive devices or repetitive use, which may cause gaps in meaning • repetition of ideas due to lack of vocabulary and language structures • present tense used most accurately; simple future and past tenses, if attempted, are used inconsistently or with frequent inaccuracies • descriptions, explanations, and narrations lacking detail; difficulty expressing abstract ideas • primary language features and errors associated with second language acquisition may be frequent • some writing may be understood only by individuals accustomed to the writing of ELLs; parts of the writing may be hard to understand even for individuals accustomed to the writing of ELLs
Advanced Level	**Advanced ELLs have enough English vocabulary and command of English language structures to address grade-appropriate writing tasks, although second language acquisition support is needed.** These students: • are able to use the English language, with second language acquisition support, to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction • know enough English to be able to develop or demonstrate elements of grade-appropriate writing in English, although second language acquisition support is particularly needed when topics are abstract, academically challenging, or unfamiliar Typical writing features at this level: • grasp of basic verbs, tenses, grammar features, and sentence patterns; partial grasp of more complex verbs, tenses, grammar features, and sentence patterns	• emerging grade-appropriate vocabulary; academic writing has a more academic tone • use of a variety of common cohesive devices, although some redundancy may occur • narrations, explanations, and descriptions developed in some detail with emerging clarity; quality or quantity declines when abstract ideas are expressed, academic demands are high, or low-frequency vocabulary is required • occasional second language acquisition errors • communications are usually understood by individuals not accustomed to the writing of ELLs
Advanced High Level	**Advanced high ELLs have acquired the English vocabulary and command of English language structures necessary to address grade-appropriate writing tasks with minimal second language acquisition support.** These students: • are able to use the English language, with minimal second language acquisition support, to express ideas in writing and engage meaningfully in grade-appropriate writing assignments in content area instruction • know enough English to be able to develop or demonstrate, with minimal second language acquisition support, elements of grade-appropriate writing in English	Typical writing features at this level: • nearly comparable to writing of native English-speaking peers in clarity and precision with regard to English vocabulary and language structures, with occasional exceptions when writing about academically complex ideas, abstract ideas, or topics requiring low-frequency vocabulary • occasional difficulty with naturalness of phrasing and expression • errors associated with second language acquisition are minor and usually limited to low-frequency words and structures; errors rarely interfere with communication

Excerpted from the TEA Educator Guide to TELPAS.

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Writing

Linguistic Accommodations

Using the PLDs as a formative assessment tool, teachers can determine individual student's proficiency levels to differentiate instruction and provide appropriate linguistic accommodations.

If a student is at the . . . ↓

	Suggested teacher behaviors . . .	Student Names
Beginning Level	• Present, publish, and display whole class writing projects as examples of print conventions of high-frequency, concrete words and simple sentences. • Utilize various graphic organizers for vocabulary development such as the Frayer model, word wall, and personal vocabulary notebook/journal. • Implement shared writing activities such as using a visual context and familiar topics to elicit details. • Use a familiar topic to brainstorm and model organization of thoughts using simple sentences.	**1.** **2.** **3.** **4.** **5.** **6.**
Intermediate Level	• Create an interactive word wall that students can use during independent or cooperative writing tasks. • Have a shared writing activity about a familiar expository or procedural topic to model the use of cohesive devices. • Assign independent reflective writing having students make personal connections using present and past tense. • Expect student's writing samples to have first language interference such as literal translation, word order, etc.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced Level	• Use concept mapping to develop student's ability to write more detailed and narrative writing samples. • Read texts that require students to draw conclusions and understand abstract ideas to describe or explain in their writing journals. • Have students write a personal narrative requiring the use of a graphic organizer to compose a first draft.	**1.** **2.** **3.** **4.** **5.** **6.**
Advanced High Level	• Assign research projects that require the gathering of information to support or contradict their findings to present and publish. • Expose students to multiple examples of texts that were written for a variety of purposes and audiences.	**1.** **2.** **3.** **4.** **5.** **6.**

ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Writing

ELPS Student Expectations for Writing 2-12, 19 TAC 74.4(c)(5)

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ELPS Linguistic Instructional Alignment Guide

Grades 2-12 Writing

Performance-Based Activities

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Grades 2-12 Writing Activities

- Descriptive writing on a familiar topic
- Writing about a familiar process
- Narrative writing about a past event
- Reflective writing
- Extended writing from language arts classes
- Expository or procedural writing from science, mathematics, and social studies classes

Excerpted from the TEA Educator Guide to TELPAS

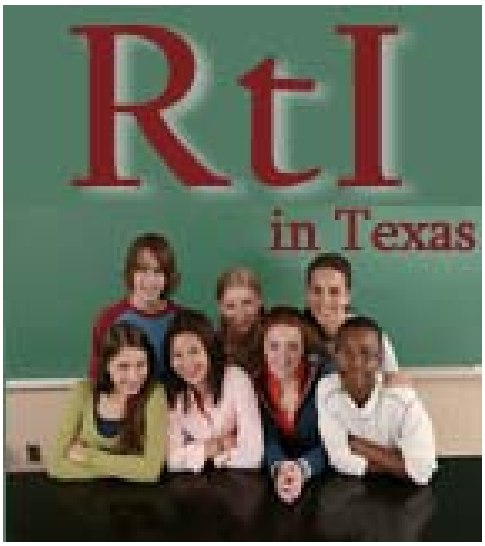
ELPS
Additional Resources

Response to Intervention

Response to Intervention (RtI) integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavioral problems. With RtI, schools use data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities.

All children can learn when provided with appropriate, effective instruction. Most academic difficulties can be prevented with early identification of need followed by immediate intervention. It is necessary to integrate the English Language Proficiency standards with fidelity when providing intervention services to English Language Learners.

Excerpted from Essential Components of RTI- A Closer Look at Response to Intervention, National Center on Response to Intervention



2008-2009

Response to Intervention

Guidance

Response to Intervention
Division of Curriculum
Texas Education Agency
1701 N. Congress
Austin, Texas 78701
(512) 463-9581

TEXAS EDUCATION AGENCY

1701 North Congress Ave. ★ Austin, Texas 78701-1494 ★ 512/463-9734 ★ FAX: 512/463-9838 ★ http://www.tea.state.tx.us

Robert Scott
Commissioner

October 2008

Dear Educator,

As we strive to provide a high quality education for all Texas students, we must continually seek to improve our schools by providing effective, research-based instruction that will meet our students' academic and social needs.

Response to Intervention, or RtI, a multi-tiered approach to instruction, is evolving as the framework of the general education program for all students including those who experience difficulties either academically or behaviorally. RtI helps to ensure that students have the opportunity to experience a full range of educational opportunities through the general education program.

Federal mandates require us to implement proactive models of instruction that allow all students to receive effective instructional as well as behavioral interventions in the general education setting.

The Texas Education Agency (TEA) is committed to assisting you as you consider the implementation of RtI on your campuses. We have established the RtI Coordinating Council (RtICC) to help us understand the needs of students, parents, teachers, and administrators regarding effective RtI implementation. TEA is deeply grateful to the membership of the RtICC for the following implementation guide. I trust it will prove a valuable resource to you.

Thank you for your commitment to improving student achievement in Texas.

Sincerely,

Robert Scott

Robert Scott
Commissioner of Education

Acknowledgements

This guidance document has been compiled with extensive contributions from the Response to Intervention Coordination Council (RtICC) whose members represent the stakeholders for whom we hope this document will serve as a resource.

The member organizations of the RtICC believe that RtI is an approach that should be embraced by Texas schools and teachers as they strive to ensure that all students achieve success in learning.

The following RtICC members have dedicated many hours of collaborative work to RtI, and for their contributions, the Texas Education Agency (TEA) is extremely thankful.

Paul Henley
Teaching and Learning Specialist
Texas State Teachers Association/National Education Association (TSTA/NEA)

Francine Holland
Deputy Executive Director, Instructional Services, ESC Region XI
Education Service Centers Core Group

Susan Holley
Associate Executive Director, Instructional Support and Leadership Development
Texas Association of School Administrators (TASA)

Patti Lyle Johnson
Director of Middle Level Services
Texas Association of Secondary School Principals (TASSP)

Trae Kendrick
Chief Learning Officer
Texas Elementary Principals and Supervisors Association (TEPSA)

Patty Quinzi
Legislative Counsel
Texas-American Federation of Teachers (TEXAS-AFT)

Ada Muoneke
Program Associate
Texas Comprehensive Center (TXCC) at SEDL

The mission of the RtICC is to communicate clear, consistent expectations for RtI implementation, model support for RtI from the various perspectives of the membership organizations, provide feedback to TEA regarding the RtI challenges faced by school districts, and identify and share RtI resources and best practices.

Texas Education Agency

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Deputy Commissioner
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Standards and Alignment

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Cory Green
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Division of NCLB Coordination

Kelly Callaway
Director
Advanced Academics/Gifted Education

Kathy Stewart
Director
Reading First

Chris Caesar
Program Manager
College and Career Readiness Initiatives

Petra Brittner
Director
Response to Intervention

Response to Intervention (RtI)

RtI is the practice of meeting the academic and behavioral needs of all students through a variety of services containing the following key elements:

- High-quality instruction and scientific research-based tiered interventions aligned with individual student need
- Frequent monitoring of student progress to make results-based academic and/or behavioral decisions
- Application of student response data to important educational decisions (such as those regarding placement, intervention, curriculum, and instructional goals and methodologies)

The instructional approaches used within the general education setting should result in academic and/or behavioral progress for the majority of the students. Struggling students are identified using data-based student progress monitoring and provided intensive instruction. The use of scientifically validated curricula and teaching methods expected in an RtI model leads to data-based school improvement.

Benefits of RtI

RtI holds the promise of ensuring that all children have access to high quality instruction and that struggling learners, including those with learning disabilities (LD), are identified, supported, and served early and effectively. Driven and documented by reliable data, the implementation of RtI in Texas schools can result in

- more effective instruction;
- increased student achievement;
- more appropriate LD identification;
- increased professional collaboration; and
- overall school improvement.

Multi-tiered model

To ensure that appropriate instruction directly addresses students' academic and behavioral difficulties in the general education setting, a multi-tiered service delivery model is used. Included are layers of increasingly intense intervention responding to student-specific needs.

Tier 1: Teachers use high-quality core class instruction aligned with the Texas Essential Knowledge and Skills (TEKS) in which about 80% or more of the students are successful. This tier is the crucial foundation of the RtI instructional model.

Tier 2: Students are identified for individual or small group intervention in addition to core class instruction. This level includes scientific research-based programs, strategies, and procedures designed and employed to supplement, enhance, and support Tier 1 activities. District-established standard protocol matches appropriate

intervention strategies to specific student needs. Tier 2 addresses the needs of approximately 10–15% of the students.

Tier 3: Students who have not responded adequately to Tiers 1 and 2 receive specific, custom-designed individual or small group instruction (designed using a problem-solving model) beyond the instruction in Tier 1. This level of intervention is aimed at those students who have identified difficulties academically or behaviorally. Tier 3 addresses the needs of approximately 5–10% of the students.

	TIER 1: CORE CLASS CURRICULUM	**TIER 2: SMALL GROUP INTERVENTION**	**TIER 3: INTENSIVE INTERVENTION**
Focus	All students	Identified students with marked difficulties who have not responded to Tier 1 efforts	Identified students with marked difficulties who have not responded to Tier 1 and Tier 2 efforts
Program	Scientific research-based curriculum and instruction	Specialized scientific research-based intervention	Individualized and responsive intervention
Grouping	As needed	Homogeneous small group instruction (1:5–10)	Homogeneous small group instruction (1:3)
Time	*90 minutes per day or more	*20 – 30 minutes per day in small group in addition to 90 minutes of core instruction	*50 minutes per day in individual or small group instruction in addition to 90 minutes of core instruction
Assessment	Universal Screening at beginning, middle, and end of the academic year (or more often, if appropriate)	Weekly progress monitoring on target skill(s) to ensure adequate progress and learning	Weekly progress monitoring on target skill(s) to ensure adequate progress and learning
Interventionist	General education teacher	Determined by the school (may be classroom teacher, specialized teacher, external interventionist, paraprofessional, etc.)	Determined by the school (may be classroom teacher, specialized teacher, external interventionist, paraprofessional, etc.)
Setting	General education classroom	Appropriate setting in the classroom or outside the classroom designated by the school	Appropriate setting outside the classroom designated by the school

*Time amounts are examples for use in comparing relative times and not intended to be recommendations; instructional time will vary depending on circumstances unique to each school.

Fidelity of Implementation

Current research indicates that the most common cause of failed intervention is a lack of fidelity of implementation. Scientific research may indicate that an intervention model is successful, but that success can only be dependably duplicated if teachers are provided sufficient on-going program-specific training, agree to implement all aspects of the model as designed and as tested, and uphold that agreement. Fidelity to the researched design should be documented; gaps in fidelity should be identified and corrected.

Assessment leading to data-based decisions

To determine the effectiveness of an intervention, student progress is monitored through formative assessments that are sensitive to small changes in student behavior and performance. The following three types of assessments are typical of RtI:

1. Universal screening of all students identifies those not making academic or behavioral progress at expected rates.

2. Diagnostics determine what students can and cannot do in academic and behavioral domains.

3. Progress monitoring determines whether academic or behavioral interventions are producing the desired effects.

Progress monitoring helps teachers choose effective, targeted instructional techniques and establish goals which enable all students to advance appropriately toward attainment of state achievement standards. RtI decision-making processes are dependent upon reliable student performance data and data-collection systems.

Benefits of Progress Monitoring

- Accelerated learning due to appropriate instruction
- Informed instructional decisions
- Effective communication with families and other professionals about students' progress
- High expectations for students by teachers
- Appropriate special education referrals
- Documentation of student progress for accountability purposes

Who is responsible for RtI?

Since RtI is a whole-school instructional framework intended to improve instruction and learning for all students, all faculty and staff members share responsibility for RtI.

The Principal is the instructional leader of the school and so must be the leader in developing and implementing an RtI model.

Counselors and diagnosticians play important roles in designing the RtI model to be used that may include making scheduling decisions, identifying student needs and monitoring progress, and helping to make decisions on appropriate interventions.

Teachers, of course, are the most important component of an RtI team and need to understand all aspects of RtI. Since teachers provide the bulk of the instruction and have the most opportunity to observe student progress, their support of RtI is crucial to success. Teachers should be included in every stage of developing an RtI model. The activities that comprise RtI typically occur in the general education setting as schools use a variety of strategies to assist struggling students. General and special education staff coordinate and collaborate to develop a process for RtI implementation, and such collaboration may lead to a shift in roles played by teachers from both areas. General education teachers may need training in many practices currently used primarily by special education teachers. The expertise of special education teachers can strengthen general education instruction as they provide that training, help to customize Tier 3 services, provide Tier 2 and 3 services, and, in general, team more closely with general education faculty.

Paraprofessionals may implement small-group interventions, assess progress, and maintain crucial databases showing that progress.

RtI's role in determining learning disability (LD) eligibility

As established by the reauthorization of the Individuals with Disabilities Education Act (IDEA) of 2004, LEAs may choose to use RtI as one of a variety of ways to determine appropriate LD eligibility. This use of RtI addresses concerns with models of LD identification that primarily rely on the use of IQ tests and performance discrepancy. Additional information regarding the use of RtI in determining LD eligibility is available in a question and answer format at
http://www.tea.state.tx.us/special.ed/guidance/rules/index.html.

RtI in Secondary Programs

Little research is currently available on the use of RtI in secondary schools. Clearly, all students can benefit from quality instructional strategies used across the curriculum (Tier 1), and students who arrive in high school performing below grade level can benefit from research-based instructional interventions and progress monitoring (Tiers 2 and 3). Currently, schools often address the needs of struggling students through tutoring programs offered during and/or after school or on Saturdays. Through an RtI model, such tutoring would be provided by teachers trained in scientifically researched instructional models, interventions would be carefully chosen to directly target deficient

skills, and students' individual progress would be carefully monitored to determine the effectiveness of the strategies implemented and to make appropriate adjustments. Using an RtI model, faculty and staff shift from a focus on the student's difficulties to a focus on planned and actual growth in response to carefully chosen and authentically implemented interventions.

Secondary schools implementing RtI will have unique considerations. Districts may want to scale up to a secondary RtI model, beginning with early grades only and gradually adding grade levels over multiple academic years. Another scale-up option that could be effective in both elementary and secondary schools is beginning with a focus only on improving Tier 1 instruction and adding Tiers 2 and 3 in the next two academic years. Regardless of the approach, issues that must be carefully considered include the following:

- What universal screening and progress monitoring options are available for secondary students and appropriate for the campus population?
- At Tier 1, what are the universal high-quality instructional practices that will be used across all subject areas?
- What age-appropriate interventions are available? Can a standard protocol identification of suitable interventions be established for the most common areas of need?
- In what ways might the structure of the school day impede intervention implementation? In what ways might the traditional school day structure be modified to accommodate an RtI model?
- How can program-specific professional development be provided to all teachers? How can opportunities for professional collaboration be expanded?
- In what ways can parent involvement and communication be increased to support the RtI model?

Using an RtI model to address behavioral concerns

Behavioral issues can negatively impact learning as learning difficulties can negatively impact behavior. As students' academic success improves in school, their social and behavioral success tends to improve as well. Nevertheless, an RtI model specifically designed to address behavioral difficulties can

- improve the pace of that improvement;
- support academic growth; and
- help improve the climate of the school.

Both academic and behavioral interventions contain the same components:

- The needs of most students are met through high-quality, research-based universal instructional and behavioral practices.
- Students needing additional intervention are identified and served through Tier 2 interventions. Tier 2 interventions are chosen through a campus-designed standard protocol or problem-based model. Student progress is carefully monitored, and interventions are modified as necessary.
- Custom-designed Tier 3 interventions are implemented with the small percentage of students who are not successful with Tier 2 interventions.

- Fidelity of implementation is crucial to success at all three tiers.

As with academic models, the focus of the entire school using RtI to address behavioral concerns can shift from identifying negative behavior to teaching and promoting positive behavior.

State and federal financial support for RtI

Although no state or federal funds are specifically appropriated for RtI implementation, several funding sources may appropriately be accessed by districts to support this initiative, including but not limited to the following:

- Accelerated Reading Instruction/Accelerated Math Instruction (ARI/AMI) - State funding is granted directly to districts for the purpose of identifying and serving students in Grades K-8 who are at risk of not meeting grade-level expectations in reading and math.

- Compensatory Education Funds - In addition to serving students at risk of dropping out of school, as defined in Section 29.081(d) of the Texas Education Code, a school district may serve students who meet local eligibility criteria adopted by the board of trustees.

- High School Allotment - RtI initiatives directed at improving academic success, disciplinary/behavioral issues, and drop out prevention may be appropriately funded for Grades 6 – 12 using the high school allotment.

- IDEA-B Early Intervening Services (EIS) - LEAs may use up to 15% of the entitlement received under IDEA-B to support RtI implementation. Local education agencies (LEAs) are encouraged to consider RtI when using EIS funds and when addressing student emotional/behavioral health and/or disproportionate representation by race/ethnicity in special education.

- Reading First - Reading First funds support struggling readers in Grades K-3 through professional development and technical assistance in the areas of phonological awareness, phonics, vocabulary, fluency and comprehension. Funds also support professional development for K-12 Special Education teachers.

- Title I, Part A Funds - Title I, Part A funds must be expended for programs/activities/strategies that are scientifically-based on research and meet needs (identified in the campus's comprehensive needs assessment process) which are listed in the campus improvement plan.

State initiatives to support RtI

The Response to Intervention Coordinating Council (RtICC) was formed in December 2007 to provide support and guidance to TEA and districts as RtI models are designed and implemented. In addition to representatives from several TEA divisions, all of whom work together to model braiding various services for successful RtI implementation,

An interactive Question and Answer (Q&A) version of this document is currently available at the Texas Education Agency (TEA) website. In that version of the document, the terms printed in red are hyperlinks that will take the reader to more precise information and links to related web-based resources.

You may access the interactive version at
http://www.tea.state.tx.us/curriculum/RtI/index.html.

RtI CC membership includes representatives from the following associations:

- American Federation of Teachers, Texas Chapter (TEXAS-AFT)
- Education Service Centers (ESCs)
- Texas Association of School Administrators (TASA)
- Texas Association of Secondary School Principals (TASSP)
- Texas Comprehensive Center at SEDL (TXCC)
- Texas Elementary Principals and Supervisors Association (TEPSA)
- Texas State Teachers Association (TSTA)

As determined at the conception of the RtICC, the council's 2007-09 goals are as follows:

1. Create state guidance tools available to districts on the TEA website.

Guidance Tool	**Completion Date**
The Texas definition of RtI	September 2008
The elements of an effective RtI model	September 2008
Information about appropriate funding sources for RtI implementation	Work in progress
A glossary of RtI terms	September 2008
Frequently asked questions and answers	September 2008
Links to useful resources	September 2008
Information about training opportunities	September 2008
Connections to ESC support	September 2008
Images of successful RtI implementation	Work in progress
Sample forms, procedures, etc. for modification and use by LEAs	Work in progress

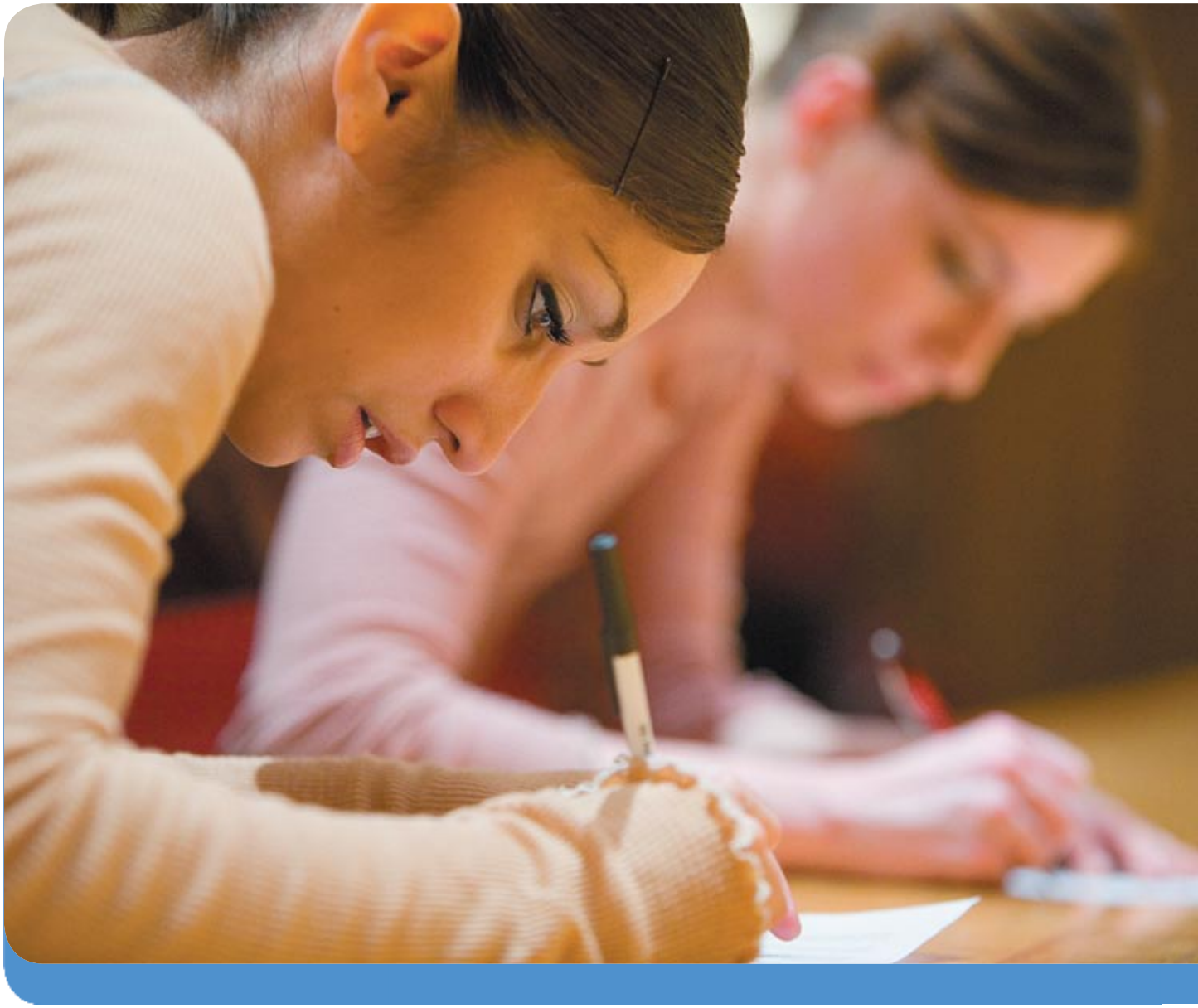
2. Provide guidance and direction for the provision of effective RtI professional development through the state system of ESCs.

College Readiness Standards

The College Readiness Standards are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as in a wide range of majors and careers. By implementing these standards, secondary school and higher education faculty, in all academic disciplines, will advance the mission of Texas: college ready students. All students deserve an education that prepares them for many types of opportunities after high school graduation. Generally, the more standards a student can demonstrate successfully the more likely it is that he or she will be college and career ready. It is crucial that educators implement these standards when instructing English language learners to ensure their postsecondary success.

Excerpted from the Introduction of Texas College Readiness Standards
(Adopted by the Texas Higher Education Coordinating Board January 24, 2008)

Texas College and Career Readiness Standards



Texas College and Career - Readiness Standards -

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Introduction

Over the past decade, Texas has focused on ensuring that its students are prepared for a changing and increasingly complex future. In elementary and middle schools, test results have improved, especially among students of color, and more students of all backgrounds are entering and completing postsecondary education programs. However, despite these substantial gains, Texas trails other states in preparing and sending students to postsecondary education. It is also clear that K-12 students, along with their parents, are uncertain about what students must know and what intellectual skills they must possess to be successful beyond high school.

Recognizing the importance of a world class education, the 79th Texas Legislature, Third Called Special Session, passed House Bill 1, the "Advancement of College Readiness in Curriculum." Section 28.008 of the Texas Education Code, seeks to increase the number of students who are college and career ready when they graduate high school. The legislation required the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) to establish Vertical Teams (VTs) to develop College and Career Readiness Standards (CCRS) in the areas of English/language arts, mathematics, science, and social studies. These standards specify what students must know and be able to do to succeed in entry-level courses at postsecondary institutions in Texas.

Vertical Teams were composed of secondary and postsecondary faculty. In 2007, the VTs met in February, March, June, and August and developed draft standards to present to the THECB. At its October 2007 meeting, Board members approved posting of the draft standards for public comment. Over 1500 comments were received and were reviewed by the VTs as they prepared their final drafts. The final drafts were submitted to the Commissioner of Higher Education who presented them to the THECB for adoption at its January 2008 meeting. The CCRS were approved unanimously and sent to the Commissioner of Education and the State Board of Education for incorporation into the Texas Essential Knowledge and Skills (TEKS).

The Nature of College and Career Readiness Standards

In developing the CCRS, the VTs set out to specify the knowledge and skills necessary to succeed in entry-level community college and university courses. The CCRS serve a different purpose than high school graduation standards, which typically emphasize mastery of basic skills and knowledge, and not necessarily college and career readiness. High school courses are designed to provide a broad set of core knowledge and skills and a foundation in literacy and basic mathematics. College courses typically require students to use content knowledge to weigh and analyze important issues and questions in a field of study. Even a high-quality college-preparatory curriculum is unlikely to prepare students to pursue a specific major in college. It can, however, help students develop a foundation of skills that they can employ to successfully pursue a variety of college majors. Therefore, the CCRS distinguish themselves from high school standards by emphasizing content knowledge as a means to an end: the content stimulates students to engage in deeper levels of thinking.

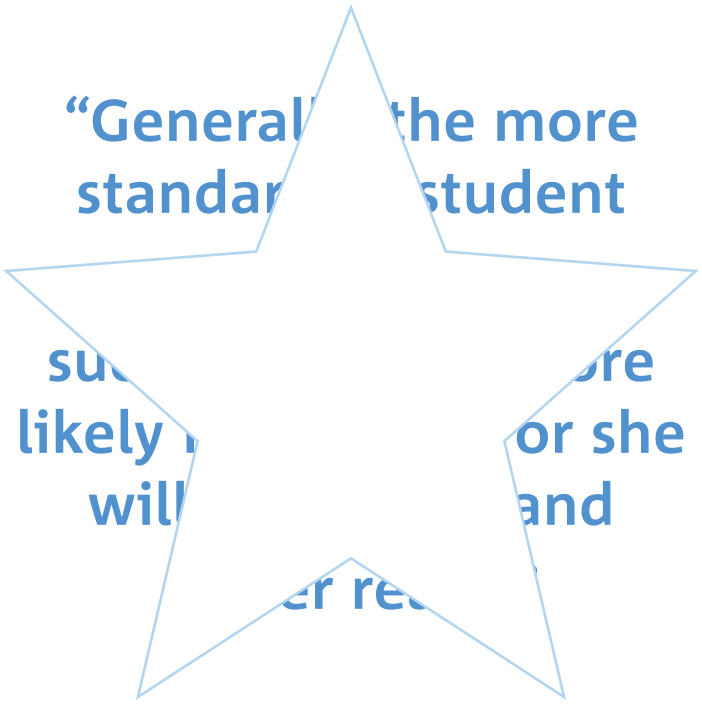
The CCRS are designed to represent a full range of knowledge and skills that students need to succeed in entry-level college courses, as well as in a wide range of majors and careers. According to research, over 80 percent of 21st century jobs require some postsecondary education. By implementing these standards, secondary school and postsecondary faculty in all academic disciplines will advance the mission of Texas: college and career ready students.

Organization of the College and Career Readiness Standards Framework

The CCRS consist of a multi-level framework that focuses not only on subject matter, but also on the way it is organized and presented in the classroom. This is crucial because at the postsecondary level, students need to understand the structure of the discipline and how knowledge expands from initial study of a topic. This pedagogical understanding sets a threshold for the kinds of deeper investigation and learning that occur as students pursue in-depth courses in their chosen majors.

Without an adequate understanding of the structure of their discipline, students will have difficulty succeeding in or will get less out of the upper-division courses that they will eventually take. The CCRS, therefore, introduce these disciplinary structures at the entry-level in order to familiarize students with key concepts and content in each of the four subject areas previously specified and in a set of cross-disciplinary standards.

Roman numerals mark the key content within each subject area. Capital letters specify the organizing components for introducing key knowledge and skills. Numbered headings delineate specific performance expectations regarding expected knowledge and skills and also suggest the challenge level of the standard. Lower-case letters present indicators of ways in which students would demonstrate performance in each area. These performance indicators, which are included as part of the appendix, serve as examples only and have not been adopted as policy by the THECB.



The CCRS should not be construed as a checklist. Generally, however, the more standards a student can demonstrate successfully, the more likely it is that he or she will be college and career ready. More importantly, that student will be prepared to succeed in most subject areas offered in college. Therefore, rather than superficially glossing over each standard, students will benefit from mastering them. The reader should keep an important distinction in mind when reviewing the CCRS: they avoid restating in detail all the prerequisite knowledge and skills that students must master to be college and career ready. The CCRS focus on "keystone" knowledge and skills. They depend on students achieving facility and fluency in foundation knowledge in the disciplines. They assume that students have achieved mastery of the knowledge and skills delineated in the TEKS. Establishing a clear connection between the TEKS and the CCRS is a crucial component of system alignment that will result in more students being ready for college.

The final section of the CCRS contains cross-disciplinary, foundational cognitive skills that may be as important as any particular content knowledge. Some of these skills, such as problem solving, are also contained within specific subject areas, but they are given additional emphasis by their inclusion in the separate cross-disciplinary standards section. Research on entry-level college courses conducted with thousands of college instructors has confirmed both the importance of these skills in entry-level courses as well as the significant shortcomings entering students demonstrate in these areas.

One additional point should be made. In delineating the knowledge and skills necessary for college and career readiness, the CCRS do not specify the performance levels necessary to demonstrate competence. Without examples of course syllabi, assignments, and student work to illustrate when or how a standard is met, some standards could conceivably be interpreted to be at a level that would challenge graduate students. Obviously, this is not the intent of the CCRS. The expectations inherent in each standard are keyed to what high school students can be expected to accomplish by the time they complete high school. Examples of course material that illustrate the necessary performance level for each standard will be made available as the CCRS are implemented.

In developing these standards, members of the VTs and staff at the TEA and the THECB were fully aware that not all high school graduates plan to go to college. However, a survey of the research on readiness for entry into the skilled workforce makes it clear that employers want their employees to be able

to read and communicate well, to perform relatively complex mathematical calculations accurately, to possess a strong knowledge of basic science, to have a fundamental knowledge of American culture and the world beyond, and to be able to think critically and adjust to rapidly changing work environments. Because these college and career readiness standards focus precisely on a strong foundation of knowledge and intellectual skills, including intellectual nimbleness and adaptability, they will serve equally well those students heading to college and to the workforce.

Organization of the College and Career Readiness Standards

The goal of the Texas CCRS is to establish what students must know and be able to do to succeed in entry-level courses offered at institutions of higher education. These CCRS are organized into four levels of specificity. The levels are defined and will appear as follows:

I. Key Content

A. Organizing Components

1. Performance Expectations

a. Examples of Performance Indicators

I. Key Content:

Keystone ideas of a discipline that reverberate as themes throughout the curriculum. (Designated by Roman numerals.)

A. Organizing Components:

Knowledge and subject areas that organize a discipline around what students should retain, be able to transfer, and apply to new knowledge and skills. (Designated by capital letters.)

1. Performance Expectations:
Knowledge and skills that represent important ideas of the current understanding of each organizing concept as well as the multiple contexts in which each organizing concept can be manifest. (Designated by numbers.)

EXAMPLE

a. Examples of Performance Indicators: Examples of how to assess and measure performance expectations. This list of indicators is not meant to be either EXHAUSTIVE or PRESCRIPTIVE. The operating premise is that the more of these or other similar indicators a student is successfully able to demonstrate, the greater the probability that the student will be prepared to succeed in college. (Designated by lowercase letters and shading in the appendix of this document.)

English/Language Arts Standards

ENGLISH/LANGUAGE ARTS STANDARDS -

English as a Way of Knowing

Listening, speaking, writing, and reading are vehicles for communication. They enable people to express their thoughts and demonstrate what they have learned. In the past, students were taught specific lessons under the rubric of language, and the skills were practiced, reinforced, and analyzed throughout the day in subjects such as geography, history, and science. Today the teaching of language arts is often considered the exclusive responsibility of English teachers. However, the complex role of language in education makes it clear that the language arts cannot be left entirely to the English class. Improvement in the language arts requires students to read and write frequently in all disciplines and to receive ample feedback. Following these standards, the language arts should be viewed as being fundamental to pedagogy in any subject.

English teachers have the expertise to ask, explore, and help students answer fundamental questions about language, among them:

- How does one convey a message in writing?
- What genres are most suitable in a given context, and what are the textual features of those genres?
- What is Standard American English?
- How might one become a more skillful reader who can understand both the text's surface and deeper meanings?
- What shared and unique features characterize specific literary genres?
- What are significant texts in American, British, and world literature, and what might they reveal about their cultural and historical contexts?
- What are the characteristics of effective listening and speaking, and how might one acquire and improve them?

English is mastered in the context of challenging content that requires students to think deeply and to exercise discipline in order to demonstrate understanding, raise questions, and present ideas.

Understanding and Using These Standards

Vertical Team (VT) members reviewed research on the skills and content knowledge students need to succeed in college; they also examined exemplary College and Career Readiness Standards (CCRS) and state and national standards in English. As members of the Commission for a College and Career Ready Texas (CCRT), the VT co-chairs studied reports and heard expert testimony. The VT's first draft was posted for public comment in October 2007 by the Texas Higher Education Coordinating Board (THECB). Concurrently, the VTs revised the standards in response to feedback from the CCRT, and this second draft was incorporated into the Report of the CCRT. The standards adopted by the THECB incorporate revisions based on the feedback to both public documents.

These standards are designed to be straightforward and easy to read. The VT members sought to avoid redundancy, wordiness, or specialized terminology. The danger with this approach is that even though each statement may be simple, the underlying meaning may not. The mastery level necessary on any particular standard depends on the specific task faced by the student. In other words, the standards can be fully understood only in the context of the learning materials or assignments with which the student is presented.

In this document, the rules of Standard American English are embedded into the writing process because a student must use language correctly in order to be college and career ready. For example, it would be highly unusual for a student to be given a multiple-choice test on parts of speech in a first-year English class in college. These rules are also contained in the cross-disciplinary standards to indicate the need for students to be able to use grammar and punctuation correctly in all subject areas. Another reason that mechanics and usage are not separated from the writing process is that the context of communication—what educators and scholars call the rhetorical situation—determines what is appropriate and what is effective. Because language is employed in a wide range of situations, skillful users of language must know how to

interpret and express themselves in a variety of forms and formats. Therefore, the standards address the full range of American English, allowing for the possibility that language can be used appropriately in many different formats and that students must have mastery of the rules associated with those formats and know when and how to apply those rules.

Because the language arts are present throughout the core curriculum, standards for the language arts appear in two places in this document—as elements of the cross-disciplinary standards fundamental to all subjects and as a stand-alone subject.

I. Writing

A. Compose a variety of texts that demonstrate clear focus, the logical development of ideas in well-organized paragraphs, and the use of appropriate language that advances the author's purpose.

1. Determine effective approaches, forms, and rhetorical techniques that demonstrate understanding of the writer's purpose and audience.

2. Generate ideas and gather information relevant to the topic and purpose, keeping careful records of outside sources.
3. Evaluate relevance, quality, sufficiency, and depth of preliminary ideas and information, organize material generated, and formulate a thesis.
4. Recognize the importance of revision as the key to effective writing. Each draft should refine key ideas and organize them more logically and fluidly, use language more precisely and effectively, and draw the reader to the author's purpose.
5. Edit writing for proper voice, tense, and syntax, assuring that it conforms to standard English, when appropriate.

II. Reading

A. Locate explicit textual information, draw complex inferences, and analyze and evaluate the information within and across texts of varying lengths.

1. Use effective reading strategies to determine a written work's purpose and intended audience.
2. Use text features and graphics to form an overview of informational texts and to determine where to locate information.
3. Identify explicit and implicit textual information including main ideas and author's purpose.
4. Draw and support complex inferences from text to summarize, draw conclusions, and distinguish facts from simple assertions and opinions.
5. Analyze the presentation of information and the strength and quality of evidence used by the author, and judge the coherence and logic of the presentation and the credibility of an argument.
6. Analyze imagery in literary texts.
7. Evaluate the use of both literal and figurative language to inform and shape the perceptions of readers.
8. Compare and analyze how generic features are used across texts.

9. Identify and analyze the audience, purpose, and message of an informational or persuasive text.
10. Identify and analyze how an author's use of language appeals to the senses, creates imagery, and suggests mood.
11. Identify, analyze, and evaluate similarities and differences in how multiple texts present information, argue a position, or relate a theme.

B. Understand new vocabulary and concepts and use them accurately in reading, speaking, and writing.

1. Identify new words and concepts acquired through study of their relationships to other words and concepts.
2. Apply knowledge of roots and affixes to infer the meanings of new words.
3. Use reference guides to confirm the meanings of new words or concepts.

C. Describe, analyze, and evaluate information within and across literary and other texts from a variety of cultures and historical periods.

1. Read a wide variety of texts from American, European, and world literatures.
2. Analyze themes, structures, and elements of myths, traditional narratives, and classical and contemporary literature.
3. Analyze works of literature for what they suggest about the historical period and cultural contexts in which they were written.
4. Analyze and compare the use of language in literary works from a variety of world cultures.

D. Explain how literary and other texts evoke personal experience and reveal character in particular historical circumstances.

1. Describe insights gained about oneself, others, or the world from reading specific texts.
2. Analyze the influence of myths, folktales, fables, and classical literature from a variety of world cultures on later literature and film.

III. Speaking

A. Understand the elements of communication both in informal group discussions and formal presentations (e.g., accuracy, relevance, rhetorical features, organization of information).

1. Understand how style and content of spoken language varies in different contexts and influences the listener's understanding.
2. Adjust presentation (delivery, vocabulary, length) to particular audiences and purposes.

B. Develop effective speaking styles for both group and one-on-one situations.

1. Participate actively and effectively in one-on-one oral communication situations.
2. Participate actively and effectively in group discussions.
3. Plan and deliver focused and coherent presentations that convey clear and distinct perspectives and demonstrate solid reasoning.

IV. Listening

A. Apply listening skills as an individual and as a member of a group in a variety of settings (e.g., lectures, discussions, conversations, team projects, presentations, interviews).

1. Analyze and evaluate the effectiveness of a public presentation.
2. Interpret a speaker's message; identify the position taken and the evidence in support of that position.
3. Use a variety of strategies to enhance listening comprehension (e.g., focus attention on message, monitor message for clarity and understanding, provide verbal and nonverbal feedback, note cues such as change of pace or particular words that indicate a new point is about to be made, select and organize key information).

B. Listen effectively in informal and formal situations.

1. Listen critically and respond appropriately to presentations.
2. Listen actively and effectively in one-on-one communication situations.
3. Listen actively and effectively in group discussions.

V. Research

A. Formulate topic and questions.

1. Formulate research questions.
2. Explore a research topic.
3. Refine research topic and devise a timeline for completing work.

B. Select information from a variety of sources.

1. Gather relevant sources.
2. Evaluate the validity and reliability of sources.
3. Synthesize and organize information effectively.

C. Produce and design a document.

1. Design and present an effective product.
2. Use source material ethically.

Mathematics Standards

MATHEMATICS STANDARDS -

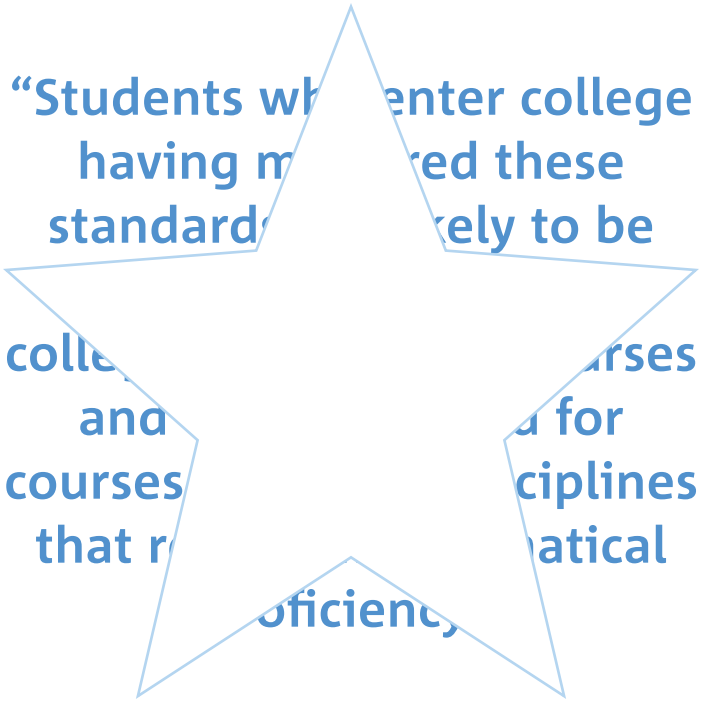
Mathematics as a Way of Knowing

Mathematics knowledge is essential to becoming a productive citizen in today's society. Many factors have increased the level of understanding of mathematics needed by the average adult. Our ever-changing world has become increasingly quantitative in nature. For example, in the physical sciences, social studies, and the business world, a widening array of phenomena is explained with numeric data presented visually in the form of charts and graphs that require interpretation. Mathematical reasoning is key to solving problems, formulating logical arguments, understanding quantitative features of various disciplines, critically analyzing media sources, and searching for patterns. Through mathematics, people become more able to make well-informed decisions by formulating conjectures and testing hypotheses. Mathematics cannot be viewed solely as a series of stand-alone courses or a set of specific skills. It must also be considered as a source of cross-disciplinary knowledge that is essential for success in numerous areas of study.

Understanding and Using These Standards

The College and Career Readiness Standards (CCRS) were developed as a result of a collaborative effort between secondary and postsecondary faculty. The standards are not intended to prescribe specific high school mathematics course titles or to endorse particular sequences. Students may encounter some of the content included in these standards at lower levels and should aim to meet these standards in high school.

These CCRS are designed to help students, parents, teachers, and counselors understand the specific content knowledge and academic skills necessary for college and career readiness. This knowledge enables all stakeholders to determine if the challenge level of any given mathematics course is appropriate to prepare students for college and careers. The CCRS are broad in nature, equipping students for general education college mathematics courses, but are not intended to encompass all skills necessary for students entering majors that require specific mathematical knowledge.



Students who enter college having mastered these standards are likely to be successful in entry-level college mathematics courses and to be prepared for courses in related disciplines that require mathematical proficiency. For science, technology, engineering, and mathematics majors in particular, additional mathematical knowledge and skills will be necessary, although adequate foundation for these future studies would be established.

Some standards identify specific mathematical skills and knowledge. Some are specific to subject area topics, while others address global topics. All are viewed as equally important to achieving the level of mathematical proficiency necessary for college and career readiness. In addition, students must develop ways of thinking about mathematics. These key cognitive skills elevate mathematics from an exercise in rote memorization to a process of analysis and interpretation that enables the learner to work with a range of complex questions, topics, and issues. The standards contain frequent reference to these key cognitive skills, but always in the context of challenging and appropriate content knowledge. Mathematical thinking never occurs in a vacuum; it is always embedded in appropriate content.

The use of technology is an instructional decision that facilitates the learning of mathematical concepts and processes. The Vertical Team decided to allow instructors to determine when and how to use technology based on their students' needs, the instructional resources, and the learning expectation. The growing technological world we live in requires students to embrace technology and the constant changes it brings to daily life.

I. Numeric Reasoning

A. Number representation

1. Compare real numbers.
2. Define and give examples of complex numbers.

B. Number operations

1. Perform computations with real and complex numbers.

C. Number sense and number concepts

1. Use estimation to check for errors and reasonableness of solutions.

II. Algebraic Reasoning

A. Expressions and equations

1. Explain and differentiate between expressions and equations using words such as "solve," "evaluate," and "simplify."

B. Manipulating expressions

1. Recognize and use algebraic (field) properties, concepts, procedures, and algorithms to combine, transform, and evaluate expressions (e.g., polynomials, radicals, rational expressions).

C. Solving equations, inequalities, and systems of equations

1. Recognize and use algebraic (field) properties, concepts, procedures, and algorithms to solve equations, inequalities, and systems of linear equations.
2. Explain the difference between the solution set of an equation and the solution set of an inequality.

D. Representations

1. Interpret multiple representations of equations and relationships.
2. Translate among multiple representations of equations and relationships.

III. Geometric Reasoning

A. Figures and their properties

1. Identify and represent the features of plane and space figures.
2. Make, test, and use conjectures about one-, two-, and three-dimensional figures and their properties.
3. Recognize and apply right triangle relationships including basic trigonometry.

B. Transformations and symmetry

1. Identify and apply transformations to figures.
2. Identify the symmetries of a plane figure.
3. Use congruence transformations and dilations to investigate congruence, similarity, and symmetries of plane figures.

C. Connections between geometry and other mathematical content strands

1. Make connections between geometry and algebra.
2. Make connections between geometry, statistics, and probability.
3. Make connections between geometry and measurement.

D. Logic and reasoning in geometry

1. Make and validate geometric conjectures.
2. Understand that Euclidean geometry is an axiomatic system.

IV. Measurement Reasoning

A. Measurement involving physical and natural attributes

1. Select or use the appropriate type of unit for the attribute being measured.

B. Systems of measurement

1. Convert from one measurement system to another.
2. Convert within a single measurement system.

C. Measurement involving geometry and algebra

1. Find the perimeter and area of two-dimensional figures.
2. Determine the surface area and volume of three-dimensional figures.
3. Determine indirect measurements of figures using scale drawings, similar figures, the Pythagorean Theorem, and basic trigonometry.

D. Measurement involving statistics and probability

1. Compute and use measures of center and spread to describe data.
2. Apply probabilistic measures to practical situations to make an informed decision.

V. Probabilistic Reasoning -

A. Counting principles

1. Determine the nature and the number of elements in a finite sample space.

B. Computation and interpretation of probabilities

1. Compute and interpret the probability of an event and its complement.
2. Compute and interpret the probability of conditional and compound events.

VI. Statistical Reasoning

A. Data collection

1. Plan a study.

B. Describe data

1. Determine types of data.
2. Select and apply appropriate visual representations of data.
3. Compute and describe summary statistics of data.
4. Describe patterns and departure from patterns in a set of data.

C. Read, analyze, interpret, and draw conclusions from data

1. Make predictions and draw inferences using summary statistics.
2. Analyze data sets using graphs and summary statistics.
3. Analyze relationships between paired data using spreadsheets, graphing calculators, or statistical software.
4. Recognize reliability of statistical results.

VII. Functions

A. Recognition and representation of functions

1. Recognize whether a relation is a function.
2. Recognize and distinguish between different types of functions.

B. Analysis of functions

1. Understand and analyze features of a function.
2. Algebraically construct and analyze new functions.

C. Model real world situations with functions

1. Apply known function models.
2. Develop a function to model a situation.

VIII. Problem Solving and Reasoning

A. Mathematical problem solving

1. Analyze given information.
2. Formulate a plan or strategy.
3. Determine a solution.
4. Justify the solution.
5. Evaluate the problem-solving process.

B. Logical reasoning

1. Develop and evaluate convincing arguments.
2. Use various types of reasoning.

C. Real world problem solving

1. Formulate a solution to a real world situation based on the solution to a mathematical problem.
2. Use a function to model a real world situation.
3. Evaluate the problem-solving process.

IX. Communication and Representation

A. Language, terms, and symbols of mathematics

1. Use mathematical symbols, terminology, and notation to represent given and unknown information in a problem.
2. Use mathematical language to represent and communicate the mathematical concepts in a problem.
3. Use mathematics as a language for reasoning, problem solving, making connections, and generalizing.

B. Interpretation of mathematical work

1. Model and interpret mathematical ideas and concepts using multiple representations.
2. Summarize and interpret mathematical information provided orally, visually, or in written form within the given context.

C. Presentation and representation of mathematical work

1. Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, graphs, and words.
2. Create and use representations to organize, record, and communicate mathematical ideas.
3. Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications.

X. Connections

A. Connections among the strands of mathematics

1. Connect and use multiple strands of mathematics in situations and problems.
2. Connect mathematics to the study of other disciplines.

B. Connections of mathematics to nature, real world situations, and everyday life

1. Use multiple representations to demonstrate links between mathematical and real world situations.
2. Understand and use appropriate mathematical models in the natural, physical, and social sciences.
3. Know and understand the use of mathematics in a variety of careers and professions.

Science Standards

Science as a Way of Knowing

As with mathematics, proficiency in science needs to improve before and during the secondary school years in order to meet the test of college and career readiness. The process of science rests on information and descriptions about the natural world, collected by observation. When an observation has been made repeatedly and independently by several observers under controlled and reproducible conditions, the findings are regarded with increasing confidence. Findings that are repeatedly confirmed across a range of situations yield insights that can lead to explanatory models, also called theories. Throughout this process, certain analytical procedures and practices are used in all scientific disciplines. These include specific mathematical procedures and techniques, standardized measurement methods, and several applications of formal logic.

These logical procedures are extremely important components of scientific methods but are not usually spontaneous, intuitive modes of thought. Scientific methods emphasize the practice of testing hypotheses (i.e., theories, explanatory models) by comparing their predictions to observations of the natural world. To judge the quality of a hypothesis, scientists ask whether it leads to accurate predictions about future events or observations. This pattern of logical thought and this particular method of analyzing and improving our understanding of the natural world is a fundamental element of all studies of science.

The field of science is typically divided into disciplines such as biology, chemistry, physics, environmental science, and Earth science. Although each discipline focuses on different features of the natural world, all areas of science share a common set of principles and procedures for collecting, analyzing, evaluating, and synthesizing information.

Science is distinguished from other fields of study by the way students learn skills for appropriately applying a variety of apparatuses, equipment, techniques, and procedures for collecting, interpreting, and using data. While engaged in scientific inquiry, students utilize other foundational skills such as

mathematics, communication, and social ethics, as well as personal skills such as time management, self-discipline, and organization.

Understanding and Using These Standards

The science Vertical Team (VT) consulted a range of resource materials that contained standards for science developed by national subject matter organizations, and considered carefully other the college readiness standards in science that have been previously developed. In addition, the process drew from various VT member experiences and backgrounds in order to respond to the needs and situations of Texas schools.

The standards are focused on ensuring that students are ready to explore and appreciate the richness and complexity of the natural world, to grapple with new ideas and divergent interpretations, and to master the powerful techniques of collecting, organizing, and analyzing information that scientists use in their investigations. The standards go beyond the three “traditional” high school science courses of biology, chemistry, and physics. They are less

concerned with course titles and more focused on ensuring that students are ready to explore and appreciate the richness and complexity of the natural world.

Although the standards are quite extensive and specific in their identification of important prerequisite knowledge, they emphasize in equal measure the importance of the key cognitive skills necessary to succeed in the kinds of tasks that students will almost certainly encounter in entry-level college science courses.

Student success in college-level introductory science courses depends on the development of certain skills in high school classes. Although applications of these skills vary from one discipline and one grade level to the next, all high school science courses should encourage students to master in an age-appropriate manner the concepts and vocabulary outlined in the standards, and to do so while acquiring and developing the key cognitive skills necessary to think like a scientist.

Within the context of these standards, scientific vocabulary should be viewed as a tool, not as an end in itself. Technical words and phrases allow concise and precise communication. Accurate use of technical language is critical for interaction among those who are actively engaged in science. But to focus on vocabulary alone is not sufficient. Students should be encouraged to maintain a judicious balance between learning vocabulary and applying that vocabulary as they formulate good questions, plan investigations, gather and evaluate data, and draw conclusions.

I. Nature of Science: Scientific Ways of Learning and Thinking

A. Cognitive skills in science

1. Utilize skepticism, logic, and professional ethics in science.
2. Use creativity and insight to recognize and describe patterns in natural phenomena.
3. Formulate appropriate questions to test understanding of natural phenomena.
4. Rely on reproducible observations of empirical evidence when constructing, analyzing, and evaluating explanations of natural events and processes.

B. Scientific inquiry

1. Design and conduct scientific investigations in which hypotheses are formulated and tested.

C. Collaborative and safe working practices

1. Collaborate on joint projects.
2. Understand and apply safe procedures in the laboratory and field, including chemical, electrical, and fire safety and safe handling of live or preserved organisms.
3. Demonstrate skill in the safe use of a wide variety of apparatuses, equipment, techniques, and procedures.

D. Current scientific technology

1. Demonstrate literacy in computer use.
2. Use computer models, applications, and simulations.
3. Demonstrate appropriate use of a wide variety of apparatuses, equipment, techniques, and procedures for collecting quantitative and qualitative data.

E. Effective communication of scientific information

1. Use several modes of expression to describe or characterize natural patterns and phenomena. These modes of expression include narrative, numerical, graphical, pictorial, symbolic, and kinesthetic.
2. Use essential vocabulary of the discipline being studied.

II. Foundation Skills: Scientific Applications of Mathematics

A. Basic mathematics conventions

1. Understand the real number system and its properties.
2. Use exponents and scientific notation.
3. Understand ratios, proportions, percentages, and decimal fractions, and translate from any form to any other.
4. Use proportional reasoning to solve problems.
5. Simplify algebraic expressions.
6. Estimate results to evaluate whether a calculated result is reasonable.
7. Use calculators, spreadsheets, computers, etc., in data analysis.

B. Mathematics as a symbolic language

1. Carry out formal operations using standard algebraic symbols and formulae.
2. Represent natural events, processes, and relationships with algebraic expressions and algorithms.

C. Understand relationships among geometry, algebra, and trigonometry

1. Understand simple vectors, vector notations, and vector diagrams, and carry out simple calculations involving vectors.
2. Understand that a curve drawn on a defined set of axes is fully equivalent to a set of algebraic equations.
3. Understand basic trigonometric principles, including definitions of terms such as sine, cosine, tangent, cotangent, and their relationship to triangles.
4. Understand basic geometric principles.

D. Scientific problem solving

1. Use dimensional analysis in problem solving.

E. Scientific application of probability and statistics

1. Understand descriptive statistics.

F. Scientific measurement

1. Select and use appropriate Standard International (SI) units and prefixes to express measurements for real world problems.
2. Use appropriate significant digits.
3. Understand and use logarithmic notation (base 10).

III. Foundation Skills: Scientific Applications of Communication

A. Scientific writing

1. Use correct applications of writing practices in scientific communication.

B. Scientific reading

1. Read technical and scientific articles to gain understanding of interpretations, apparatuses, techniques or procedures, and data.
2. Set up apparatuses, carry out procedures, and collect specified data from a given set of appropriate instructions.
3. Recognize scientific and technical vocabulary in the field of study and use this vocabulary to enhance clarity of communication.
4. List, use, and give examples of specific strategies before, during, and after reading to improve comprehension.

C. Presentation of scientific/technical information

1. Prepare and present scientific/technical information in appropriate formats for various audiences.

D. Research skills/information literacy

1. Use search engines, databases, and other digital electronic tools effectively to locate information.
2. Evaluate quality, accuracy, completeness, reliability, and currency of information from any source.

IV. Science, Technology, and Society

A. Interactions between innovations and science

1. Recognize how scientific discoveries are connected to technological innovations.

B. Social ethics

1. Understand how scientific research and technology have an impact on ethical and legal practices.
2. Understand how commonly held ethical beliefs impact scientific research.

C. History of science

1. Understand the historical development of major theories in science.
2. Recognize the role of people in important contributions to scientific knowledge.

V. Cross-Disciplinary Themes

A. Matter/states of matter

1. Know modern theories of atomic structure.
2. Understand the typical states of matter (solid, liquid, gas) and phase changes among these.

B. Energy (thermodynamics, kinetic, potential, energy transfers)

1. Understand the Laws of Thermodynamics.
2. Know the processes of energy transfer.

C. Change over time/equilibrium

1. Recognize patterns of change.

D. Classification

1. Understand that scientists categorize things according to similarities and differences.

E. Measurements and models

1. Use models to make predictions.
2. Use scale to relate models and structures.
3. Demonstrate familiarity with length scales from sub-atomic particles through macroscopic objects.

VI. Biology

A. Structure and function of cells

1. Know that although all cells share basic features, cells differentiate to carry out specialized functions.
2. Explain how cells can be categorized into two major types: prokaryotic and eukaryotic, and describe major features that distinguish one from the other.
3. Describe the structure and function of major sub-cellular organelles.
4. Describe the major features of mitosis and relate this process to growth and asexual reproduction.
5. Understand the process of cytokinesis in plant and animal cells and how this process is related to growth.
6. Know the structure of membranes and how this relates to permeability.

B. Biochemistry

1. Understand the major categories of biological molecules: lipids, carbohydrates, proteins, and nucleic acids.
2. Describe the structure and function of enzymes.
3. Describe the major features and chemical events of photosynthesis.
4. Describe the major features and chemical events of cellular respiration.
5. Know how organisms respond to presence or absence of oxygen, including mechanisms of fermentation.

6. Understand coupled reaction processes and describe the role of ATP in energy coupling and transfer.

C. Evolution and populations

1. Know multiple categories of evidence for evolutionary change and how this evidence is used to infer evolutionary relationships among organisms.
2. Recognize variations in population sizes, including extinction, and describe mechanisms and conditions that produce these variations.

D. Molecular genetics and heredity

1. Understand Mendel's laws of inheritance.
2. Know modifications to Mendel's laws.
3. Understand the molecular structures and functions of nucleic acids.
4. Understand simple principles of population genetics and describe characteristics of a Hardy-Weinberg population.
5. Describe the major features of meiosis and relate this process to Mendel's laws of inheritance.

E. Classification and taxonomy

1. Know ways in which living things can be classified based on each organism's internal and external structure, development, and relatedness of DNA sequences.

F. Systems and homeostasis

1. Know that organisms possess various structures and processes (feedback loops) that maintain steady internal conditions.
2. Describe, compare, and contrast structures and processes that allow gas exchange, nutrient uptake and processing, waste excretion, nervous and hormonal regulation, and reproduction in plants, animals, and fungi; give examples of each.

G. Ecology

1. Identify Earth's major biomes, giving their locations, typical climate conditions, and characteristic organisms.
2. Know patterns of energy flow and material cycling in Earth's ecosystems.
3. Understand typical forms of organismal behavior.
4. Know the process of succession.

VII. Chemistry

A. Matter and its properties

1. Know that physical and chemical properties can be used to describe and classify matter.
2. Recognize and classify pure substances (elements, compounds) and mixtures.

B. Atomic structure

1. Summarize the development of atomic theory. Understand that models of the atom are used to help understand the properties of elements and compounds.

C. Periodic table

1. Know the organization of the periodic table.
2. Recognize the trends in physical and chemical properties as one moves across a period or vertically through a group.

D. Chemical bonding

1. Characterize ionic bonds, metallic bonds, and covalent bonds. Describe the properties of metals and ionic and covalent compounds.

E. Chemical reactions

1. Classify chemical reactions by type. Describe the evidence that a chemical reaction has occurred.
2. Describe the properties of acids and bases, and identify the products of a neutralization reaction.
3. Understand oxidation-reduction reactions.
4. Understand chemical equilibrium.
5. Understand energy changes in chemical reactions.
6. Understand chemical kinetics.

F. Chemical nomenclature

1. Know formulas for ionic compounds.
2. Know formulas for molecular compounds.

G. The mole and stoichiometry

1. Understand the mole concept.
2. Understand molar relationships in reactions, stoichiometric calculations, and percent yield.

H. Thermochemistry

1. Understand the Law of Conservation of Energy and processes of heat transfer.
2. Understand energy changes and chemical reactions.

I. Properties and behavior of gases, liquids, and solids

1. Understand the behavior of matter in its various states: solid, liquid, and gas.
2. Understand properties of solutions.
3. Understand principles of ideal gas behavior and kinetic molecular theory.
4. Apply the concept of partial pressures in a mixture of gases.
5. Know properties of liquids and solids.
6. Understand the effect of vapor pressure on changes in state; explain heating curves and phase diagrams.
7. Describe intermolecular forces.

J. Basic structure and function of biological molecules: proteins, carbohydrates, lipids, and nucleic acids

1. Understand the major categories of biological molecules: proteins, carbohydrates, lipids, and nucleic acids.

K. Nuclear chemistry

1. Understand radioactive decay.

VIII. Physics

A. Matter

1. Demonstrate familiarity with length scales from sub-atomic particles through macroscopic objects.
2. Understand states of matter and their characteristics.
3. Understand the concepts of mass and inertia.
4. Understand the concept of density.
5. Understand the concepts of gravitational force and weight.

B. Vectors

1. Understand how vectors are used to represent physical quantities.
2. Demonstrate knowledge of vector mathematics using a graphical representation.
3. Demonstrate knowledge of vector mathematics using a numerical representation.

C. Forces and motion

1. Understand the fundamental concepts of kinematics.
2. Understand forces and Newton's Laws.
3. Understand the concept of momentum.

D. Mechanical energy

1. Understand potential and kinetic energy.
2. Understand conservation of energy.
3. Understand the relationship of work and mechanical energy.

E. Rotating systems

1. Understand rotational kinematics.
2. Understand the concept of torque.
3. Apply the concept of static equilibrium.
4. Understand angular momentum.

F. Fluids

1. Understand pressure in a fluid and its applications.
2. Understand Pascal's Principle.
3. Understand buoyancy.
4. Understand Bernoulli's principle.

G. Oscillations and waves

1. Understand basic oscillatory motion and simple harmonic motion.
2. Understand the difference between transverse and longitudinal waves.
3. Understand wave terminology: wavelength, period, frequency, and amplitude.

4. Understand the properties and behavior of sound waves.

H. Thermodynamics

1. Understand the gain and loss of heat energy in matter.
2. Understand the basic laws of thermodynamics.

I. Electromagnetism

1. Discuss electric charge and electric force.
2. Gain qualitative and quantitative understandings of voltage, current, and resistance.
3. Understand Ohm's Law.
4. Apply the concept of power to electricity.
5. Discuss basic DC circuits that include voltage sources and combinations of resistors.
6. Discuss basic DC circuits that include voltage sources and combinations of capacitors.
7. Understand magnetic fields and their relationship to electricity.
8. Relate electricity and magnetism to everyday life.

J. Optics

1. Know the electromagnetic spectrum.
2. Understand the wave/particle duality of light.
3. Understand concepts of geometric optics.

IX. Earth and Space Sciences

A. Earth systems

1. Know the major features and characteristics of atmosphere, geosphere, hydrosphere, and biosphere.
2. Understand relationships and interactions among atmosphere, geosphere, hydrosphere, and biosphere.
3. Possess a scientific understanding of the history of Earth's systems.
4. Utilize the tools scientists use to study and understand the Earth's systems.

B. Sun, Earth, and moon system

1. Understand interactions among the sun, Earth, and moon.
2. Possess a scientific understanding of the formation of the Earth and moon.

C. Solar system

1. Describe the structure and motions of the solar system and its components.
2. Possess a scientific understanding of the formation of the solar system.

D. Origin and structure of the universe

1. Understand scientific theories for the formation of the universe.
2. Know the current scientific descriptions of the components of the universe.

E. Plate tectonics

1. Describe the evidence that supports the current theory of plate tectonics.
2. Identify the major tectonic plates.
3. Describe the motions and interactions of tectonic plates.
4. Describe the rock cycle and its products.

F. Energy transfer within and among systems

1. Describe matter and energy transfer in the Earth's systems.
2. Give examples of effects of energy transfer within and among systems.

X. Environmental Science

A. Earth systems

1. Recognize the Earth's systems.
2. Know the major features of the geosphere and the factors that modify them.
3. Know the major features of the atmosphere.
4. Know the major features of the hydrosphere.
5. Be familiar with Earth's major biomes.
6. Describe the Earth's major biogeochemical cycles.

B. Energy

1. Understand energy transformations.

2. Know the various sources of energy for humans and other biological systems.

C. Populations

1. Recognize variations in population sizes, including human population and extinction, and describe mechanisms and conditions that produce these variations.

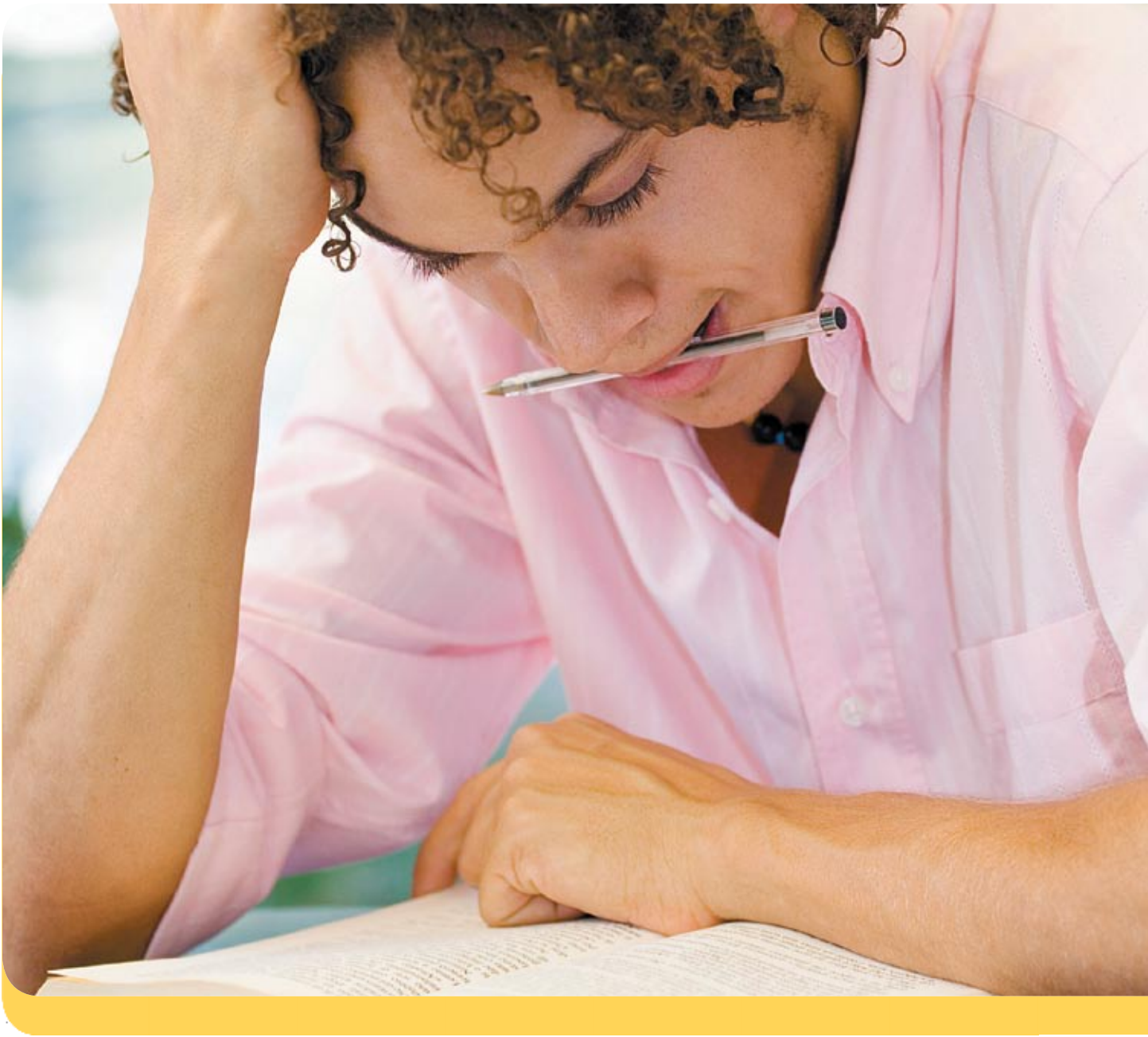
D. Economics and politics

1. Name and describe major environmental policies and legislation.
2. Understand the types, uses, and regulations of the various natural resources.

E. Human practices and their impacts

1. Describe the different uses for land (land management).
2. Understand the use and consequences of pest management.
3. Know the different methods used to increase food production.
4. Understand land and water usage and management practices.
5. Understand how human practices affect air, water, and soil quality.

Social Studies Standards



SOCIAL STUDIES STANDARDS -

Social Studies as a Way of Knowing

Social studies encompass a wide variety of disciplines including history, geography, political science, sociology, psychology, anthropology, economics, philosophy, and archeology as well as several fields of specialization within these broad categories. Each discipline focuses on specific aspects of the human experience and employs a variety of methodological approaches to study these phenomena. Within each field, social scientists incorporate research, statistical methods, and conclusions from other disciplines to strengthen their own mode of inquiry. All social scientists employ a variety of key cognitive skills from the sciences, mathematics, and language arts. They use an interdisciplinary approach to understanding human behavior, organizations, institutions, beliefs, and attitudes across time and space.

The goal and the focus of social studies is to promote a deeper and richer understanding of the human experience. Together, social studies disciplines impart particular knowledge and skills that equip students to engage actively, thoughtfully, and responsibly with their local, national, and international communities.

A primary goal of social studies is to promote greater civic awareness and responsibility. Effective citizenship requires knowledge of political and economic structures and institutions, methods of participation, and tools for problem solving. Social studies encourage rational and logic-based analysis of complex social problems using a variety of approaches, while recognizing and appreciating diverse human perspectives. They encourage individuals to understand social and environmental influences on their behavior and to connect their lives and decisions to the world around them, taking into consideration both past and present.

Understanding and Using These Standards

Social studies as taught at the college level require mastery of key cognitive skills that utilize a broad

body of factual information and concepts. Simply memorizing facts and data is not sufficient to succeed in a college-level social studies course. These thinking processes are the method by which students develop a greater understanding of the historical, political, economical, geographical, social, and psychological forces that have shaped their lives and the world they live in. Students need to know how to read and examine information critically, to communicate conclusions effectively, and to gather cogent information that will help them understand problems they will encounter in a wide variety of disciplines and careers.

To succeed at the college level, students in social studies must possess a body of knowledge and skills that enable them to engage actively with complex material. They must understand and be able to apply in a systematic manner the fundamental concepts, approaches, and terminologies common to a range of social studies disciplines including history, geography, political science, economics, and sociology. While it is not necessary for high school students to take courses in all of these subject areas, they do need to understand something about the tools that scholars in these subject areas use to formulate ideas and

investigate major problems in their fields. The ability to be a thoughtful analyst and interpreter of social and human behavior and events is at the heart of what it takes to succeed in college social studies courses. Training to develop these sophisticated skills needs to begin early and be nurtured over many years, and students need to be ready to demonstrate them with some level of fluency in college courses. The standards are designed to provide insight into the knowledge and skills students should be mastering in high school to be better prepared for the challenge of college social studies courses.

The Vertical Teams (VTs) chose deliberately not to identify lists of facts that students must master to be ready for college. Of course, students should master a range of specific information about social systems and phenomena. The VTs created standards that assume students will use their understanding of events, social systems, and human behavior to develop greater insight into how the various parts fit together into a more unified whole and how seemingly contradictory explanations or points-of-view can be analyzed for greater understanding instead of simply taking sides. This perspective is supported by and consistent with the approach taken in many exemplary social studies standards from other states and national organizations that were reviewed in the process of developing these standards.

I. Interrelated Disciplines and Skills

A. Spatial analysis of physical and cultural processes that shape the human experience

1. Use the tools and concepts of geography appropriately and accurately.
2. Analyze the interaction between human communities and the environment.
3. Analyze how physical and cultural processes have shaped human communities over time.
4. Evaluate the causes and effects of human migration patterns over time.
5. Analyze how various cultural regions have changed over time.
6. Analyze the relationship between geography and the development of human communities.

B. Periodization and chronological reasoning

1. Examine how and why historians divide the past into eras.
2. Identify and evaluate sources and patterns of change and continuity across time and place.
3. Analyze causes and effects of major political, economic, and social changes in U.S. and world history.

C. Change and continuity of political ideologies, constitutions, and political behavior

1. Evaluate different governmental systems and functions.
2. Evaluate changes in the functions and structures of government across time.
3. Explain and analyze the importance of civic engagement.

D. Change and continuity of economic systems and processes

1. Identify and evaluate the strengths and weaknesses of different economic systems.
2. Analyze the basic functions and structures of international economics.

E. Change and continuity of social groups, civic organizations, institutions, and their interaction

1. Identify different social groups (e.g., clubs, religious organizations) and examine how they form and how and why they sustain themselves.
2. Define the concept of socialization and analyze the role socialization plays in human development and behavior.
3. Analyze how social institutions (e.g., marriage, family, churches, schools) function and meet the needs of society.
4. Identify and evaluate the sources and consequences of social conflict.

F. Problem-solving and decision-making skills

1. Use a variety of research and analytical tools to explore questions or issues thoroughly and fairly.
2. Analyze ethical issues in historical, cultural, and social contexts.

II. Diverse Human Perspectives and Experiences

A. Multicultural societies

1. Define a "multicultural society" and consider both the positive and negative qualities of multiculturalism.
2. Evaluate the experiences and contributions of diverse groups to multicultural societies.

B. Factors that influence personal and group identities (e.g., race, ethnicity, gender, nationality, institutional affiliations, socioeconomic status)

1. Explain and evaluate the concepts of race, ethnicity, and nationalism.
2. Explain and evaluate the concept of gender.
3. Analyze diverse religious concepts, structures, and institutions around the world.
4. Evaluate how major philosophical and intellectual concepts influence human behavior or identity.
5. Explain the concepts of socioeconomic status and stratification.
6. Analyze how individual and group identities are established and change over time.

III. Interdependence of Global Communities

A. Spatial understanding of global, regional, national, and local communities

1. Distinguish spatial patterns of human communities that exist between or within contemporary political boundaries.
2. Connect regional or local developments to global ones.
3. Analyze how and why diverse communities interact and become dependent on each other.

B. Global analysis

1. Apply social studies methodologies to compare societies and cultures.

IV. Analysis, Synthesis, and Evaluation of Information

A. Critical examination of texts, images, and other sources of information

1. Identify and analyze the main idea(s) and point(s)-of-view in sources.
2. Situate an informational source in its appropriate contexts (contemporary, historical, cultural).
3. Evaluate sources from multiple perspectives.
4. Understand the differences between a primary and secondary source and use each appropriately to conduct research and construct arguments.
5. Read narrative texts critically.
6. Read research data critically.

B. Research and methods

1. Use established research methodologies.
2. Explain how historians and other social scientists develop new and competing views of past phenomena.
3. Gather, organize, and display the results of data and research.
4. Identify and collect sources.

C. Critical listening

1. Understand and interpret presentations (e.g., speeches, lectures, informal presentations) critically.

D. Reaching conclusions

1. Construct a thesis that is supported by evidence.
2. Recognize and evaluate counter-arguments.

V. Effective Communication

A. Clear and coherent oral and writtencommunication

1. Use appropriate oral communication techniques depending on the context or nature of the interaction.
2. Use conventions of standard written English.

B. Academic integrity

1. Attribute ideas and information to source materials and authors.

Cross-Disciplinary Standards

CROSS-DISCIPLINARY STANDARDS -

Foundations of Learning and Knowing

Although the College and Career Readiness Standards (CCRS) are organized into four distinct disciplinary areas, English/language arts, mathematics, science, and social studies, there are elements that cut across one or more disciplines. In fact, some skill areas span all four subject areas. It is important to identify the cross-cutting knowledge and skills that underlie and connect the four disciplinary areas. This important need has been addressed through the addition of a section of cross-disciplinary standards.

Think of cross-disciplinary standards as tools that college instructors in all areas use to challenge, engage, and evaluate students in each specific subject area. They include key cognitive skills such as reasoning and problem solving, as well as foundational skills such as reading, writing, data analysis, and conducting research.

Many of these skills are also taught within the context of a single subject area. Reading and writing are excellent examples. While the primary responsibility for developing reading and writing skills in secondary school resides within English/language arts courses, first-year college students are expected to employ a range of subject-specific reading and writing strategies and techniques in all of their courses. For example, they will write a lab report in a biology class or read primary source documents in a history class.

Academic and business leaders emphasize the importance of being able to apply these skills across a variety of contexts and subject matter. They describe 21st century learning and work environments in which the cross-disciplinary skills are prerequisites to solving many of the most important problems students will encounter in college and the workplace. These problems increasingly require applying knowledge across disciplines and subject areas and the mastery of a base set of communication and analysis skills that span subject areas. Students, then, not only need to possess content knowledge, but also need to be able to apply key cognitive skills to the academic tasks presented to them, most of which require much more than simple recall of factual knowledge. These cross-disciplinary standards enable students to engage in deeper levels of thinking across a wide range of subjects. They help high school students prepare for the transition from high school's primary focus on acquiring content knowledge to a postsecondary environment in which complex cognitive skills are necessary to achieve deeper understanding.

Understanding and Using The Cross-Disciplinary Standards

The cross-disciplinary standards are organized into two major areas: Key Cognitive Skills and Foundational Skills. The Key Cognitive Skills specify intellectual behaviors that are prevalent in entry-level college courses. The list includes intellectual curiosity, reasoning, problem solving, academic behaviors, work habits, and academic integrity. Foundational Skills consist of proficiencies students need to be able to transfer knowledge and apply it across the curriculum. These include reading, writing, conducting research, understanding and using data, and using technology.

The first three levels of the cross-disciplinary standards are written to apply across subject areas. The performance indicators found in the appendix illustrate how the cross-disciplinary standards are manifested within the subject areas. The Vertical Teams created an example in each subject area of at least one performance indicator that could be applied in that subject area. These indicators are meant to exemplify how the cross-disciplinary standards could be demonstrated in all subject areas.

I. Key Cognitive Skills

A. Intellectual curiosity

1. Engage in scholarly inquiry and dialogue.
2. Accept constructive criticism and revise personal views when valid evidence warrants.

B. Reasoning

1. Consider arguments and conclusions of self and others.
2. Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions.

3. Gather evidence to support arguments, findings, or lines of reasoning.
4. Support or modify claims based on the results of an inquiry.

C. Problem solving

1. Analyze a situation to identify a problem to be solved.
2. Develop and apply multiple strategies to solve a problem.
3. Collect evidence and data systematically and directly relate to solving a problem.

D. Academic behaviors

1. Self-monitor learning needs and seek assistance when needed.
2. Use study habits necessary to manage academic pursuits and requirements.
3. Strive for accuracy and precision.
4. Persevere to complete and master tasks.

E. Work habits

1. Work independently.
2. Work collaboratively.

F. Academic integrity

1. Attribute ideas and information to source materials and people.
2. Evaluate sources for quality of content, validity, credibility, and relevance.
3. Include the ideas of others and the complexities of the debate, issue, or problem.
4. Understand and adhere to ethical codes of conduct.

II. Foundational Skills

A. Reading across the curriculum

1. Use effective prereading strategies.
2. Use a variety of strategies to understand the meanings of new words.
3. Identify the intended purpose and audience of the text.
4. Identify the key information and supporting details.
5. Analyze textual information critically.
6. Annotate, summarize, paraphrase, and outline texts when appropriate.
7. Adapt reading strategies according to structure of texts.
8. Connect reading to historical and current events and personal interest.

B. Writing across the curriculum

1. Write clearly and coherently using standard writing conventions.
2. Write in a variety of forms for various audiences and purposes.
3. Compose and revise drafts.

C. Research across the curriculum

1. Understand which topics or questions are to be investigated.
2. Explore a research topic.
3. Refine research topic based on preliminary research and devise a timeline for completing work.
4. Evaluate the validity and reliability of sources.
5. Synthesize and organize information effectively.
6. Design and present an effective product.
7. Integrate source material.
8. Present final product.

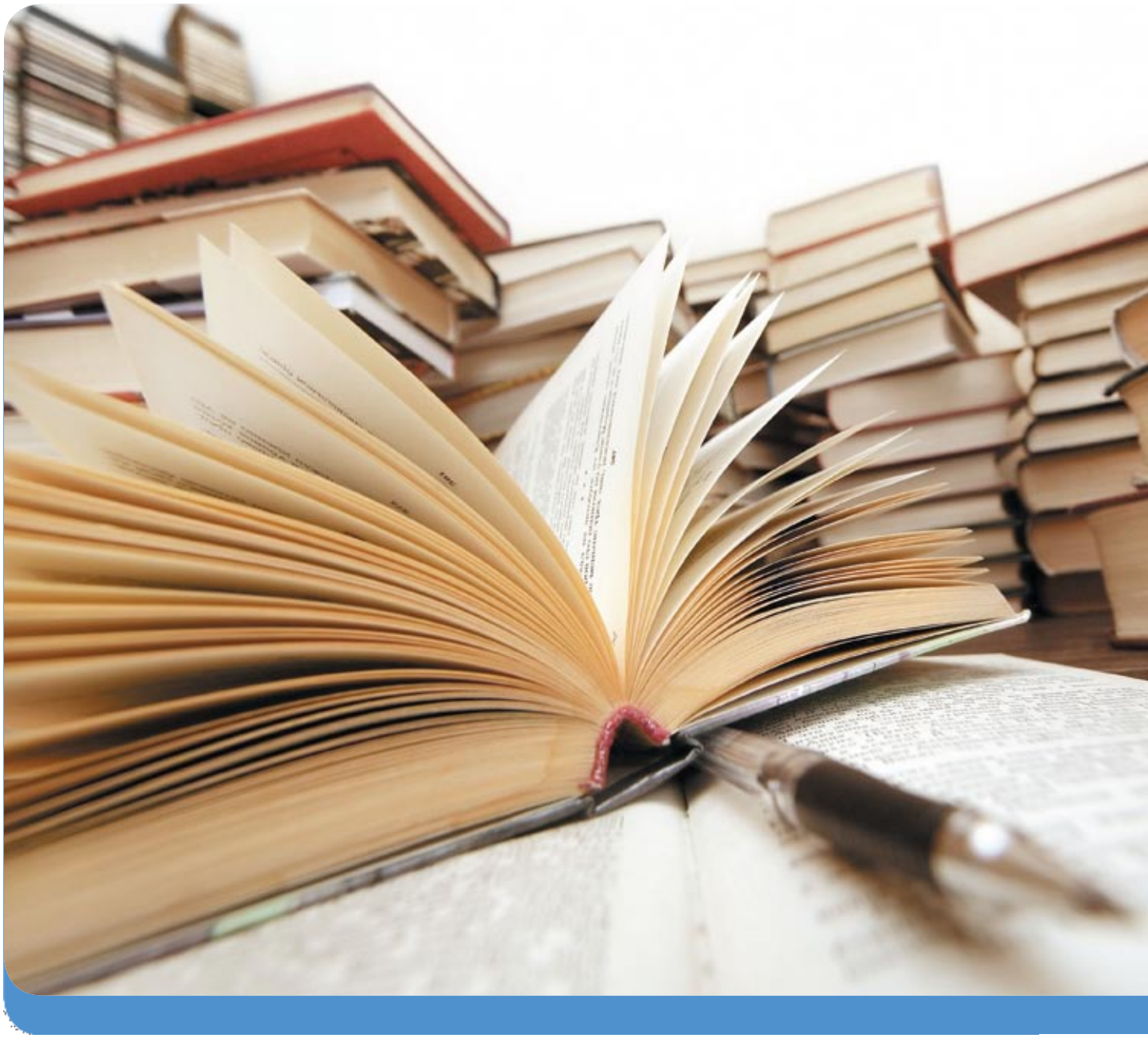
D. Use of data

1. Identify patterns or departures from patterns among data.
2. Use statistical and probabilistic skills necessary for planning an investigation and collecting, analyzing, and interpreting data.
3. Present analyzed data and communicate findings in a variety of formats.

E. Technology

1. Use technology to gather information.
2. Use technology to organize, manage, and analyze information.
3. Use technology to communicate and display findings in a clear and coherent manner.
4. Use technology appropriately.

Glossary of Terms -



DOCUMENT GLOSSARY

Annotated list of sources
A bibliography that includes evaluation or comments on accuracy, completeness, usefulness, deficiencies, or other features of the sources.

Conjecture
A conclusion deduced by surmise or guesswork; a proposition (as in mathematics) before it has been proved or disproved.

Constant
Something invariable or unchanging, such as a number that has a fixed value in a given situation or universally.

Construction
The act or result of construing, interpreting, or explaining. Also involves creating a model that relates geometric principles.

Contrapositive
A proposition or theorem formed by negating both the hypothesis and conclusion of a given proposition or theorem and interchanging them (e.g., "if not-B then not-A" is the contrapositive of "if A then B").

Control
In experimental design, a sample or procedure that is virtually identical to the experimental sample except for the one variable (termed the independent variable) whose effect is being tested. If different results are obtained from the control and the experimental samples, this difference can be attributed to the effect of the independent variable.

Counterexample
An example that refutes or disproves a proposition or theory; the analysis of a set of facts in their relation to one another.

Culture
The integrated pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations; a society's way of life, including codes of manners, dress, language, religion, rituals, behavioral norms, and systems of belief.

Data
Factual information used as a basis for reasoning, discussion, or calculation. Reproducible observations that have been repeatedly confirmed are regarded as the highest quality data.

Deductive reasoning
The kind of reasoning in which the conclusion is necessitated by previously known premises. Usually understood as moving from a statement or description of a broad category to a description or conclusion regarding a specific instance or example within that category.

Diffusion
The geographic spread of phenomena such as culture, disease, or economic modes of production.

Dimensional analysis
A conceptual tool often applied in science and engineering to understand physical situations involving several different kinds of physical quantities. It is routinely used by scientists and engineers as a problem solving method to check the plausibility of derived equations and computations. It is also used to form reasonable hypotheses about complex physical situations that can be tested by experiment or by more developed theories of the phenomena. Calculations often require determining both the numerical value and the units of a variable in an equation. Dimensional analysis provides a useful method for determining the units of a variable in such cases.

Dissipative
A thermodynamically open system operating far from thermodynamic equilibrium in an environment with which it exchanges energy and matter. The term "dissipative system" is often used to describe one that releases heat. Simple examples include convection, cyclones, and hurricanes. More complex examples include lasers, Bénard cells, the Belousov-Zhabotinsky reaction, and at the most sophisticated level, life itself.

Diverse
Composed of distinct or unlike elements or qualities.

Domain
The set of elements to which a mathematical or logical variable is limited. Specifically, the set on which a function is defined.

Empirical
Originating in or based on observation or experience.

Ethnicity
A population of human beings whose members identify with each other, either on the basis of a presumed common genealogy or ancestry, recognition by others as a distinct group, or by common cultural, linguistic, religious, or physical traits.

DOCUMENT GLOSSARY

Function
In mathematics, a relation for which each element of the domain corresponds to exactly one element of the range.

Gender
The behavioral, cultural, or psychological traits typically associated with one sex.

Global community
The collective habitation of Earth by both humans and animals and the interconnection shared by means of inhabiting the same space.

Graphic organizers
Tools to visually categorize information such as calendars, outlines, or flow charts.

Human communities
Groups of people sharing an environment where intent, belief, resources, preferences, needs, risks, and a number of other conditions may be present and common, affecting the identity of the participants and their degree of cohesiveness.

Hypothesis
A tentative explanation or model to account for data, developed to draw out its logical or empirical consequences, and to guide the search for additional data.

Ideology
A systematic body of concepts, especially about human life or culture.

Inductive reasoning
The process of reasoning in which the premise of an argument is believed to support the conclusion but does not ensure it. Usually understood as moving from a statement or description of specific examples or instances to generalizable statements or descriptions of the entire class or category to which the examples belong.

Inquiry
A systematic investigation of facts or principles.

Key content
Overarching or keystone ideas of a discipline that reverberate as themes throughout the curriculum. The first and highest level in the organizing structure of the College and Career Readiness Standards (CCRS). Designated in this document by Roman numerals.

Law
In terms of science, a statement of order and relation in nature that has been found to be invariable under the same conditions.

Literary element
An individual aspect or characteristic of a whole work of literature.

Manipulatives
Objects (such as blocks) that a student is instructed to use in a way that teaches or reinforces a lesson.

Model
A system of postulates, data, and inferences presented as a mathematical description.

Multicultural
Of, relating to, reflecting, or adapted to a diverse range of cultures.

Natural phenomena
Facts or events observable in the natural world.

Organizing components
Knowledge and subject areas that organize a discipline around what students should retain, be able to transfer, and apply to new knowledge and skills. The second level in the organizing structure of the CCRS. Designated in this document by capital letters.

Performance expectations
Knowledge and skills that represent the important ideas of the current understanding of each organizing concept as well as the multiple contexts in which each organizing concept can be manifest. The third level in the organizing structure of the CCRS. Designated in this document by numbers.

Performance indicators
Examples of how to assess and measure performance expectations. The fourth level in the organizing structure of the CCRS. Designated in this document by lower-case letters.

Periodization
The organization of the past into units of inquiry, marked by key defining concepts.

Positive and negative controls
A controlled experiment generally compares the results obtained from an experimental sample against a control sample, which is practically identical to the experimental sample except for the one aspect whose effect is being tested. To be sure that the experimental procedures are working correctly, investigators

often include samples for which the expected result is already known. For example, in the widely-used Benedict's Test for glucose, the experimental set-up typically includes one sample in which sugar is known to be present (the positive control) and one sample in which sugar is known to be absent (the negative control). If the assay is working as expected, the positive control will yield the typical color change while the negative control will give no color change. If either of these samples produces results other than those expected, the investigator is alerted that something is interfering with the normal outcome of the assay, and all experimental results are unreliable.

Primary source
A document or other source of information that was created at or near the time being studied by an authoritative source, usually one with direct personal knowledge of the events being described.

Property
A quality or trait belonging to and especially peculiar to an individual or thing; an attribute common to all members of a class.

Qualitative
Description or distinction based on some quality rather than on some quantity.

Quantitative
A measurement based on a quantity or number rather than on a quality.

Quantitative inheritance
In genetics, traits that are determined by the combined influence of alleles at multiple loci. When studying such traits, geneticists often do not know the identities of the particular loci involved. Further, such traits do NOT show qualitatively discrete phenotypes, but rather these traits show continuous variation. Examples of human traits with continuous variation are height, athletic ability, and intelligence. Traits showing quantitative inheritance are determined by the combined influences of the genotype at many different loci, and the environmental setting in which the traits develop.

Race
A socially constructed segment of the human population defined by physical characteristics that are transmitted.

Recursive
In math, a procedure that can repeat itself indefinitely.

Region
A spatial area of the Earth's surface marked by specific criteria (e.g., multiple and overlapping political, cultural, and ecological regions existing in the present and the past).

Reliability
Ability of a system to perform and maintain its functions in routine circumstances, as well as in hostile or unexpected circumstances.

Rhetorical device
A technique that an author or speaker uses to evoke an emotional response in his audience (e.g., analogy, simile, metaphor).

Scientific ethics
Certain standards and guiding principles are universally accepted in scientific investigations, including the following:

- Data should never be falsified, either by reporting results that were not observed, or by failing to report completely all pertinent data. Neither should analyses be biased to favor one interpretation over other possible interpretations.
- Credit should be given to all individuals who made significant intellectual contributions to the investigation, and no credit should be claimed for someone else's work.
- Investigations should be carried out in ways that minimize danger to bystanders and participants should be informed in advance of any possible dangers. Part of an instructor's work is to train students to safely handle equipment, chemicals, and organisms in ways that minimize dangers to themselves and to others.
- If living organisms are used in investigations, they should be treated with respect and care. Efforts should be made to minimize or eliminate fear, pain, and suffering in those organisms, consistent with the nature of the investigation being done. Appropriate care guidelines as specified by institutional animal care policies should be rigorously followed.
- If humans are used as subjects in investigations, they must be fully apprised of any dangers or adverse effects that might result from the

investigation, and must voluntarily give informed consent to their participation, as specified by institutional review policies.

Secondary source
A work, such as a scholarly book or article, built from primary sources.

Social group
Grouping of people according to common characteristics (note: examples are given after this term is introduced in the standards).

Spatial
Relating to, occupying, or having the character of space.

Standard International Units
The modern form of the metric system of measurements. Units are defined for measurement of length, mass, time, electric current, thermodynamic temperature, amount of substance, and luminous intensity. Prefixes are added to units to produce a multiple (relative size) of the original unit (e.g., the factor 10 is named "deca" and symbolized by "da").

Strategy
A careful plan or method employed toward a goal.

System
A structured collection of parts or components that affect, influence, or interact with each other in defined, predictable ways; a form of social, economic, or political organization or practice; an organized set of doctrines, ideas, or principles usually intended to explain the arrangement or working of a systematic whole; an organized or established procedure; a manner of classifying, symbolizing, or schematizing.

Text
The main body of printed or written matter.

Theme
A unifying subject or idea.

Theory
A scientifically acceptable general principle, explanatory model, or body of principles offered to explain or account for observed phenomena. Usually understood to have been more extensively tested or supported by more data than a hypothesis.

Thesis
A position or proposition that a person advances and offers to maintain by argument; a proposition to be proved, or one advanced without proof.

Topic
A heading in an outlined argument or exposition; the subject of a discourse or of a section of a discourse.

Transactional
A communicative action or activity involving two parties or things that reciprocally affect or influence each other.

Validity
The quality of being well-grounded or justifiable; being at once relevant and meaningful.

Variable
Able or apt to vary; subject to variation or changes.

Vertical Team (VT)
For the purpose of this study, a panel of subject-specific secondary and postsecondary faculty established to develop CCRS that address what students must know and be able to do to succeed in entry-level courses offered at Texas institutions of higher education.

Vertical Team Members

The following faculty members served on the Vertical Teams that developed the draft version of the College and Career Readiness Standards contained in this document.

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Appendix

English/Language Arts Standards

with performance indicators

I. Writing

A. Compose a variety of texts that demonstrate clear focus, the logical development of ideas in well-organized paragraphs, and the use of appropriate language that advances the author's purpose.

1. **Determine effective approaches, forms, and rhetorical techniques that demonstrate understanding of the writer's purpose and audience.**

2. **Generate ideas and gather information relevant to the topic and purpose, keeping careful records of outside sources.**

3. **Evaluate relevance, quality, sufficiency, and depth of preliminary ideas and information, organize material generated, and formulate a thesis.**

4. Recognize the importance of revision as the key to effective writing. Each draft should refine key ideas and organize them more logically and fluidly, use language more precisely and effectively, and draw the reader to the author's purpose.

5. Edit writing for proper voice, tense, and syntax, assuring that it conforms to standard English, when appropriate.

II. Reading

A. Locate explicit textual information, draw complex inferences, and analyze and evaluate the information within and across texts of varying lengths.

1. Use effective reading strategies to determine a written work's purpose and intended audience.

2. Use text features and graphics to form an overview of informational texts and to determine where to locate information.

3. **Identify explicit and implicit textual information including main ideas and author's purpose.**

4. **Draw and support complex inferences from text to summarize, draw conclusions, and distinguish facts from simple assertions and opinions.**

5. **Analyze the presentation of information and the strength and quality of evidence used by the author, and judge the coherence and logic of the presentation and the credibility of an argument.**

6. **Analyze imagery in literary texts.**

7. **Evaluate the use of both literal and figurative language to inform and shape the perceptions of readers.**

   b. Describe and compare how authors use style to evoke specific cultures, social classes, geographical locations, and time periods.

   c. Explain how authors use dialect to convey character.

8. **Compare and analyze how generic features are used across texts.**

9. **Identify and analyze the audience, purpose, and message of an informational or persuasive text.**

10. **Identify and analyze how an author's use of language appeals to the senses, creates imagery, and suggests mood.**

11. **Identify, analyze, and evaluate similarities and differences in how multiple texts present information, argue a position, or relate a theme.**

B. Understand new vocabulary and concepts and use them accurately in reading, speaking, and writing.

1. Identify new words and concepts acquired through study of their relationships to other words and concepts.
2. Apply knowledge of roots and affixes to infer the meanings of new words.
3. Use reference guides to confirm the meanings of new words or concepts.

C. Describe, analyze, and evaluate information within and across literary and other texts from a variety of cultures and historical periods.

1. Read a wide variety of texts from American, European, and world literatures.
2. Analyze themes, structures, and elements of myths, traditional narratives, and classical and contemporary literature.
3. Analyze works of literature for what they suggest about the historical period and cultural contexts in which they were written.
4. Analyze and compare the use of language in literary works from a variety of world cultures.

D. Explain how literary and other texts evoke personal experience and reveal character in particular historical circumstances.

1. Describe insights gained about oneself, others, or the world from reading specific texts.

b. Relate a text to current or historical events (e.g., compare current world events with those described in works from the early 20th Century).

2. **Analyze the influence of myths, folktales, fables, and classical literature from a variety of world cultures on later literature and film.**

III. Speaking

A. Understand the elements of communication both in informal group discussions and formal presentations (e.g., accuracy, relevance, rhetorical features, organization of information).

1. **Understand how style and content of spoken language varies in different contexts and influences the listener's understanding.**

2. **Adjust presentation (delivery, vocabulary, length) to particular audiences and purposes.**

B. Develop effective speaking styles for both group and one-on-one situations.

1. **Participate actively and effectively in one-on-one oral communication situations.**

2. **Participate actively and effectively in group discussions.**

3. **Plan and deliver focused and coherent presentations that convey clear and distinct perspectives and demonstrate solid reasoning.**

IV. Listening

A. Apply listening skills as an individual and as a member of a group in a variety of settings (e.g., lectures, discussions, conversations, team projects, presentations, interviews).

1. **Analyze and evaluate the effectiveness of a public presentation.**

2. Interpret a speaker's message; identify the position taken and the evidence in support of that position.

3. Use a variety of strategies to enhance listening comprehension (e.g., focus attention on message, monitor message for clarity and understanding, provide verbal and nonverbal feedback, note cues such as change of pace or particular words that indicate a new point is about to be made, select and organize key information).

B. Listen effectively in informal and formal situations.

1. Listen critically and respond appropriately to presentations.

2. Listen actively and effectively in one-on-one communication situations.

3. Listen actively and effectively in group discussions.

V. Research

A. Formulate topic and questions.

1. Formulate research questions.

2. Explore a research topic.

3. **Refine research topic and devise a timeline for completing work.**

B. Select information from a variety of sources.

1. **Gather relevant sources.**

2. **Evaluate the validity and reliability of sources.**

3. **Synthesize and organize information effectively.**

C. Produce and design a document.

1. **Design and present an effective product.**

2. **Use source material ethically.**

Mathematics - Standards

with performance indicators

I. Numeric Reasoning -

A. Number representation

1. **Compare real numbers.**

2. **Define and give examples of complex numbers.**

B. Number operations

1. **Perform computations with real and complex numbers.**

d. Calculate the sum, difference, product, and quotient of two complex numbers and express the result in standard form.

C. Number sense and number concepts

1. **Use estimation to check for errors and reasonableness of solutions.**

II. Algebraic Reasoning

A. Expressions and equations

1. **Explain and differentiate between expressions and equations using words such as "solve," "evaluate," and "simplify."**

B. Manipulating expressions

1. **Recognize and use algebraic (field) properties, concepts, procedures, and algorithms to combine, transform, and evaluate expressions (e.g., polynomials, radicals, rational expressions).**

C. Solving equations, inequalities, and systems of equations

1. **Recognize and use algebraic (field) properties, concepts, procedures, and algorithms to solve equations, inequalities, and systems of linear equations.**

2. **Explain the difference between the solution set of an equation and the solution set of an inequality.**

D. Representations

1. **Interpret multiple representations of equations and relationships.**

2. **Translate among multiple representations of equations and relationships.**

III. Geometric Reasoning

A. Figures and their properties

1. **Identify and represent the features of plane and space figures.**

2. **Make, test, and use conjectures about one-, two-, and three-dimensional figures and their properties.**

3. **Recognize and apply right triangle relationships including basic trigonometry.**

B. Transformations and symmetry

1. **Identify and apply transformations to figures.**

2. **Identify the symmetries of a plane figure.**

3. **Use congruence transformations and dilations to investigate congruence, similarity, and symmetries of plane figures.**

C. Connections between geometry and other mathematical content strands

1. **Make connections between geometry and algebra.**

2. **Make connections between geometry, statistics, and probability.**

3. **Make connections between geometry and measurement.**

D. Logic and reasoning in geometry

1. Make and validate geometric conjectures.

2. Understand that Euclidean geometry is an axiomatic system.

IV. Measurement Reasoning

A. Measurement involving physical and natural attributes

1. Select or use the appropriate type of unit for the attribute being measured.

b. Select and accurately use an appropriate tool to make measurements.

c. Recognize and use significant digits to determine the accuracy of a measurement in problem situations.

d. Use the appropriate level of precision when providing solutions to measurement problems.

e. Know when to estimate and approximate measurements for given problem situations.

B. Systems of measurement

1. Convert from one measurement system to another.

2. Convert within a single measurement system.

C. Measurement involving geometry and algebra

1. Find the perimeter and area of two-dimensional figures.

2. Determine the surface area and volume of three-dimensional figures.

3. Determine indirect measurements of figures using scale drawings, similar figures, the Pythagorean Theorem, and basic trigonometry.

D. Measurement involving statistics and probability

1. Compute and use measures of center and spread to describe data.

2. Apply probabilistic measures to practical situations to make an informed decision.

V. Probabilistic Reasoning

A. Counting principles

1. Determine the nature and the number of elements in a finite sample space.

B. Computation and interpretation of probabilities

1. Compute and interpret the probability of an event and its complement.

2. Compute and interpret the probability of conditional and compound events.

VI. Statistical Reasoning

A. Data collection

1. Plan a study.

B. Describe data

1. Determine types of data.

2. Select and apply appropriate visual representations of data.

3. Compute and describe summary statistics of data.

4. Describe patterns and departure from patterns in a set of data.

C. Read, analyze, interpret, and draw conclusions from data

1. Make predictions and draw inferences using summary statistics.

2. Analyze data sets using graphs and summary statistics.

3. Analyze relationships between paired data using spreadsheets, graphing calculators, or statistical software.

4. Recognize reliability of statistical results.

VII. Functions

A. Recognition and representation of functions

1. Recognize whether a relation is a function.

2. Recognize and distinguish between different types of functions.

B. Analysis of functions

1. Understand and analyze features of a function.

2. Algebraically construct and analyze new functions.

f. Determine the inverse function of a given function in tabular, symbolic, or graphical form, if it exists (e.g., the inverse of an exponential function is a logarithmic function).

g. Use properties of inverse functions to solve problems (e.g., inverse trigonometric functions to find angles in a right triangle).

C. Model real world situations with functions

1. Apply known function models.

2. Develop a function to model a situation.

VIII. Problem Solving and Reasoning

A. Mathematical problem solving

1. Analyze given information.

b. Identify what is known, not known, and what one wants to know in a problem.

c. Distinguish relevant from irrelevant information in a given situation.

d. Determine the problem(s) to be solved.

e. Identify additional information needed to reach a solution.

f. Test ideas with specific cases.

2. Formulate a plan or strategy.

3. Determine a solution.

4. Justify the solution.

5. Evaluate the problem-solving process.

B. Logical reasoning

1. Develop and evaluate convincing arguments.

2. Use various types of reasoning.

C. Real world problem solving

1. Formulate a solution to a real world situation based on the solution to a mathematical problem.

2. Use a function to model a real world situation.

3. Evaluate the problem-solving process.

IX. Communication and Representation

A. Language, terms, and symbols of mathematics

1. Use mathematical symbols, terminology, and notation to represent given and unknown information in a problem.

2. **Use mathematical language to represent and communicate the mathematical concepts in a problem.**

3. **Use mathematics as a language for reasoning, problem solving, making connections, and generalizing.**

B. Interpretation of mathematical work

1. **Model and interpret mathematical ideas and concepts using multiple representations.**

2. **Summarize and interpret mathematical information provided orally, visually, or in written form within the given context.**

C. Presentation and representation of mathematical work

1. **Communicate mathematical ideas, reasoning, and their implications using symbols, diagrams, graphs, and words.**

2. **Create and use representations to organize, record, and communicate mathematical ideas.**

3. **Explain, display, or justify mathematical ideas and arguments using precise mathematical language in written or oral communications.**

b. Communicate reasons associated with performing steps in algebraic methods (e.g., explaining why a quadratic equation must be written in standard form first when solving by factoring).

c. Identify units associated with any variables and constants used in a problem solution.

X. Connections

A. Connections among the strands of mathematics

1. Connect and use multiple strands of mathematics in situations and problems.

2. Connect mathematics to the study of other disciplines.

B. Connections of mathematics to nature, real world situations, and everyday life

1. Use multiple representations to demonstrate links between mathematical and real world situations.

2. Understand and use appropriate mathematical models in the natural, physical, and social sciences.

3. Know and understand the use of mathematics in a variety of careers and professions.

Science Standards

with performance indicators

I. Nature of Science: Scientific Ways of Learning and Thinking

A. Cognitive skills in science

1. Utilize skepticism, logic, and professional ethics in science.

- Average (mean) results are reported, but not the amount of variation around the mean.
- Absolute and proportional quantities or percentages are mixed together without clarification.
- Other incorrect, misleading, or shoddy practices are used, as described in more detail in Science for All Americans, a report from Project 2061, AAAS, 1990.

c. Base alternate explanations on data and follow accepted, logical rules.

d. Demonstrate ability to review and evaluate articles from a variety of sources, including scientific journals, websites, and

popular publications to identify examples of proper statements and arguments, as well as examples where good practices were not exhibited.

2. **Use creativity and insight to recognize and describe patterns in natural phenomena.**

3. **Formulate appropriate questions to test understanding of natural phenomena.**

4. **Rely on reproducible observations of empirical evidence when constructing, analyzing, and evaluating explanations of natural events and processes.**

B. Scientific inquiry

1. **Design and conduct scientific investigations in which hypotheses are formulated and tested.**

C. Collaborative and safe working practices

1. **Collaborate on joint projects.**

2. Understand and apply safe procedures in the laboratory and field, including chemical, electrical, and fire safety and safe handling of live or preserved organisms.

3. Demonstrate skill in the safe use of a wide variety of apparatuses, equipment, techniques, and procedures.

D. Current scientific technology

1. Demonstrate literacy in computer use.

2. Use computer models, applications, and simulations.

3. Demonstrate appropriate use of a wide variety of apparatuses, equipment, techniques, and procedures for collecting quantitative and qualitative data.

E. Effective communication of scientific information

1. Use several modes of expression to describe or characterize natural patterns and phenomena. These modes of expression include narrative, numerical, graphical, pictorial, symbolic, and kinesthetic.

2. Use essential vocabulary of the discipline being studied.

II. Foundation Skills: Scientific Applications of Mathematics

A. Basic mathematics conventions

1. Understand the real number system and its properties.

2. **Use exponents and scientific notation.**

3. **Understand ratios, proportions, percentages, and decimal fractions, and translate from any form to any other.**

4. **Use proportional reasoning to solve problems.**

5. **Simplify algebraic expressions.**

6. **Estimate results to evaluate whether a calculated result is reasonable.**

7. **Use calculators, spreadsheets, computers, etc., in data analysis.**

B. Mathematics as a symbolic language

1. **Carry out formal operations using standard algebraic symbols and formulae.**

2. **Represent natural events, processes, and relationships with algebraic expressions and algorithms.**

C. Understand relationships among geometry, algebra, and trigonometry

1. **Understand simple vectors, vector notations, and vector diagrams, and carry out simple calculations involving vectors.**

2. **Understand that a curve drawn on a defined set of axes is fully equivalent to a set of algebraic equations.**

3. **Understand basic trigonometric principles, including definitions of terms such as sine, cosine, tangent, cotangent, and their relationship to triangles.**

4. **Understand basic geometric principles.**

   b. Compute angle values using various geometric principles including the sum of angles in a triangle, alternate interior angles, and similar triangles.

D. Scientific problem solving

1. **Use dimensional analysis in problem solving.**

E. Scientific application of probability and statistics

1. **Understand descriptive statistics.**

F. Scientific measurement

1. **Select and use appropriate Standard International (SI) units and prefixes to express measurements for real-world problems.**

3. Understand and use logarithmic notation (base 10).

III. Foundation Skills: Scientific Applications of Communication

A. Scientific writing

1. Use correct applications of writing practices in scientific communication.

B. Scientific reading

1. Read technical and scientific articles to gain understanding of interpretations, apparatuses, techniques or procedures, and data.

2. Set up apparatuses, carry out procedures, and collect specified data from a given set of appropriate instructions.

3. Recognize scientific and technical vocabulary in the field of study and use this vocabulary to enhance clarity of communication.

4. List, use and give examples of specific strategies before, during, and after reading to improve comprehension.

C. Presentation of scientific/technical information

1. Prepare and present scientific/technical information in appropriate formats for various audiences.

D. Research skills/information literacy

1. Use search engines, databases, and other digital electronic tools effectively to locate information.

2. Evaluate quality, accuracy, completeness, reliability, and currency of information from any source.

IV. Science, Technology, and Society

A. Interactions between innovations and science

1. Recognize how scientific discoveries are connected to technological innovations.

B. Social ethics

1. Understand how scientific research and technology have an impact on ethical and legal practices.

2. Understand how commonly held ethical beliefs impact scientific research.

C. History of science

1. Understand the historical development of major theories in science.

2. Recognize the role of people in important contributions to scientific knowledge.

V. Cross-Disciplinary Themes

A. Matter/states of matter

1. Know modern theories of atomic structure.

2. Understand the typical states of matter (solid, liquid, gas) and phase changes among these.

B. Energy (thermodynamics, kinetic, potential, energy transfers)

1. Understand the Laws of Thermodynamics.

2. Know the processes of energy transfer.

C. Change over time/equilibrium

1. Recognize patterns of change.

f. Use graphs, symbolic equations, and other techniques for depicting and analyzing patterns of change.

D. Classification

1. Understand that scientists categorize things according to similarities and differences.

E. Measurements and models

1. Use models to make predictions.

2. Use scale to relate models and structures.

3. Demonstrate familiarity with length scales from sub-atomic particles through macroscopic objects.

VI. Biology

A. Structure and function of cells

1. Know that although all cells share basic features, cells differentiate to carry out specialized functions.

2. Explain how cells can be categorized into two major types: prokaryotic and eukaryotic, and describe major features that distinguish one from the other.

3. Describe the structure and function of major sub-cellular organelles.

4. Describe the major features of mitosis and relate this process to growth and asexual reproduction.

5. Understand the process of cytokinesis in plant and animal cells and how this process is related to growth.

6. Know the structure of membranes and how this relates to permeability.

B. Biochemistry

1. Understand the major categories of biological molecules: lipids, carbohydrates, proteins, and nucleic acids.

2. Describe the structure and function of enzymes.

3. Describe the major features and chemical events of photosynthesis.

4. Describe the major features and chemical events of cellular respiration.

5. Know how organisms respond to presence or absence of oxygen, including mechanisms of fermentation.

6. Understand coupled reaction processes and describe the role of ATP in energy coupling and transfer.

C. Evolution and populations

1. **Know multiple categories of evidence for evolutionary change and how this evidence is used to infer evolutionary relationships among organisms.**

2. **Recognize variations in population sizes, including extinction, and describe mechanisms and conditions that produce these variations.**

D. Molecular genetics and heredity

1. **Understand Mendel's laws of inheritance.**

2. **Know modifications to Mendel's laws.**

3. **Understand the molecular structures and functions of nucleic acids.**

b. Describe in words or pictures the molecular structure of DNA, RNA, and proteins.

c. Describe in words or pictures the molecular events of replication, transcription, translation, and mutation.

d. Describe the events and processes of molecular genetics: DNA controls synthesis of several types of RNA, RNA molecules plus proteins cooperate to synthesize new proteins, and proteins control structure and metabolism of cells.

e. Describe the processes of electrophoresis and polymerase chain reaction, and explain their function in identifying DNA, RNA, and proteins.

4. Understand simple principles of population genetics and describe characteristics of a Hardy-Weinberg population.

5. Describe the major features of meiosis and relate this process to Mendel's laws of inheritance.

E. Classification and taxonomy

1. Know ways in which living things can be classified based on each organism's internal and external structure, development, and relatedness of DNA sequences.

F. Systems and homeostasis

1. Know that organisms possess various structures and processes (feedback loops) that maintain steady internal conditions.

2. Describe, compare, and contrast structures and processes that allow gas exchange, nutrient uptake and processing, waste excretion, nervous and hormonal regulation, and reproduction in plants, animals, and fungi; give examples of each.

G. Ecology

1. Identify Earth's major biomes, giving their locations, typical climate conditions, and characteristic organisms.

2. Know patterns of energy flow and material cycling in Earth's ecosystems.

3. Understand typical forms of organismal behavior.

4. Know the process of succession.

VII. Chemistry

A. Matter and its properties

1. Know that physical and chemical properties can be used to describe and classify matter.

2. Recognize and classify pure substances (elements, compounds) and mixtures.

B. Atomic structure

1. Summarize the development of atomic theory. Understand that models of the atom are used to help understand the properties of elements and compounds.

C. Periodic table

1. Know the organization of the periodic table.
2. Recognize the trends in physical and chemical properties as one moves across a period or vertically through a group.

D. Chemical bonding

1. Characterize ionic bonds, metallic bonds, and covalent bonds. Describe the properties of metals and ionic and covalent compounds.

E. Chemical reactions

1. Classify chemical reactions by type. Describe the evidence that a chemical reaction has occurred.

2. **Describe the properties of acids and bases and identify the products of a neutralization reaction.**

3. **Understand oxidation-reduction reactions.**

4. **Understand chemical equilibrium.**

5. **Understand energy changes in chemical reactions.**

6. **Understand chemical kinetics.**

F. Chemical nomenclature

1. **Know formulas for ionic compounds.**

2. **Know formulas for molecular compounds.**

G. The mole and stoichiometry

1. **Understand the mole concept.**

2. Understand molar relationships in reactions, stoichiometric calculations, and percent yield.

H. Thermochemistry

1. Understand the Law of Conservation of Energy and processes of heat transfer.

2. Understand energy changes and chemical reactions.

I. Properties and behavior of gases, liquids, and solids

1. Understand the behavior of matter in its various states: solid, liquid, and gas.

2. Understand properties of solutions.

3. Understand principles of ideal gas behavior and kinetic molecular theory.

4. Apply the concept of partial pressures in a mixture of gases.

5. Know properties of liquids and solids.

6. Understand the effect of vapor pressure on changes in state; explain heating curves and phase diagrams.

7. Describe intermolecular forces.

J. Basic structure and function of biological molecules: proteins, carbohydrates, lipids, and nucleic acids

1. Understand the major categories of biological molecules: proteins, carbohydrates, lipids, and nucleic acids.

K. Nuclear chemistry

1. Understand radioactive decay.

VIII. Physics

A. Matter

1. Demonstrate familiarity with length scales from sub-atomic particles through macroscopic objects.
2. Understand states of matter and their characteristics.
3. Understand the concepts of mass and inertia.
4. Understand the concept of density.
5. Understand the concepts of gravitational force and weight.

B. Vectors

1. Understand how vectors are used to represent physical quantities.

2. Demonstrate knowledge of vector mathematics using a graphical representation.

3. Demonstrate knowledge of vector mathematics using a numerical representation.

C. Forces and motion

1. Understand the fundamental concepts of kinematics.

2. Understand forces and Newton's Laws.

3. Understand the concept of momentum.

D. Mechanical energy

1. Understand potential and kinetic energy.

2. Understand conservation of energy.

3. **Understand the relationship of work and mechanical energy.**

E. Rotating systems

1. **Understand rotational kinematics.**

2. **Understand the concept of torque.**

3. **Apply the concept of static equilibrium.**

4. **Understand angular momentum.**

F. Fluids

1. **Understand pressure in a fluid and its applications.**

2. **Understand Pascal's Principle.**

3. **Understand buoyancy.**

4. **Understand Bernoulli's principle.**

G. Oscillations and waves

1. **Understand basic oscillatory motion and simple harmonic motion.**

2. **Understand the difference between transverse and longitudinal waves.**

3. **Understand wave terminology: wavelength, period, frequency, and amplitude.**

4. **Understand the properties and behavior of sound waves.**

H. Thermodynamics

1. **Understand the gain and loss of heat energy in matter.**

2. **Understand the basic laws of thermodynamics.**

I. Electromagnetism

1. **Discuss electric charge and electric force.**

2. **Gain qualitative and quantitative understandings of voltage, current, and resistance.**

3. **Understand Ohm's Law.**

4. **Apply the concept of power to electricity.**

5. **Discuss basic DC circuits that include voltage sources and combinations of resistors.**

6. **Discuss basic DC circuits that include voltage sources and combinations of capacitors.**

7. **Understand magnetic fields and their relationship to electricity.**

8. **Relate electricity and magnetism to everyday life.**

J. Optics

1. **Know the electromagnetic spectrum.**

2. **Understand the wave/particle duality of light.**

3. Understand concepts of geometric optics.

IX. Earth and Space Sciences

A. Earth systems

1. Know the major features and characteristics of atmosphere, geosphere, hydrosphere, and biosphere.

2. Understand relationships and interactions among atmosphere, geosphere, hydrosphere, and biosphere.

3. Possess a scientific understanding of the history of Earth's systems.

4. Utilize the tools scientists use to study and understand the Earth's systems.

B. Sun, Earth, and moon system

1. Understand interactions among the sun, Earth, and moon.

2. **Possess a scientific understanding of the formation of the Earth and moon.**

C. Solar system

1. **Describe the structure and motions of the solar system and its components.**

2. **Possess a scientific understanding of the formation of the solar system.**

D. Origin and structure of the universe

1. **Understand scientific theories for the formation of the universe.**

2. **Know the current scientific descriptions of the components of the universe.**

E. Plate tectonics

1. **Describe the evidence that supports the current theory of plate tectonics.**

2. **Identify the major tectonic plates.**

3. **Describe the motions and interactions of tectonic plates.**

4. **Describe the rock cycle and its products.**

F. Energy transfer within and among systems

1. **Describe matter and energy transfer in the Earth's systems.**

2. **Give examples of effects of energy transfer within and among systems.**

X. Environmental Science

A. Earth systems

1. Recognize the Earth's systems.

2. Know the major features of the geosphere and the factors that modify them.

3. Know the major features of the atmosphere.

4. Know the major features of the hydrosphere.

5. Be familiar with Earth's major biomes.

6. Describe the Earth's major biogeochemical cycles.

B. Energy

1. Understand energy transformations.

2. Know the various sources of energy for humans and other biological systems.

C. Populations

1. Recognize variations in population sizes, including human population and extinction, and describe mechanisms and conditions that produce these variations.

D. Economics and politics

1. Name and describe major environmental policies and legislation.

2. Understand the types, uses, and regulations of the various natural resources.

E. Human practices and their impacts

1. Describe the different uses for land (land management).

2. Understand the use and consequences of pest management.

3. Know the different methods used to increase food production.

4. Understand land and water usage and management practices.

5. **Understand how human practices affect air, water, and soil quality.**

Social Studies Standards

with performance indicators

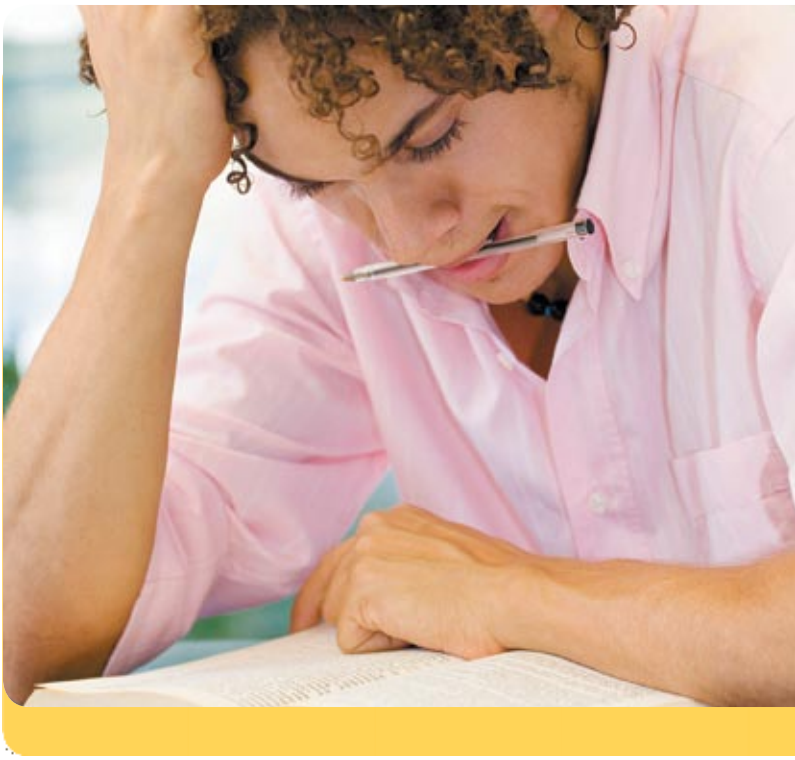
I. Interrelated Disciplines and Skills

A. Spatial analysis of physical and cultural processes that shape the human experience

1. **Use the tools and concepts of geography appropriately and accurately.**

2. **Analyze the interaction between human communities and the environment.**

3. **Analyze how physical and cultural processes have shaped human communities over time.**



EXAMPLES

a. Explain how climate has influenced

4. **Evaluate the causes and effects of human migration patterns over time.**

5. Analyze how various cultural regions have changed over time.

6. Analyze the relationship between geography and the development of human communities.

B. Periodization and chronological reasoning

1. Examine how and why historians divide the past into eras.

2. Identify and evaluate sources and patterns of change and continuity across time and place.

3. Analyze causes and effects of major political, economic, and social changes in U.S. and world history.

C. Change and continuity of political ideologies, constitutions, and political behavior

1. Evaluate different governmental systems and functions.

d. Explain differences between the governmental system of the United States and other countries (e.g., Canada, the United Kingdom, China).

2. Evaluate changes in the functions and structures of government across time.

3. Explain and analyze the importance of civic engagement.

D. Change and continuity of economic systems and processes

1. Identify and evaluate the strengths and weaknesses of different economic systems.

EXAMPLES

a. Examine the role of the free enterprise system in the U.S. economy and its general impact on American culture.

b. Compare and contrast a traditional, command, and market economy and give examples of the strengths and weaknesses of each.

c. Explain the influence of mercantilism on European colonization practices and analyze its influence on the development of the American colonies.

d. Identify and evaluate examples of government intervention in the marketplace intended to address market failure.

e. Describe how the New York Stock Exchange works and the central role it plays in the U.S. economy.

2. Analyze the basic functions and structures of international economics.

E. Change and continuity of social groups, civic organizations, institutions, and their interaction

1. Identify different social groups (e.g., clubs, religious organizations) and examine how they form and how and why they sustain themselves.

2. **Define the concept of socialization and analyze the role socialization plays in human development and behavior.**

3. **Analyze how social institutions (e.g., marriage, family, churches, schools) function and meet the needs of society.**

4. **Identify and evaluate the sources and consequences of social conflict.**

F. Problem-solving and decision-making skills

1. **Use a variety of research and analytical tools to explore questions or issues thoroughly and fairly.**

EXAMPLES

a. Design a research project that analyzes various points of view on a current controversial issue, such as global climate change.

b. Use both primary and secondary sources to develop a group presentation that analyzes the causes of the U.S. Civil War from the perspectives of residents of both the North and the South.

c. Use both primary and secondary sources to analyze the actions of Abraham Lincoln to end the Civil War and restore national unity.

d. Collect and present visual images (e.g., photographs, paintings, illustrations) that trace shifting attitudes toward women in American culture and analyze changes.

e. Use maps and graphs to compare levels of economic development and standards of living in various countries and suggest reasons for any disparities.

2. **Analyze ethical issues in historical, cultural, and social contexts.**

II. Diverse Human Perspectives and Experiences

A. Multicultural societies

1. **Define a "multicultural society" and consider both the positive and negative qualities of multiculturalism.**

EXAMPLES

a. Consider whether the United States is a multicultural society and whether multiculturalism is compatible with the principle, "One nation under God."

b. Compare the experience of American multiculturalism with that of other countries with long experiences of immigration.

c. Analyze the sources of violent cultural conflict in several countries and assess whether these cultural differences can be resolved peacefully.

2. **Evaluate the experiences and contributions of diverse groups to multicultural societies.**

B. Factors that influence personal and group identities (e.g., race, ethnicity, gender, nationality, institutional affiliations, socioeconomic status)

1. **Explain and evaluate the concepts of race, ethnicity, and nationalism.**

2. **Explain and evaluate the concept of gender.**

3. **Analyze diverse religious concepts, structures, and institutions around the world.**

4. **Evaluate how major philosophical and intellectual concepts influence human behavior or identity.**

5. **Explain the concepts of socioeconomic status and stratification.**

6. **Analyze how individual and group identities are established and change over time.**

b. Create a visual presentation that demonstrates the changing depiction by the media of social identities.

c. Analyze how various court decisions or governmental initiatives have shaped individual or group identities over time.

III. - Interdependence of Global Communities

A. Spatial understanding of global, regional, national, and local communities

1. **Distinguish spatial patterns of human communities that exist between or within contemporary political boundaries.**

2. **Connect regional or local developments to global ones.**

3. **Analyze how and why diverse communities interact and become dependent on each other.**

B. Global analysis

1. **Apply social science methodologies to compare societies and cultures.**

IV. Analysis, Synthesis, and Evaluation of Information

A. Critical examination of texts, images, and other sources of information

1. **Identify and analyze the main idea(s) and point(s) of view in sources.**

b. Evaluate the message and the techniques used to influence public opinion in a variety of media (e.g., film, television, Internet, editorial cartoons).

2. Situate an informational source in its appropriate contexts (contemporary, historical, cultural).

3. Evaluate sources from multiple perspectives.

4. Understand the differences between a primary and secondary source and use each appropriately to conduct research and construct arguments.

5. Read narrative texts critically.

6. Read research data critically.

B. Research and methods

1. Use established research methodologies.

2. **Explain how historians and other social scientists develop new and competing views of past phenomena.**

3. **Gather, organize, and display the results of data and research.**

4. **Identify and collect sources.**

C. Critical listening

1. **Understand and interpret presentations (e.g., speeches, lectures, informal presentations) critically.**

D. Reaching conclusions

1. **Construct a thesis that is supported by evidence.**

2. **Recognize and evaluate counter arguments.**

V. Effective Communication

A. Clear and coherent oral and written communication

1. **Use appropriate oral communication techniques depending on the context or nature of the interaction.**

2. **Use conventions of Standard Written English.**

B. Academic integrity

1. **Attribute ideas and information to source materials and authors.**

f. Explain why an academic integrity standard is necessary and the consequences of violating it.

Cross-Disciplinary - Standards

with performance indicators

I. Key Cognitive Skills

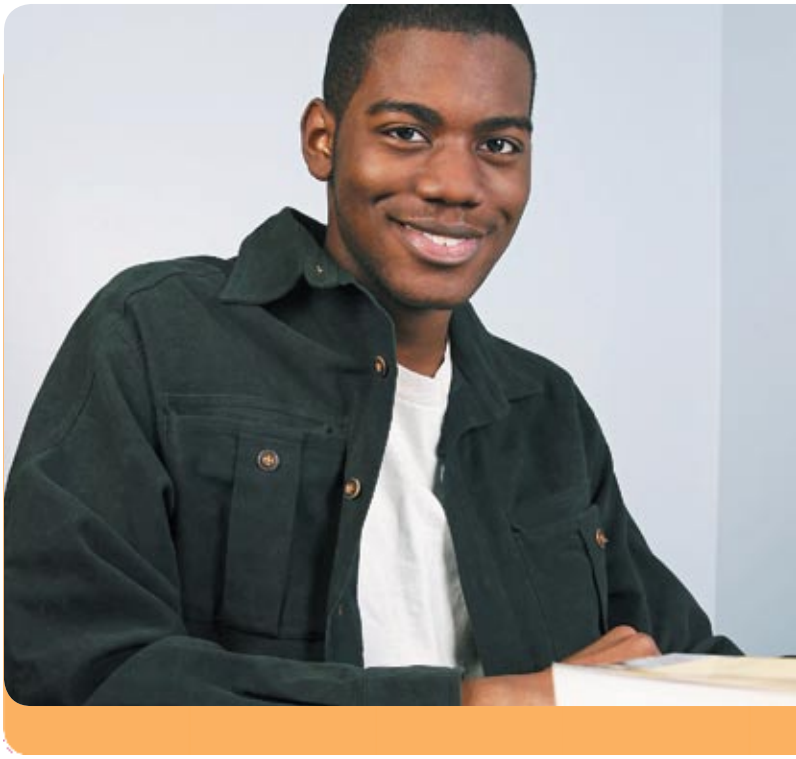
A. Intellectual curiosity

1. Engage in scholarly inquiry and dialogue.

2. Accept constructive criticism and revise personal views when valid evidence warrants.

B. Reasoning

1. Consider arguments and conclusions of self and others.



2. Construct well-reasoned arguments to explain phenomena, validate conjectures, or support positions.

d. Recognize and apply techniques of statistical or probabilistic analysis to judge reliability of information.

e. Organize an argument separating fact from opinion.

3. Gather evidence to support arguments, findings, or lines of reasoning.

4. Support or modify claims based on the results of an inquiry.

C. Problem solving

1. Analyze a situation to identify a problem to be solved.

2. Develop and apply multiple strategies to solve a problem.

3. Collect evidence and data systematically and directly relate to solving a problem.

D. Academic behaviors

1. Self-monitor learning needs and seek assistance when needed.

2. Use study habits necessary to manage academic pursuits and requirements.

3. Strive for accuracy and precision.

4. **Persevere to complete and master tasks.**

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E. Work habits

1. **Work independently.**

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2. **Work collaboratively.**

F. Academic integrity

1. **Attribute ideas and information to source materials and people.**

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2. **Evaluate sources for quality of content, validity, credibility, and relevance.**

EXAMPLES

a. Verify validity of a source within a submitted work.

b. Compare and contrast coverage of a single topic from multiple media sources.

3. **Include the ideas of others and the complexities of the debate, issue, or problem.**

4. **Understand and adhere to ethical codes of conduct.**

II. Foundational Skills

A. Reading across the curriculum

1. **Use effective prereading strategies.**

2. **Use a variety of strategies to understand the meanings of new words.**

3. Identify the intended purpose and audience of the text.

4. Identify the key information and supporting details.

5. Analyze textual information critically.

6. Annotate, summarize, paraphrase, and outline texts when appropriate.

7. Adapt reading strategies according to structure of texts.

8. Connect reading to historical and current events and personal interest.

B. Writing across the curriculum

1. Write clearly and coherently using standard writing conventions.

e. Use a variety of reference guides for citation conventions, grammar, mechanics, and punctuation.

2. Write in a variety of forms for various audiences and purposes.

3. Compose and revise drafts.

C. Research across the curriculum

1. Understand which topics or questions are to be investigated.

c. Consult previous studies or conduct interviews with experts to identify questions central to a research topic.

d. Propose explicit, testable hypotheses, using the "if ..., then ..." format.

2. Explore a research topic.

3. Refine research topic based on preliminary research and devise a timeline for completing work.

4. **Evaluate the validity and reliability of sources.**

5. **Synthesize and organize information effectively.**

6. **Design and present an effective product.**

7. **Integrate source material.**

   b. Balance use of source material with relevant explanations.

   c. Use source material ethically.

   d. Understand and avoid all types of plagiarism.

8. **Present final product.**

D. Use of data

1. **Identify patterns or departures from patterns among data.**

2. **Use statistical and probabilistic skills necessary for planning an investigation and collecting, analyzing, and interpreting data.**

3. **Present analyzed data and communicate findings in a variety of formats.**

E. Technology

1. **Use technology to gather information.**

EXAMPLES

a. Use the Internet or other appropriate technologies to post survey questions on an assigned topic.

b. Use devices to measure physical properties.

c. Use online databases to access scholarly work on an assigned research topic.

2. **Use technology to organize, manage, and analyze information.**

3. **Use technology to communicate and display findings in a clear and coherent manner.**

4. **Use technology appropriately.**

Development of this document facilitated by the Educational Policy Improvement Center -

epiconline.org

toll free 877–766–2279

720 E. 13th Ave., Suite 203
Eugene, OR 97401

Printed by University Printing Services -
The University of Texas at Austin -
Austin, Texas -
2009 -

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Developed by Education Service Center, Region 20 in conjunction with Texas Education Agency.