

Alternate Assessment Standards

for

Maine's Personalized Alternate Assessment Portfolio



Reading, Writing, and Mathematics

Based on New England Common Assessment Program (NECAP) Grade Level Expectations

Science

Based on Maine's Accountability Standards, Chapter 131

TABLE OF CONTENTS — 2009-10 PAAP Standards

A Guide to Maine's 2009-10 Personalized Alternate Assessment Portfolio.....	PAGE 6
---	-----------

Reading Content Standard A

(Grades 2–7, 2nd & 3rd Year HS: Choose two of three—A1, A2, A3—for assessment in 2009-10)

*A1 — Word Identification and Vocabulary Knowledge	PAGE
Levels of Complexity 1–4.....	10
Levels of Complexity 5–8.....	11
*A2 — Literary Text	
Levels of Complexity 1–4.....	12
Levels of Complexity 5–8.....	13
*A3 — Informational Text	
Levels of Complexity 1–4.....	14
Levels of Complexity 5–8.....	15

Writing Content Standard B

(Grades 4 and 7, 3rd Year HS: Choose one of two—B2 or B3—or assessment in 2009-10)

Developmental Characteristics of Writing	PAGE 17
B1 — Writing Conventions and Structures of Language	
Levels of Complexity 1–4.....	18
Levels of Complexity 5–8.....	19
*B2 — Narrative	
Levels of Complexity 1–4.....	20
Levels of Complexity 5–8.....	21
*B3 — Expository and Informational Writing	
Levels of Complexity 1–4.....	22
Levels of Complexity 5–8	23

***For 2009-10 assessment, choose only from those Content Standards/Performance Indicators that are shaded.**

Writing Content Standard B (Continued)	
B4 — Response to Text	PAGE
Levels of Complexity 1–4.....	24
Levels of Complexity 5–8.....	25

Mathematics Content Standard A — Numbers and Operations <i>(Grades 2–7, 2nd & 3rd Year HS: Choose one from each of three of the four Content Standard groups—A, B, C, D)</i>	
*A1 — Whole Numbers	PAGE
Levels of Complexity 1–8.....	27
A2 — Fractions	
Levels of Complexity 1–8.....	28
A3 — Decimals (Including Money) and Percents	
Levels of Complexity 1–8.....	29
A4 — Magnitude of Numbers	
Levels of Complexity 1–8.....	30
*A5 — Understanding of Mathematical Operations and Solving Problems	
Levels of Complexity 1–8.....	31
A6 — Estimates	
Levels of Complexity 1–8.....	32
A7 — Properties of Numbers	
Levels of Complexity 1–8.....	33

Mathematics Content Standard B — Geometry and Measurement	
B1— Properties of 2- and 3-Dimensional Shapes and Apply Theorems	PAGE
Levels of Complexity 1–8.....	34
B2— Congruency and Similarities	
Levels of Complexity 1–8.....	35
*B3— Perimeter, Area, Volume, and Circumference	
Levels of Complexity 1–8.....	36
B4— Measure and Converting Between Units	
Levels of Complexity 1–8.....	37

***For 2009-10 assessment, choose only from those Content Standards/Performance Indicators that are shaded.**

Mathematics Content Standard B — Geometry and Measurement (Continued)	
B5 — Coordinate Plane	PAGE
Levels of Complexity 1–8.....	38
B6 — Spatial Reasoning and Visualization	
Levels of Complexity 1–8.....	39

Mathematics Content Standard C — Functions and Algebra	
*C1 — Patterns	PAGE
Levels of Complexity 1–8.....	40
C2 — Equality and Algebraic Expressions	
Levels of Complexity 1–8.....	41

Mathematics Content Standard D — Data, Statistics, and Probability	
*D1 — Interpreting Data	PAGE
Levels of Complexity 1–8.....	42
D2 — Analyzing Data	
Levels of Complexity 1–8.....	43
D3 — Counting Techniques	
Levels of Complexity 1–8.....	44
D4 — Probability	
Levels of Complexity 1–8.....	45
D5 — Collect, Organize, and Display Data	
Levels of Complexity 1–8.....	46

Science Content Standard D — The Physical Setting	
<i>(Grades 5 and 8, 3rd Year HS: Choose three from Content Standard groups D and E. No more than two of the choices can come from a single group)</i>	
*D1 — Universe and Solar System	PAGE
Levels of Complexity 1–8.....	48
*D2 — Earth	
Levels of Complexity 1–8.....	49
*D3 — Matter and Energy	
Levels of Complexity 1–8.....	50

***For 2009-10 assessment, choose only from those Content Standards/Performance Indicators that are shaded.**

Science Content Standard D — The Physical Setting (Continued)

*D4 — Force and Motion	PAGE
Levels of Complexity 1–8.....	51

Science Content Standard E — The Living Environment

*E1 — Biodiversity	PAGE
Levels of Complexity 1–8.....	52
*E2 — Ecosystems	
Levels of Complexity 1–8.....	53
*E3 — Cells	
Levels of Complexity 1–8.....	54
*E4 — Heredity and Reproduction	
Levels of Complexity 1–8.....	55
*E5 — Evolution	
Levels of Complexity 1–8.....	56

****For 2009-10 assessment, choose only from those Content Standards/Performance Indicators that are shaded.***

A Guide to Maine Alternate Assessment Standards for Maine's Personalized Alternate Assessment Portfolio (PAAP)

NECAP/MEA/PSAT/MHSA

Students may participate in Maine's State Assessments—the New England Common Assessment Program (NECAP) for students in grades 2 through 7, the Maine Educational Assessment Science tests at grades 5 and 8, the PSAT for students in their second year of high school, and the Maine High School Assessment (SAT, Math augmentation, and Science) required for students in their third year of high school—through any of three avenues. Students may participate in a standard administration, standard administration with accommodations, or an alternate assessment. A team must determine which avenue is appropriate for an individual student. Lists of approved accommodations for each of the assessments may be found in documents on the Maine Department of Education Web site. The same accommodations may be used for students who are participating in testing through alternate assessment.

Maine Alternate Assessment Standards are designed for planning and implementing the State's alternate assessment, the Personalized Alternate Assessment Portfolio (PAAP), for NECAP and MEA Science (grades 5 and 8, and 3rd year high school), PSAT, and MHSA. The PAAP is used to allow participation in State assessments for those students with an Individual Education Program (IEP) who need a modified measure of performance because their exceptionality is so significant that it prevents access to the standard assessment, even with a combination of accommodations. The PAAP, like NECAP and MEA Science, PSAT, or MHSA, will provide a snapshot in time of the individual student's performance. A broader picture will emerge as the student results on the PAAP are reviewed along with results on other assessments in and beyond the classroom. The population appropriate for inclusion in this alternate avenue to assessment is made up of those students with IEPs who have significant cognitive disabilities. The results of the alternate assessment will serve as the basis for reporting under the No Child Left Behind Act for the student participants.

The PAAP is a portfolio assessment that assesses students in Reading and Mathematics at grades 2 through 7, 2nd year high school, and 3rd year high school; Writing at grades 4, 7, and 3rd year high school; and Science at grades 5, 8, and 3rd year high school (see PAAP Blueprint Table below). The administration window for the PAAP is the first week of December through the first week of May. Local teachers select tasks from the online PAAP task bank based on the student's individual learning program. The five-month administration window provides opportunities for instruction to be embedded in the student's daily work over the course of the school year then assessed using PAAP tasks.

PAAP Blueprint Table

Content Area	Grade(s) Assessed	Number of Content Standards/ Performance Indicators Required	PAAP Content Standards/ Performance Indicators from which to Select 2009-10 Entries
Reading	2–7 and 2nd and 3rd year high school	2	A1, A2, A3
Mathematics	2–7 and 2nd and 3rd year high school	3	A1, A5, B3, C1, D1
Writing	4 and 7, 3rd year high school	1	B2, B3
Science	5 and 8, 3rd year high school	3	D1, D2, D3, D4, E1, E2, E3, E4, E5

Levels of Complexity (LoC)

Maine's Alternate Assessment Standards for 2009-2010 PAAPs are written on a continuum of Levels of Complexity (LoC). The LoC for Science are linked to *Maine's Accountability Standards, Chapter 131* for grades 5, 8, and high school, whereas the LoC for Reading, Writing, and Mathematics are linked to the *NECAP Grade-Level Expectations* for grades 2 through 7 and high school. The LoC descriptors, which represent a learning continuum, are written with the high school performance standards and developmentally backed down to ensure access to instruction and assessment for all students.

The Maine Alternate Assessment Standards provide a common basis for the planning and assessment of standards-related instruction and assessment in a system that allows students to work on the Content Standards, LoC descriptors, and tasks best suited to their individual needs. **ALL TASKS SUBMITTED IN 2009-10 PAAPs MUST COME FROM THE PAAP TASK BANK** online at www.mecas.org/paap/taskbank. All Tasks within the Task Bank are aligned with the Maine Alternate Assessment Standards Levels of Complexity 1–8. Students working above the grade-appropriate LoC should participate in the State assessment for their grade-level placement with appropriate accommodations.

Format of the PAAP Standards

Maine's Alternate Assessment Standards are formatted by Content Area, Content Standard, and LoC descriptor. There are three Content Area sections that are color coded: 1) Reading & Writing (yellow); 2) Mathematics (blue); and 3) Science (green). White pages within each color-coded section include standards for which tasks are NOT available for assessment in 2009-10. Please note that there will be no matching tasks in the Task Bank for the standards on white pages. However, they are available for instructional purposes and future planning. The intent is to provide tasks for these standards in the future. At the top of each page, there is a header with the Content Area, Content Standard, and Performance Indicator/Grade-Level Expectation (as written in *Maine's Accountability Standards, Chapter 131* or *NECAP Grade-Level Expectations*) along with a letter-number to indicate the Alternate Assessment Standard. The student expectations for that Content Standard, as defined in *Maine's Accountability Standards, Chapter 131* or *NECAP Grade-Level Expectations*, are written in italics below the Content Standard.

The header of each page is followed by a four-column table. The fourth column, Level of Complexity 4 and 8, is directly linked to the end-of-grade-span Performance Indicators for the Content Standard in measurable form. Performance Indicator descriptors are backed down developmentally as the Level of Complexity rows are read from right to left (starting at LoC 8 and working backward to LoC 1). The descriptor for each Level of Complexity provides measurable targets for specific Performance Indicators. The developmental Levels of Complexity (LoC) provide a continuum of cognitive demand from Level of Complexity 1, the access point for each Performance Indicator, to Level of Complexity 8. At the top of each column within each Level of Complexity, the grade levels appropriate for participation are identified. The Maine Alternate Assessment Standards for the PAAP can be found online at www.mecas.org/paap/rubrics.

Since all students must be involved in general curriculum, teachers are asked to plan instruction aligned to the PAAP Level of Complexity descriptor for each Content Standard and Performance Indicator selected as appropriate for inclusion in a student's instructional program (i.e., IEP). Assessment of the student's related knowledge and/or skills using downloaded PAAP tasks aligned to that Level of Complexity descriptor should be completed following delivery of the planned instruction. The completed tasks, along with the accompanying forms required, will make up the student work that serves as the contents of the PAAP.

Acronyms

CS – Content Standard – Maine’s Alternate Assessment Content Standards are designed to encourage the highest achievement of every student, by defining the knowledge, concepts, and skills that students should acquire at each LoC. Within the standards document, each Content Standard is assigned a letter for organizational purposes (e.g., Reading Content Standard A).

GLEs – Grade Level Expectations – What all students should know and be able to do at the end of a given grade level.

LoC – Levels of Complexity – Continuum of complexity descriptors, of which there are eight within each standard.

Maine’s Accountability Standards, Chapter 131 – Identifies the knowledge and skills essential to prepare Maine students for work, for higher education, for citizenship, and for personal fulfillment. This document defines only the core elements of education that should apply to all students without regard to their specific career and academic plans.

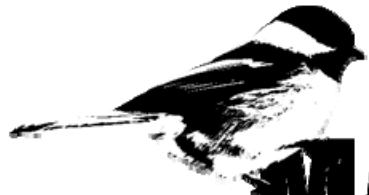
MEA – Maine Educational Assessment – Science assessment required of students in grades 5 and 8.

MHSA – Maine High School Assessment – Assessment required of students in their third year of high school.

NECAP – New England Common Assessment Program – Assessment program required for students in grades 2 *through* 7.

PAAP – Personalized Alternate Assessment Portfolio – Alternate assessment program for students with significant cognitive disabilities who cannot participate with accommodations in the general assessment in Maine.

PI – Performance Indicator – For Maine’s Alternate Assessment Standards, a Performance Indicator is the number assigned within a content standard (e.g., A1) for organizational purposes.



MAINE
PAAP 2009-10
PERSONALIZED ALTERNATE ASSESSMENT PORTFOLIO

Reading Standards

Word Identification and Vocabulary Knowledge

Student applies word identification and decoding strategies, identifies the meaning of unfamiliar vocabulary, shows breadth of vocabulary knowledge, and/or demonstrates understanding of word meaning or relationships by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> identifying signs, symbols, gestures, objects, and/or pictures to show understanding of words. 	<ul style="list-style-type: none"> showing phonemic awareness and/or sound/symbol relationships. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> using phonemic awareness and/or using word parts or phonics to decode words, <p>AND</p> <ul style="list-style-type: none"> using context clues to determine the meaning of words. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> using phonemic awareness and/or using word parts or phonics to decode words, <p>AND</p> <ul style="list-style-type: none"> using context clues to determine the meaning of words.

Word Identification and Vocabulary Knowledge

Student applies word identification and decoding strategies, identifies the meaning of unfamiliar vocabulary, shows breadth of vocabulary knowledge, and/or demonstrates understanding of word meaning or relationships by:

Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • using phonemic awareness and/or • using word parts or phonics to decode words, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • using context clues to determine the meaning of words and/or • identifying unfamiliar vocabulary by using suffixes or base words, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • identifying synonyms, • identifying antonyms, and/or • categorizing words. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • applying word identification/decoding strategies and/or • using knowledge of sounds, syllable types, or word patterns such as prefixes or suffixes to decode words, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • identifying unfamiliar vocabulary by using affixes or base words, • using context clues to determine meaning, and/or • using a dictionary or glossary to determine the meaning of words, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • identifying synonyms, • identifying antonyms, • categorizing words, • selecting words to use in content-specific context, and/or • determining the meaning of a multiple-meaning word that is appropriate for the text. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying the meaning of unfamiliar vocabulary by using knowledge of word structure, • using context clues to determine meaning, and/or • using a dictionary or glossary to determine the meaning of words, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying synonyms, • identifying antonyms, • selecting words to use in content-specific context, • determining the meaning of a multiple-meaning word that is appropriate for the text, and/or • distinguishing shades of meaning. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying the meaning of unfamiliar vocabulary by using knowledge of word structure, • using context clues to determine meaning, and/or • using a dictionary, glossary, or thesaurus to determine definitions or usage of words, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying synonyms, • identifying antonyms, • distinguishing shades of meaning, and/or • selecting or explaining the use of words in context.

Literary Text

Student demonstrates initial understanding, analysis, and interpretation of elements of literary text, citing evidence where appropriate, by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> identifying pictures of named events from among a group of two or more pictures depicting varied events. 	<ul style="list-style-type: none"> putting key events from a simple story listened to or viewed in correct sequence. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> identifying settings or characters and/or retelling events in a story using words and pictures, <p>AND</p> <ul style="list-style-type: none"> answering questions about information from the text. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> identifying settings or characters and/or retelling a story using relevant details and putting events in proper sequence, <p>AND</p> <ul style="list-style-type: none"> answering questions about information from the text.

Literary Text

Student demonstrates initial understanding, analysis, and interpretation of elements of literary text, citing evidence where appropriate, by:

Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • identifying or describing characters or setting, and/or • identifying or describing problem, solution, or events, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • making logical predictions, • identifying characteristics or personality traits of main characters, and/or • making basic inferences. <p><i>Text must be read by the student.</i></p>	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying or describing characters or setting, • identifying or describing problem, solution, events, or plot, and/or • paraphrasing or summarizing, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • making logical predictions, • describing main characters' characteristics or personality traits, • providing examples from text that reveal characters' personality traits, • making basic inferences, and/or • identifying author's basic message. <p><i>Text must be read by the student.</i></p>	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying or describing characters, setting, problem/solution, events, or plot, • identifying changes in characters over time, and/or • paraphrasing or summarizing, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • making logical predictions, • describing characters' characteristics or personality traits, • providing examples from text that reveal characters' personality traits, • making inferences, • identifying who is telling the story, and/or • identifying author's message or theme. <p><i>Text must be read by the student.</i></p>	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying or describing characters, setting, problem/solution, events or plot, • identifying changes in characters over time, and/or • paraphrasing/summarizing, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • making logical predictions, • describing characters' characteristics, personality traits, or interactions, • providing examples from text that reveal characters' personality traits, • describing changes in characters over time, • making inferences, • identifying the narrator, • identifying or describing the author's message or theme and/or, • demonstrating knowledge of literary elements and devices (imagery, exaggeration). <p><i>Text must be read by the student.</i></p>

Informational Text

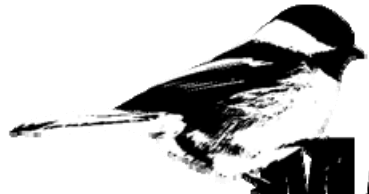
Student demonstrates initial understanding, analysis, and interpretation of elements of informational text, citing evidence as appropriate, by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> distinguishing front of a book from the back, distinguishing top of a book from the bottom, and/or using signs, symbols, pictures, words, or actions to communicate needs or wants. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> differentiating between print and pictures, indicating the title on the cover or title page, indicating where one begins to read on a page, indicating where to find the author’s name, using explicitly stated information from the text to answer questions, and/or recognizing a central idea from text when presented with three pictures. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> obtaining information from a title page (title, author), distinguishing between the beginning and end of a book, differentiating between print and pictures, using explicitly stated information from the text to answer questions, and/or recognizing main/central idea when presented with pictures and sentences. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> obtaining information from a simple table of contents, obtaining information from a simple glossary, obtaining information from illustrations, and/or using explicitly stated information from the text to answer questions, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> making basic inferences and/or drawing basic conclusions when given possible choices.

Informational Text

Student demonstrates initial understanding, analysis, and interpretation of elements of informational text, citing evidence as appropriate, by:

<p>Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)</p>	<p>Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)</p>	<p>Level of Complexity 7 (2nd & 3rd Year HS)</p>	<p>Level of Complexity 8 (2nd & 3rd Year HS)</p>
<p>doing two or more of the following:</p> <ul style="list-style-type: none"> obtaining information from simple table of contents or glossary, obtaining information from simple charts, graphs, diagrams, or illustrations, and/or using explicitly stated information to answer questions, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> connecting information within a text, recognizing generalizations, making basic inferences or drawing basic conclusions, and/or inferring cause or effect when signal words are present. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> obtaining information from table of contents, glossary, transition words, bold or italicized text, or headings, obtaining information from graphic organizers, charts, graphs, or illustrations, and/or answering questions related to explicitly stated information, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> connecting information within a text, recognizing generalizations about a text, making inferences, including cause/effect, drawing basic conclusions, forming judgments or opinions, and/or distinguishing fact from opinion. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> obtaining information from table of contents, glossary, index, transition words or phrases, bold or italicized text, headings, subheadings, graphic organizers, charts, graphs, or illustrations, answering questions related to explicitly stated information, and/or paraphrasing or summarizing, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> connecting information within or across texts, synthesizing information from one or more texts, making inferences including cause/effect, determining author’s purpose, drawing basic conclusions, forming judgments/opinions, and/or distinguishing fact from opinion. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> obtaining information from table of contents, glossary, index, transition words or phrases, bold or italicized text, headings, subheadings, graphic organizers, charts, graphs, or illustrations, using information from the text to answer questions, and/or summarizing or comparing/contrasting, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> connecting information within or across texts, synthesizing information from one or more texts, drawing conclusions about text, determining author’s purpose, forming and supporting opinions/judgments and assertions, and/or distinguishing fact from opinion, making inferences about causes and effects.



MAINE
PAAP 2009-10
PERSONALIZED ALTERNATE ASSESSMENT PORTFOLIO

Writing Standards



Developmental Characteristics of Writing



Grades K-2 Developmental Characteristics	Grades 3-5 Developmental Characteristics
<ul style="list-style-type: none"> ✓ aware that speech can be written down ✓ English organized from left to right ✓ print language is close match to oral language child uses ✓ uses invented spelling by writing the sounds heard in words, and often picks letters having those sounds in their names ✓ attempts use of punctuation and capitalization ✓ written thoughts may be random ✓ combination of letters and words (semi-phonetic spellings with some sounds represented by letters) used as experiments in writing ✓ has a sense of sentence ✓ uses basic sentence structures ✓ composition conveys basic ideas ✓ uses logical sequence (beginning, middle, and end) ✓ attempts use of punctuation and capitalization mechanics ✓ uses some variety of complete sentence structures 	<ul style="list-style-type: none"> ✓ develops a central idea or topic ✓ begins to develop and later maintains a consistent focus ✓ includes beginning, middle, and end ✓ begins to organize writing by paragraph ✓ relates multiple sentences to single topic ✓ uses varied text forms to suit purpose ✓ matches writing to purpose and audience ✓ provides descriptive details ✓ selects a topic for composition ✓ establishes an organizing structure ✓ composes coherent paragraphs with supporting details and a concluding sentence ✓ conveys voice ✓ edits for correct grammar, usage, and mechanics
Grades 6-8 and 11 Developmental Characteristics	
<ul style="list-style-type: none"> ✓ selects and refines a topic for composition ✓ establishes an organizing structure that is appropriate for the purpose ✓ maintains a consistent focus, point of view, or thesis ✓ uses specific details and references to support the focus, point of view, or thesis ✓ uses descriptive language to clarify, enhance, or develop ideas ✓ includes relevant information in a logical order ✓ uses varied sentence length and structure to enhance meaning ✓ uses a variety of elaboration strategies and transitional devices ✓ conveys voice appropriate to audience and purpose ✓ uses precise and specific language ✓ edits for correct grammar, usage, and mechanics ✓ uses resources to support editing 	

Writing Conventions and Structures of Language

Student demonstrates command of the structures of sentences, paragraphs, and text, and demonstrates command of appropriate conventions by:

Level of Complexity 1 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 2 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 3 (Grade 7 and 3rd Year HS)	Level of Complexity 4 (Grade 7 and 3rd Year HS)
<ul style="list-style-type: none"> • identifying given signs, symbols, and/or pictures that communicate a thought (e.g., need, name of object, person). 	<ul style="list-style-type: none"> • expressing an idea using pictures, <p>AND</p> <ul style="list-style-type: none"> • using phonemic awareness and letter-sound association to connect letters to sounds. 	<ul style="list-style-type: none"> • expressing an idea using pictures and letters, <p>AND</p> <ul style="list-style-type: none"> • using phonemic awareness and letter knowledge to represent initial or final consonant sounds. 	<ul style="list-style-type: none"> • writing recognizable short sentences, <p>AND</p> <ul style="list-style-type: none"> • using phonemic awareness and letter knowledge to spell independently (phonetic and/or “invented” spelling acceptable).

Writing Conventions and Structures of Language

Student demonstrates command of the structures of sentences, paragraphs, and text, and demonstrates command of appropriate conventions by:

<p>Level of Complexity 5 (Grade 7 and 3rd Year HS)</p>	<p>Level of Complexity 6 (Grade 7 and 3rd Year HS)</p>	<p>Level of Complexity 7 (3rd Year HS)</p>	<p>Level of Complexity 8 (3rd Year HS)</p>
<ul style="list-style-type: none"> • writing short sentences, <p>AND doing one or more of the following:</p> <ul style="list-style-type: none"> • using capital letters for names and at the beginning of sentences, • using correct end punctuation in simple sentences, • correctly spelling high frequency gr. 2 words, and/or • correctly spelling one syllable words with these patterns: CVC, CVCe, CCVC, CVCC. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • writing simple declarative, exclamatory, or interrogative sentences and/or • recognizing indentations for new paragraphs, <p>AND doing one or more of the following:</p> <ul style="list-style-type: none"> • using capital letters at the beginning of names and sentences, • using periods, question marks, or exclamation points correctly in simple sentences, • correctly spelling high frequency gr. 3 words, and/or • correctly spelling single syllable words with regular long and short vowels. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • writing a variety of simple sentences, • writing a variety of compound sentences, and/or • writing a paragraph with a main idea and two supporting details, <p>AND doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying grammatical errors when given examples, • applying basic capitalization rules, for the beginning of sentences and in proper nouns or titles, • using commas in dates and in a series, • using end punctuation correctly in a variety of sentence structures, • correctly spelling high frequency words at gr. 4 level, and/or • recognizing or applying English spelling rules: consonant doubling, changing y to i, dropping silent e. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> • using a variety of sentence structures to enhance meaning, • adding phrases and clauses to sentences, and/or • writing a paragraph with a main idea and three or more supporting details, <p>AND doing two or more of the following:</p> <ul style="list-style-type: none"> • identifying or correcting grammatical errors, including subject-verb agreement, • applying basic capitalization rules, for the beginning of sentences, and in proper nouns or titles, • using commas, apostrophes, or quotation marks to clarify meaning, • correctly spelling high frequency words at gr. 5 level, including homophones, and/or • recognizing or applying English spelling rules.

Narrative

Student organizes and relates a story line / plot / series of events and demonstrates use of narrative strategies by:

Level of Complexity 1 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 2 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 3 (Grade 7 and 3rd Year HS)	Level of Complexity 4 (Grade 7 and 3rd Year HS)
<ul style="list-style-type: none"> identifying pictures or symbols to relate an experience, event, or idea. 	<ul style="list-style-type: none"> composing responses related to an event, experience, or idea. 	<ul style="list-style-type: none"> using pictures to create an understandable story line with a beginning and end when given a structure (pictures may include labels), <p>AND</p> <ul style="list-style-type: none"> using pictures to identify and/or create characters. 	<ul style="list-style-type: none"> creating an understandable story line with a beginning and end when given a structure (may take form of words or pictures or some combination), <p>AND</p> <ul style="list-style-type: none"> creating character(s)—may take form of words or pictures or some combination.

Narrative

Student organizes and relates a story line / plot / series of events and demonstrates use of narrative strategies by:

Level of Complexity 5 (Grade 7 and 3rd Year HS)	Level of Complexity 6 (Grade 7 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<ul style="list-style-type: none"> • creating a clear, understandable story line with a beginning, middle, and end when given a structure, <p>AND</p> <ul style="list-style-type: none"> • creating or identifying characters. 	<ul style="list-style-type: none"> • creating a clear, understandable story line with a beginning, middle, and end when given a prompt, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • using details and/or • creating or identifying characters. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • creating a clear, understandable story line with a beginning, middle, and end and/or • establishing a problem and solution, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • using relevant and descriptive details and/or • creating or identifying characters. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • creating a clear and coherent (logically consistent) story line, • establishing context (setting or background information, problem/conflict/challenge, and resolution), <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • using relevant and descriptive details and sensory language to advance the plot/story line, and/or • developing characters through description.

Expository and Informational Writing

Student conveys purpose and demonstrates ability to organize ideas or concepts and use a range of elaboration strategies in reports and informational writing by:

Level of Complexity 1 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 2 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 3 (Grade 7 and 3rd Year HS)	Level of Complexity 4 (Grade 7 and 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> identifying signs, symbols, pictures, or words to convey simple needs related to specific tasks or procedures and/or using pictures, signs, or symbols to communicate or identify information. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> composing and sharing related responses to convey simple needs and/or matching objects, people, places, or events to related information. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> naming or labeling objects or pictures that have a common characteristic, representing facts through pictures, and/or using pictures to illustrate details or information related to topic (pictures may have labels). 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> sorting facts within a given category, representing facts through pictures, words, sentences, or some combination, and/or using pictures to create meaning, <p>AND</p> <ul style="list-style-type: none"> including details or information relevant to topic (details or information may take the form of pictures with captions, words, sentences, or some combination).

Expository and Informational Writing

Student conveys purpose and demonstrates ability to organize ideas or concepts and use a range of elaboration strategies in reports and informational writing by:

Level of Complexity 5 (Grade 7 and 3rd Year HS)	Level of Complexity 6 (Grade 7 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> establishing a topic, restating a given focus or controlling idea on a topic (purpose), using a given organizational structure for grouping facts, and/or selecting facts to set context or background. <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> including details or information relevant to topic and/or focus, and/or using sufficient details or pictures to illustrate facts. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> establishing a topic, stating a focus or controlling idea on a topic, using a template to group facts and ideas, selecting appropriate facts to set context or background, using basic transition words when appropriate (e.g., first, then, next, finally), and/or providing a concluding statement. <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> including details or information relevant to topic and/or focus, and/or including sufficient details for appropriate depth of information: naming, describing, explaining, comparing, use of visual images. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> establishing a topic, stating and maintaining a focus or controlling idea on a topic, grouping ideas logically, writing an introduction that sets the context (including materials lists in procedures), using transition words or phrases, and/or writing a conclusion. <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> including facts and details relevant to the focus or controlling idea and/or including sufficient details or facts for appropriate depth of information: naming, describing, explaining, comparing, use of visual images. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> establishing a topic, stating and maintaining a focus or controlling idea on a topic, using a text structure appropriate to the focus or controlling idea (text structures: description, sequential, chronology, proposition/support, compare/contrast), selecting appropriate information to set the context, using transition words or phrases appropriate for organizing text structure (e.g., for compare-contrast, “on the other hand”), and/or writing a conclusion that provides closure. <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> including facts and details relevant to the focus or controlling idea, and excluding extraneous information and/or including sufficient details or facts for appropriate depth of information: naming, describing, explaining, comparing, use of visual images.

Response to Text

Student shows understanding of plot/ideas/concepts, and makes and supports analytical judgments about literary and informational text by:

Level of Complexity 1 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 2 (Grades 4, 7, and 3rd Year HS)	Level of Complexity 3 (Grade 7 and 3rd Year HS)	Level of Complexity 4 (Grade 7 and 3rd Year HS)
<ul style="list-style-type: none"> using signs, symbols, or pictures to communicate understanding of facts. 	<ul style="list-style-type: none"> using signs, symbols, or pictures to communicate understanding of ideas and/or concepts. 	<ul style="list-style-type: none"> showing understanding of text using pictures (pictures may include labels, which might only include beginning sounds and/or end sounds), <p>AND</p> <ul style="list-style-type: none"> using prior knowledge or references to text to respond to a question using pictures (pictures may include labels, which might only include beginning sounds and/or end sounds). 	<ul style="list-style-type: none"> using pictures, words, sentences, or some combination to show understanding of text, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> using prior knowledge or references to text to respond to a question (evidence may take the form of pictures, words, sentences, or some combination) and/or using a beginning and an ending to organize ideas, given an organizing structure (e.g., graphic organizer, story map).

Response to Text

Student shows understanding of plot/ideas/concepts, and makes and supports analytical judgments about literary and informational text by:

Level of Complexity 5 (Grade 7 and 3rd Year HS)	Level of Complexity 6 (Grade 7 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<ul style="list-style-type: none"> • selecting appropriate information to set context or background, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • stating a focus (purpose) when responding to a given question, • using details or references to text to support a given focus (Note: support may include prior knowledge), and/or • using a beginning, middle, and concluding statement or sentence to organize ideas, given an organizing structure (e.g., graphic organizer, story map). 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • selecting appropriate information to set context or background and/or • connecting what has been read (plot, ideas, or concepts) to prior knowledge, which might include other texts, <p>AND</p> <p>doing one or more of the following:</p> <ul style="list-style-type: none"> • stating a focus (purpose) when responding to a given question, • making inferences about the content, events, characters, or setting, • using details or references to text to support focus (Note: support may include prior knowledge), and/or • organizing ideas, using basic transition words (e.g., first, next, then, finally), and having a concluding statement. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • selecting appropriate information to set context or background and/or • connecting what has been read (plot, ideas, or concepts) to prior knowledge, which might include other texts, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • stating and maintaining a focus (purpose) when responding to a given question, • making inferences about content, events, characters, setting, or common themes, • using specific details and references to text to support focus, and/or • organizing ideas, using basic transition words or phrases, and writing a conclusion. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> • selecting appropriate information to set context or background and/or • connecting what has been read (plot, ideas, or concepts) to prior knowledge or other texts, by referring to relevant ideas, <p>AND</p> <p>doing two or more of the following:</p> <ul style="list-style-type: none"> • stating and maintaining a focus (purpose) when responding to a given question, • making inferences about content, events, characters, setting, or common themes, • using specific details and references to text or citations to support focus, and/or • organizing ideas, using transition words or phrases, and writing a conclusion that provides closure.



Mathematics Standards

Numbers and Operations – Whole Numbers

Student demonstrates conceptual understanding of rational numbers by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> indicating or labeling a collection of up to 3 items. 	<ul style="list-style-type: none"> indicating or labeling a collection of up to 10 items. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> reading, writing, and counting numbers up to 99 and/or recognizing the place value (tens and ones) of numbers. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> reading, writing, and counting numbers up to 199, skip counting by 2s, 5s, and 10s (may use a hundreds chart), and/or recognizing the place value (ones, tens, and/or hundreds) of numbers.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> counting forward and backward off a nonzero number from 1–199 and/or skip counting by 2s, 5s, and 10s, <p>AND</p> <ul style="list-style-type: none"> recognizing the place value (ones, tens, and/or hundreds) of numbers. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> reading and writing numbers up to 999, using models, explanations, and/or other representations to show equivalency, and/or composing and decomposing numbers up to 999 (e.g., $786 = 700 + 80 + 6$ or $786 = 500 + 200 + 86$). 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> reading and writing numbers up to 999,999, using models, explanations, and/or other representations to show equivalency, and/or composing and decomposing numbers up to 9,999 (e.g., $5367 = 5000 + 300 + 60 + 7$ or $5367 = 5000 + 200 + 167$). 	<ul style="list-style-type: none"> reading and writing numbers up to 9,999,999, using models, explanations, and/or other representations to show equivalency, <p>AND</p> <ul style="list-style-type: none"> composing and decomposing numbers up to 9,999 (e.g., $5367 = 5000 + 300 + 60 + 7$ or $5367 = 5000 + 200 + 167$).

Numbers and Operations – Fractions

Student demonstrates conceptual understanding of rational numbers by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> indicating that one half is less than one whole. 	<ul style="list-style-type: none"> indicating that two halves make a whole. 	<ul style="list-style-type: none"> indicating that two halves, three thirds, and/or four fourths make a whole. 	<ul style="list-style-type: none"> indicating $\frac{1}{2}$, $\frac{1}{3}$, and/or $\frac{1}{4}$.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> identifying, naming, and/or illustrating $\frac{1}{2}$, $\frac{1}{3}$, and/or $\frac{1}{4}$. 	<ul style="list-style-type: none"> naming, comparing, and/or ordering fractions with denominators of 2, 3, 4, and/or 5. 	<ul style="list-style-type: none"> naming, comparing, and/or ordering fractions with denominators of 2, 3, 4, 5, 6, 8, and/or 10. 	<ul style="list-style-type: none"> naming, comparing, and/or ordering fractional numbers, proper, mixed number, and improper with denominators of 2, 3, 4, 5, 6, 8, 10, 12, 100, and/or 1000.

Numbers and Operations – Decimals (Including Money) and Percents

Student demonstrates conceptual understanding of rational numbers by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> matching coins (penny, nickel, dime, or quarter) to coins of the same value. 	<ul style="list-style-type: none"> identifying coins (penny, nickel, dime, or quarter). 	<ul style="list-style-type: none"> identifying coins (penny, nickel, dime, and quarter) and the value of coins (a penny and a quarter). 	<p>doing one of the following:</p> <ul style="list-style-type: none"> identifying coins (penny, nickel, dime, and quarter) and giving the value of these coins and/or distinguishing between decimal notations (e.g., 0.35) and other numbers (e.g., 35).
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> identifying \$1.00, \$5.00, and \$10.00 bills, finding possible combinations of coins that equal \$0.25 or \$0.50 and/or identifying decimals within a context of money as part of 100 (e.g., shows 10 pennies out of 100 is the same as \$0.10). 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> adding like and unlike coin collections together using dollar-and-cents notation, identifying the value of bills and how they relate to each other (e.g., \$1.00 as 100 pennies or a \$5.00 bill as 5 \$1.00 bills), making change for a dollar and/or identifying decimals within a context of money and/or percent as part of 100 (e.g., shows 10 pennies out of 100 is the same as \$0.10 or 10%). 	<ul style="list-style-type: none"> demonstrating an understanding of decimals (to the hundredths place) within the context of money. <p>AND</p> <ul style="list-style-type: none"> demonstrating understanding of benchmark percents (10%, 25%, 50%, 75%, and 100%). 	<ul style="list-style-type: none"> demonstrating an understanding of decimals (to the thousandths place), <p>AND</p> <ul style="list-style-type: none"> describing the relationship between percent and the original number (e.g., 33% percent off means a discount, or 15% increase means the number is greater than before).

Numbers and Operations – Magnitude of Numbers

Student demonstrates understanding of the relative magnitude of numbers by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> determining which group has more or less when given two groups of objects (real or pictured). 	<ul style="list-style-type: none"> determining which group has the most or the least when given three groups of objects (real or pictured). 	<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–49. 	<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–99.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–199. 	<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–999. 	<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–999,999. 	<ul style="list-style-type: none"> ordering and comparing whole numbers from 0–9,999,999.

Numbers and Operations – Understanding of Mathematical Operations, Calculations, and Solving Problems

Student demonstrates conceptual understanding of mathematical operations, mental calculations, and problem solving by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> matching a set of 2–4 objects with an equivalent set of 2–4 objects. 	<ul style="list-style-type: none"> adding and subtracting whole numbers (sums up to 6 and the corresponding subtraction counterparts) using manipulatives. 	<ul style="list-style-type: none"> adding and subtracting whole numbers (sums up to 10 and the corresponding subtraction counterparts) and showing or explaining strategies for such problems. 	<ul style="list-style-type: none"> adding and subtracting whole numbers (sums up to 20 and the corresponding subtraction counterparts) and showing or explaining strategies for such problems.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> adding and subtracting whole numbers (up to 99) and/or describing or illustrating the inverse relationship between addition and subtraction and/or the relationship between repeated addition and multiplication. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> adding and subtracting whole numbers (up to 199), multiplying (limited to one-digit numbers) and dividing (limited to one-digit divisors and two-digit dividends) whole numbers, and/or describing or illustrating the inverse relationship between multiplication and division of whole numbers (without remainders) and/or the relationship between repeated subtraction and division. 	<ul style="list-style-type: none"> multiplying (up to two digits by two digits) and dividing (limited to one-digit divisors) whole numbers to solve problems. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> using mental computation strategies of all four operations on whole numbers (division up to two-digit divisors) to solve problems and/or accurately solving problems involving proportional reasoning.

Numbers and Operations – Estimates

Student demonstrates understanding of estimates by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
N/A	N/A	N/A	N/A
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
N/A	N/A	<ul style="list-style-type: none"> • using comparisons to estimate size of a collection, up to 10, without counting (e.g., Are there enough chairs for the 10 students who need them?). <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • making estimates in a given situation and explaining the reasonableness of the solution (e.g., If there are seven students and five yards of material and every student needs 1 yard of material, is there enough material for everyone? Explain your answer.). 	<ul style="list-style-type: none"> • using comparisons to estimate size of a collection, up to 20, without counting (e.g., Are there enough chairs for the 20 students who need them?). <p style="text-align: center;">AND</p> <ul style="list-style-type: none"> • estimating the size of a collection, up to 100, without counting (e.g., Are there more than 75 pennies in the jar?).

Numbers and Operations – Properties of Numbers

Student applies properties of numbers and field properties to solve problems by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>N/A</p>	<p>N/A</p>	<ul style="list-style-type: none"> • identifying odd and even numbers, <p>AND</p> <ul style="list-style-type: none"> • identifying or showing examples of the commutative property of addition (e.g., $9 + 8$ is the same as $8 + 9$). 	<ul style="list-style-type: none"> • identifying or showing that adding zero to any number gives that number (additive identity), <p>AND</p> <ul style="list-style-type: none"> • identifying or showing that when adding 3 or more numbers, the order in which the numbers are combined does not matter (e.g., $(5 + 6) + 9 = 5 + (6 + 9)$ (associative of addition).

Geometry and Measurement – Properties of 2- and 3-Dimensional Shapes and Apply Theorems

Student uses properties or attributes of angles, sides, and/or figures to:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> select, from two choices, the shape that matches a given model or picture. 	<ul style="list-style-type: none"> match two shapes when given a variety of models or pictures. 	<ul style="list-style-type: none"> identify circles, triangles, and squares. 	<ul style="list-style-type: none"> indicate and classify two-dimensional shapes as circles, triangles, or quadrilaterals.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> identify triangles, squares, circles, and rectangles. 	<p>do two or more of the following:</p> <ul style="list-style-type: none"> identify the number of angles in a polygon, identify angles as more than, less than, or equal to 90 degrees, and/or identify triangles, squares, circles, and/or rectangles. 	<ul style="list-style-type: none"> identify the different types of angles, <p>AND</p> <ul style="list-style-type: none"> identify triangles, squares, circles, rectangles, and/or rhombi. 	<p>do two or more of the following:</p> <ul style="list-style-type: none"> differentiate right angles from other angles (e.g., acute and obtuse angles), identify, describe, classify, or distinguish among two-dimensional shapes using angles (right, acute, or obtuse) or sides (number of congruent sides, parallelism, or perpendicularity), and/or identify, compare, or describe three-dimensional shapes using the shapes of bases, number of lateral faces, or number of bases.

Geometry and Measurement – Congruency and Similarities

Student demonstrates conceptual understanding of congruency and similarity by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> matching figures with the same shape (e.g., matching two rectangles of the same size). 	<ul style="list-style-type: none"> identifying congruent figures when given three choices. 	<ul style="list-style-type: none"> matching congruent figures from slides (translations). 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> matching congruent figures from slides (translations) and/or identifying similar figures.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> matching congruent figures from flips or slides (reflections or translations) and/or matching congruent figures from slides (translations) and/or identifying similar figures. 	<ul style="list-style-type: none"> matching congruent figures from flips or slides (reflections or translations) <p>AND</p> <ul style="list-style-type: none"> identifying and/or comparing similar figures. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> matching congruent figures from reflections, translations, and rotations (flips, slides, and turns), identifying and comparing similar figures, and/or composing and decomposing shapes to show congruent parts within a shape (e.g., use two congruent trapezoids to make a hexagon). 	<p>doing all of the following:</p> <ul style="list-style-type: none"> matching congruent figures from reflections, translations, and rotations (flips, slides, and turns), composing and decomposing shapes to show congruent parts within a shape (e.g., use two congruent trapezoids to make a hexagon), <p>AND</p> <ul style="list-style-type: none"> applying scales on maps or explaining why two shapes are similar or not similar.

Geometry and Measurement – Perimeter, Area, Volume, and Circumference

Student demonstrates conceptual understanding of perimeter, area, volume, and circumference by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> comparing two items based on length. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> comparing two items based on length and/or comparing two containers based on capacity. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> comparing two items based on length, and/or comparing two items based on capacity, <p>AND</p> <ul style="list-style-type: none"> comparing two 2-dimensional figures based on area (e.g., placing one object on top of another to determine which takes up more space). 	<ul style="list-style-type: none"> measuring length using non-standard units (e.g., paper clips) and standard units (limited to whole inches).
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> measuring and recording the length of each side of a rectangle. 	<ul style="list-style-type: none"> measuring and calculating the distance around a figure whose perimeter is comprised of straight edges. 	<ul style="list-style-type: none"> finding the area of rectangles in standard units and the area of irregular figures on grids. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> measuring the distance around a circle, finding the area of rectangles or right triangles, and the area of irregular figures on grids, and/or finding the volume of cubes.

Geometry and Measurement – Measure and Converting Between Units

Student measures and uses units of measures appropriately and consistently and makes conversions within systems when solving problems, including:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> comparing two items or events based on length or temperature by identifying, for example, which is longer/shorter or hotter/colder. 	<ul style="list-style-type: none"> comparing two items based on weight or capacity by identifying, for example, which is heavier/lighter or which has more/less. 	<ul style="list-style-type: none"> estimating and measuring length, temperature, weight, time, or capacity. 	<ul style="list-style-type: none"> estimating and measuring length, temperature, weight, time, and capacity.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<p>doing one or more of the following:</p> <ul style="list-style-type: none"> measuring length (whole inches, feet, and/or centimeters), telling time (hour to 15-minute intervals), and/or reading temperature (degrees Fahrenheit). 	<p>doing three or more of the following:</p> <ul style="list-style-type: none"> measuring length (half and/or whole inches, feet, and/or centimeters), telling time (hour to 10-minute intervals), reading temperature (degrees Fahrenheit), and/or computing equivalencies (12 inches = 1 foot and/or 24 hours = 1 day). 	<p>doing four or more of the following:</p> <ul style="list-style-type: none"> measuring length (quarter, half and/or whole inches; feet; whole centimeters; and/or meters), telling time (hour to 5-minute intervals), reading temperature (degrees Fahrenheit and Celsius), identifying capacity (whole quarts), identifying mass (whole grams), identifying weight (whole pounds), and/or computing equivalencies (12 inches = 1 foot, 24 hours = 1 day, and/or 7 days = 1 week). 	<p>doing five or more of the following:</p> <ul style="list-style-type: none"> measuring length (quarter, half and/or whole inches; feet; whole centimeters; and/or miles), telling time (to the minute), reading temperature (degrees Fahrenheit and Celsius), identifying capacity (whole quarts and/or gallons), identifying mass (whole grams and kilograms), identifying weight (whole pounds), and/or computing equivalencies (12 inches = 1 foot, 365 days = 1 year, 24 hours = 1 day, 7 days = 1 week, 60 minutes = 1 hour, and/or 60 seconds = 1 minute).

NECAP GLE M(G&M) — 9
Geometry and Measurement – Coordinate Plane

Alternate Mathematics Content Standard/PI — B5

Student solves problems on and off the coordinate plane by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
N/A	N/A	N/A	N/A
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
N/A	N/A	<ul style="list-style-type: none"> using a simple grid with x-axis labeled with letters and y-axis labeled with numbers to locate objects in regions and to locate specific points (e.g., identify coordinates when playing the game Battleship). 	<ul style="list-style-type: none"> using a simple 4-by-4 grid with x-axis labeled letters and y-axis labeled with numbers to locate objects at intersections using positional language (e.g., move right 4 and down 3). <p>AND</p> <ul style="list-style-type: none"> using coordinate labels to locate points (“Which picture is located at D,5?”).

Geometry and Measurement – Spatial Reasoning and Visualization

Student demonstrates conceptual understanding of spatial reasoning and visualization by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
N/A	N/A	N/A	N/A
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
N/A	N/A	<ul style="list-style-type: none"> • copying a shape or small collection of shapes from memory after seeing/feeling a model for several seconds (e.g., draw an array of six after a “quick image” is shown). 	<ul style="list-style-type: none"> • drawing a shape from memory and from verbal/written directions, <p>AND</p> <ul style="list-style-type: none"> • building models of rectangular prisms from two-dimensional nets or three-dimensional representations.

Functions and Algebra – Patterns

Student demonstrates understanding of patterns and linear relationships by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> copying simple repeating patterns. 	<ul style="list-style-type: none"> extending simple repeating patterns of objects to the next step. 	<ul style="list-style-type: none"> extending a variety of patterns represented in sequences to the next step. 	<ul style="list-style-type: none"> extending a variety of patterns represented in tables or sequences to the next one or two steps.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> extending a variety of patterns represented in tables or sequences to the next one, two, or three steps, or finding a missing step (e.g., 2, 4, 6, __, 10). 	<ul style="list-style-type: none"> extending a variety of patterns represented in models, tables, or sequences to the next one, two, or three steps. 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> identifying and extending to specific cases a variety of linear patterns represented in models, tables, sequences, or problem situations and/or writing a rule in words or symbols for finding specific cases of a linear relationship. 	<p>doing two or more of the following:</p> <ul style="list-style-type: none"> identifying and/or describing a constant rate of change between successive elements in a pattern in a variety of situations (e.g., when looking at a graph, student identifies the rate of change as being constant), identifying and extending to specific cases a variety of patterns (linear and non-linear) represented in models, tables, sequences, or problem situations, and/or writing a rule in words or symbols for finding specific cases of a linear relationship.

Functions and Algebra – Equality and Algebraic Expressions

Student demonstrates conceptual understanding of equality and algebraic expressions by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> matching quantities that are equal (e.g., matching a set of 3 blocks to another set of 3 blocks). 	<ul style="list-style-type: none"> using concrete materials to represent a mathematical situation. 	<ul style="list-style-type: none"> using concrete materials and numeric symbols to represent sums and differences. 	<ul style="list-style-type: none"> finding the value that will make an open sentence true (limited to addition).
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> finding the value that will make an open sentence true (limited to addition and subtraction). 	<ul style="list-style-type: none"> finding the value that will make an open sentence true (limited to addition, subtraction, and multiplication). 	<p>doing one or more of the following:</p> <ul style="list-style-type: none"> representing unknown quantities with letters to write linear algebraic expressions involving addition, subtraction, or multiplication, or evaluating linear algebraic expressions using whole numbers and/or simplifying numerical expressions. 	<ul style="list-style-type: none"> representing unknown quantities with letters to write linear algebraic expressions involving any two of the four operations, or evaluating linear algebraic expressions using whole numbers, <p>AND</p> <ul style="list-style-type: none"> showing equivalence between two expressions using models or different representations of expressions by solving one-step linear equations.

Data, Statistics, and Probability – Interpreting Data

Student demonstrates ability to work with data and interpret a given representation by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> collecting data. 	<ul style="list-style-type: none"> collecting and organizing data. 	<ul style="list-style-type: none"> collecting, organizing, and reading data. 	<ul style="list-style-type: none"> reading and interpreting data.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> reading, constructing, and interpreting data in tables. 	<ul style="list-style-type: none"> reading, constructing, and interpreting a given representation (table, bar graph, or pictograph) to answer questions related to the data. 	<ul style="list-style-type: none"> interpreting a given representation (table, bar graph, circle graph, or line graph) to answer questions related to the data, analyze the data to formulate or justify conclusions, make predictions, or solve problems. 	<ul style="list-style-type: none"> interpreting a given representation (table, bar graph, circle graph, or line graph) to answer questions related to the data, analyze the data to formulate or justify conclusions, make predictions, or solve problems, <p>AND</p> <ul style="list-style-type: none"> describing representations or elements of representations that best display a given set of data or situation (e.g., when to use a bar graph vs. a line graph, or the best intervals for the axes).

Data, Statistics, and Probability – Analyzing Data

Student analyzes patterns, trends, or distributions in data in a variety of contexts, including:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> using “more” or “less” when given a set of 3–6 objects (e.g., 3 marbles is more than 1 marble). 	<ul style="list-style-type: none"> using “more” or “less” when given a set of 5–10 objects (e.g., 3 marbles is less than 6 marbles). 	<ul style="list-style-type: none"> using “more” or “less” to analyze data. 	<ul style="list-style-type: none"> using “more” or “less” to analyze data or solve problems.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> using “more”, “less”, or equal to analyze data or solve problems. 	<ul style="list-style-type: none"> using “most frequent” (mode), “least frequent”, “largest/greatest”, or “smallest/fewest” to analyze data or solve problems. 	<ul style="list-style-type: none"> using measures of central tendency (median or mode) or range to analyze situations or solve problems. 	<ul style="list-style-type: none"> using measures of central tendency (mean, median, or mode) or range to analyze situations or solve problems.

Data, Statistics, and Probability – Counting Techniques

Student uses counting techniques to solve problems by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
N/A	N/A	N/A	N/A
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> using counting techniques to solve problems involving combinations (e.g., find all the coin combinations to make \$0.25 or \$0.50). 	<ul style="list-style-type: none"> using counting techniques to solve problems involving combinations (e.g., find all the coin combinations to make \$0.75 or \$1.00). 	<ul style="list-style-type: none"> using counting techniques to solve problems involving combinations (e.g., find all the coin combinations to make \$1.50), and/or using an organized list or tree diagram to show combinations. 	<ul style="list-style-type: none"> using counting techniques to solve problems involving combinations (e.g., find all the coin combinations to make \$3.00), using an organized list or tree diagram to show combinations.

Data, Statistics, and Probability – Probability

For a probability event in which the sample space may or may not contain equally likely outcomes, student determines the probability of an event by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
<ul style="list-style-type: none"> identifying appropriate outcomes after observing a simple event/trial. 	<ul style="list-style-type: none"> identifying whether an outcome is “possible” or “impossible” after observing a simple event/trial with two possible outcomes. 	<ul style="list-style-type: none"> identifying whether an outcome is “more likely” or “less likely” after observing a simple event/trial with two possible outcomes. 	<ul style="list-style-type: none"> recording the outcomes of simple events/trials and identifying the “more likely” and “less likely” outcomes.
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
<ul style="list-style-type: none"> determining the likelihood of the occurrence of an event (with between 5 and 10 results) using “more likely” or “less likely.” 	<ul style="list-style-type: none"> determining the likelihood of the occurrence of an event using “certain,” “likely,” “unlikely,” or “impossible.” 	<ul style="list-style-type: none"> determining the theoretical probability of an event and expressing the result as part-to-whole (e.g., two out of five). 	<ul style="list-style-type: none"> determining the experimental or theoretical probability of an event and expressing the result as a fraction.

Data, Statistics, and Probability – Collect, Organize, and Display Data

Student responds to a teacher- or student-generated question or hypothesis and chooses the most effective method to collect data by:

Level of Complexity 1 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 2 (Grades 2–7, 2nd & 3rd Year HS)	Level of Complexity 3 (Grades 5–7, 2nd & 3rd Year HS)	Level of Complexity 4 (Grades 5–7, 2nd & 3rd Year HS)
N/A	N/A	N/A	N/A
Level of Complexity 5 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 6 (Grades 6, 7, 2nd & 3rd Year HS)	Level of Complexity 7 (2nd & 3rd Year HS)	Level of Complexity 8 (2nd & 3rd Year HS)
N/A	N/A	<ul style="list-style-type: none"> collecting and recording data to answer the question or test a hypothesis. 	<ul style="list-style-type: none"> collecting, organizing, and displaying data to answer the question or test a hypothesis, <p>AND</p> <ul style="list-style-type: none"> analyzing the data to draw conclusions about the question or hypothesis being tested.



Science Standards

Based on *Maine's Accountability Standards, Chapter 131*

Maine’s Accountability Standards, Chapter 131
 The Physical Setting – Universe and Solar System

Alternate Science Content Standard/PI — D1
 Choice 1

Student understands the universal nature of matter, energy, force, and motion, and identifies how these relationships are exhibited in Earth Systems, in the solar system, and throughout the universe by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing or otherwise demonstrating understanding of the positions or apparent motions of different objects in our solar system and what these objects look like from Earth, by doing the following:</p> <ul style="list-style-type: none"> identifying night and day. 	<p>describing or otherwise demonstrating understanding of the positions or apparent motions of different objects in our solar system and what these objects look like from Earth, by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying the Sun and Earth’s Moon <p>AND</p> <ul style="list-style-type: none"> matching the Sun and Earth’s Moon appropriately to pictures of night and day. 	<p>describing or otherwise demonstrating understanding of the positions or apparent motions of different objects in our solar system and what these objects look like from Earth, by doing <u>one</u> or more of the following:</p> <ul style="list-style-type: none"> drawing or otherwise describing the movement of the Sun across the sky by identifying its position at different times of the day and/or drawing or identifying different phases of the Moon. 	<p>describing or otherwise demonstrating understanding of the positions or apparent motions of different objects in our solar system and what these objects look like from Earth, by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> drawing or otherwise describing the movement of the Sun across the sky by identifying its position at different times of the day <p>AND</p> <ul style="list-style-type: none"> drawing or identifying different phases of the Moon.
Level of Complexity 5 (Grades 8 and 3rd Year HS)	Level of Complexity 6 (Grades 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>explaining the movements and describing the location, composition, and characteristics of our solar system and universe, including planets, the sun, and galaxies, by doing the following:</p> <ul style="list-style-type: none"> identifying the Sun, Earth’s Moon, and planet(s) on a given diagram and listing some planets. 	<p>explaining the movements and describing the location, composition, and characteristics of our solar system and universe, including planets, the sun, and galaxies, by doing the following:</p> <ul style="list-style-type: none"> listing the four inner planets and placing them in order relative to the sun. 	<p>explaining the physical formation and changing nature of our universe and solar system, and how our past and present knowledge of the universe and solar system develop, by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> placing the planets in order relative to the Sun <p>AND</p> <ul style="list-style-type: none"> identifying the orbits of Earth’s Moon and selected planets. 	<p>explaining the physical formation and changing nature of our universe and solar system, and how our past and present knowledge of the universe and solar system develop by doing <u>two</u> of the following:</p> <ul style="list-style-type: none"> describing the relative locations of the Sun, Earth, Earth’s Moon, and planets and identifying their orbits; describing how the path of the Sun changes over a day, describing how the path of the Sun in the sky differs for different changes over the seasons, and/or describing the Sun as a star that gives off light like other stars.

The Physical Setting – Earth

Choice 2

Student understands the universal nature of matter, energy, force, and motion, and identifies how these relationships are exhibited in Earth Systems, in the solar system, and throughout the universe by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing the properties of Earth’s surface materials, the processes that change them, and cycles that effect Earth by doing the following:</p> <ul style="list-style-type: none"> Identifying sunny, rainy, snowy, and/or windy weather through observation. 	<p>describing the properties of Earth’s surface materials, the processes that change them, and cycles that effect Earth by doing the following:</p> <ul style="list-style-type: none"> matching pictures to the type of weather they depict. 	<p>describing the properties of Earth’s surface materials, the processes that change them, and cycles that effect Earth by doing the following:</p> <ul style="list-style-type: none"> identifying the different forms that water can take in the weather. 	<p>describing the properties of Earth’s surface materials, the processes that change them, and cycles that effect Earth by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> demonstrating understanding of Earth’s weather by matching weather to the effects it can have on the surface of Earth (erosion or weathering) <p>AND</p> <ul style="list-style-type: none"> describing the effects of the differences on people and their environments.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing the various cycles, physical and biological forces and processes, positions in space, energy transformations, and human actions that affect the short-term and long-term changes to Earth by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying different climates <p>AND</p> <ul style="list-style-type: none"> describing the seasons. 	<p>describing the various cycles, physical and biological forces and processes, positions in space, energy transformations, and human actions that affect the short-term and long-term changes to Earth by doing <u>one</u> or more of the following:</p> <ul style="list-style-type: none"> identifying slow and abrupt changes to Earth (like volcanoes and earthquakes versus erosion and weathering), and/or describing what happens to objects on Earth when they are dropped. 	<p>describing and analyzing the biological, physical, energy, and human influences that shape and alter Earth Systems by doing the following:</p> <ul style="list-style-type: none"> identifying the Sun’s heat, ocean movement, or weather as things that can change the conditions of Earth. 	<p>describing and analyzing the biological, physical, energy, and human influences that shape and alter Earth Systems by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> explaining how people can change Earth <p>AND</p> <ul style="list-style-type: none"> explaining how plants and animals can change Earth.

The Physical Setting – Matter and Energy

Choice 3

Student understands the universal nature of matter, energy, force, and motion, and identifies how these relationships are exhibited in Earth Systems, in the solar system, and throughout the universe by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing properties of objects and materials before and after they undergo a change or interaction by doing the following:</p> <ul style="list-style-type: none"> matching objects based on one physical property. 	<p>describing properties of objects and materials before and after they undergo a change or interaction by doing the following:</p> <ul style="list-style-type: none"> identifying which object in a group has a specific physical property. 	<p>describing properties of objects and materials before and after they undergo a change or interaction by doing the following:</p> <ul style="list-style-type: none"> sorting objects into groups using one or more physical properties. 	<p>describing properties of objects and materials before and after they undergo a change or interaction by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> describing the physical properties of objects and materials <p>AND</p> <ul style="list-style-type: none"> using observable characteristics to describe changes in the physical properties of materials when mixed, heated, frozen, or cut.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing physical and chemical properties of matter, interactions and changes in matter, and transfer of energy through matter by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying chemical changes <p>AND</p> <ul style="list-style-type: none"> identifying physical changes. 	<p>describing physical and chemical properties of matter, interactions and changes in matter, and transfer of energy through matter by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> comparing the properties of original materials and their properties after undergoing chemical or physical change <p>AND</p> <ul style="list-style-type: none"> observing and drawing conclusions about how the weight of an object compares to the sum of the weights of its parts. 	<p>describing the structure, behavior, and interactions of matter at the atomic level and the relationship between matter and energy by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> explaining that all materials are made of small particles <p>AND</p> <ul style="list-style-type: none"> identifying examples of chemical and physical changes. 	<p>describing the structure, behavior, and interactions of matter at the atomic level and the relationship between matter and energy by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> explaining that adding heat causes the small particles in matter to move faster <p>AND</p> <ul style="list-style-type: none"> demonstrating understanding that the properties of a material may change but the total amount of material remains the same.

The Physical Setting – Force and Motion

Choice 4

Student understands the universal nature of matter, energy, force, and motion, and identifies how these relationships are exhibited in Earth Systems, in the solar system, and throughout the universe by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>summarizing how various forces affect the motion of objects by doing the following:</p> <ul style="list-style-type: none"> identifying or demonstrating one way (e.g., forward, backward, straight, zigzag, up, down, fast, slow) an object can move. 	<p>summarizing how various forces affect the motion of objects by doing the following:</p> <ul style="list-style-type: none"> identifying or demonstrating two ways (e.g., forward, backward, straight, zigzag, up, down, fast, slow) an object can move. 	<p>summarizing how various forces affect the motion of objects by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> describing or demonstrating three ways (e.g., forward, backward, straight, zigzag, up, down, fast, slow) an object can move <p>AND</p> <ul style="list-style-type: none"> identifying that the way an object moves can be changed by pushing or pulling it. 	<p>summarizing how various forces affect the motion of objects by doing the following:</p> <ul style="list-style-type: none"> demonstrating understanding of how given objects move.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing the force of gravity, the motion of objects, the properties of waves, and the wavelike property of energy in light waves by doing the following:</p> <ul style="list-style-type: none"> identifying or describing wave motions, earthquakes, vibrations and/or water waves. 	<p>describing the force of gravity, the motion of objects, the properties of waves, and the wavelike property of energy in light waves by doing <u>one</u> or more of the following:</p> <ul style="list-style-type: none"> giving examples of how gravity pulls objects, giving examples of how magnets pull and push objects, and/or describing similarities in motion of sound vibration and earthquakes, and water waves. 	<p>showing understanding that the laws of force and motion are the same across the universe by doing <u>one</u> or more the following:</p> <ul style="list-style-type: none"> predicting the effect of a given force on the motion of objects, and/or describing how waves can have different magnitudes, and lengths, and frequencies. 	<p>showing understanding that the laws of force and motion are the same across the universe by doing <u>one</u> or more of the following:</p> <ul style="list-style-type: none"> summarizing the effects of various forces on the motion of objects, and/or describing how waves of water and other materials interact in similar ways.

The Living Environment — Biodiversity

Choice 1

Student understands that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Student understands the similarities and differences between humans and other organisms and the interconnections of these interdependent webs by:

<p>Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)</p>	<p>Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)</p>	<p>Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)</p>	<p>Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)</p>
<p>comparing living things based on their behaviors, external features, and environmental needs by doing the following:</p> <ul style="list-style-type: none"> identifying pictures or descriptions of given animals or plants. 	<p>comparing living things based on their behaviors, external features, and environmental needs by doing the following:</p> <ul style="list-style-type: none"> identifying given organisms as plants or animals based on external features. 	<p>comparing living things based on their behaviors, external features, and environmental needs by doing the following:</p> <ul style="list-style-type: none"> identifying organisms that are similar and different based on external features, behaviors, and/or needs. 	<p>comparing living things based on their behaviors, external features, and environmental needs by doing <u>two</u> of the following:</p> <ul style="list-style-type: none"> describing how plants and/or animals look, describing the things that plants and/or animals do, an/or describing ways in which the needs of a plant and/or animal are met by its environment.
<p>Level of Complexity 5 (Grade 8 and 3rd Year HS)</p>	<p>Level of Complexity 6 (Grade 8 and 3rd Year HS)</p>	<p>Level of Complexity 7 (3rd Year HS)</p>	<p>Level of Complexity 8 (3rd Year HS)</p>
<p>differentiating among organisms based on biological characteristics and identifying patterns of similarity by sorting living things based on:</p> <ul style="list-style-type: none"> external features or behaviors 	<p>differentiating among organisms based on biological characteristics and identifying patterns of similarity by doing <u>one</u> or more of the following:</p> <ul style="list-style-type: none"> identifying how external (or internal) features can influence how an animal or plant gets food, and/or differentiate among living things that make their food, living things that eat their food and those that do not clearly belong in one group or the other. 	<p>describing and analyzing the evidence for relatedness among and within diverse populations of organisms and the importance of biodiversity by doing the following:</p> <ul style="list-style-type: none"> describing environments that have many different types of organisms and those that have fewer types of organisms. 	<p>describing and analyzing the evidence for relatedness among and within diverse populations of organisms and the importance of biodiversity by doing the following:</p> <ul style="list-style-type: none"> predicting possible changes that could result if the numbers of different types of organisms were to be drastically reduced.

The Living Environment — Ecosystems

Choice 2

Student understands that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Student understands the similarities and differences between humans and other organisms and the interconnections of these interdependent webs by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing ways organisms depend upon, interact within, and change the living and non-living environment as well as ways the environment affects organisms by doing the following:</p> <ul style="list-style-type: none"> identifying pictures or descriptions of given animals or plants. 	<p>describing ways organisms depend upon, interact within, and change the living and non-living environment as well as ways the environment affects organisms by doing the following:</p> <ul style="list-style-type: none"> identifying animals or plants that live in given environments. 	<p>describing ways organisms depend upon, interact within, and change the living and non-living environment as well as ways the environment affects organisms by doing the following:</p> <ul style="list-style-type: none"> identifying plants, animals, and/or components of their environments on which given animals depend for food and shelter. 	<p>describing ways organisms depend upon, interact within, and change the living and non-living environment as well as ways the environment affects organisms by doing the following:</p> <ul style="list-style-type: none"> comparing animals and plants that live in different environments to demonstrate understanding of how animals and plants depend on each other and the environments in which they live.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>examining how the characteristics of the physical, non-living environment, the types and behaviors of living organisms, and the flow of matter and energy affect organisms and the ecosystem of which they are part by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying particular organisms in given food chains <p>AND</p> <ul style="list-style-type: none"> placing organisms in a food chain in an appropriate sequence. 	<p>examining how the characteristics of the physical, non-living environment, the types and behaviors of living organisms, and the flow of matter and energy affect organisms and the ecosystem of which they are part by doing <u>two</u> of the following:</p> <ul style="list-style-type: none"> identifying different things in an environment that organisms compete for in an environment, identifying organisms as those that eat other organisms, are eaten, or recycle material, and/or explaining how matter is transferred in an ecosystem. 	<p>describing and analyzing the interactions, cycles, and factors that affect short-term and long-term ecosystem stability and change by doing <u>one</u> of the following:</p> <ul style="list-style-type: none"> explaining ways in which organisms depend upon and interact within their environment, and/or explaining ways in which organisms depend upon, interact within, and change the living and non-living environment. 	<p>describing and analyzing the interactions, cycles, and factors that affect short-term and long-term ecosystem stability and change by doing the following:</p> <ul style="list-style-type: none"> explaining things which can limit how many plants and animals can survive in an area.

The Living Environment — Cells

Choice 3

Student understands that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Student understands the similarities and differences between humans and other organisms and the interconnections of these interdependent webs by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing how living things are made up of one or more cells and the ways cells help organisms meet their basic needs by doing the following:</p> <ul style="list-style-type: none"> identifying given parts of the human body. 	<p>describing how living things are made up of one or more cells and the ways cells help organisms meet their basic needs by doing the following:</p> <ul style="list-style-type: none"> matching animals and/or plants to their parts. 	<p>describing how living things are made up of one or more cells and the ways cells help organisms meet their basic needs by doing the following:</p> <ul style="list-style-type: none"> identifying parts that allow living things to meet basic needs. 	<p>describing how living things are made up of one or more cells and the ways cells help organisms meet their basic needs by doing the following:</p> <ul style="list-style-type: none"> identifying structures and/or processes that help given organisms stay alive.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing the hierarchy of organization and function in organisms, and the similarities and differences in structure, function, and needs among and within organisms by doing the following:</p> <ul style="list-style-type: none"> drawing or describing things seen when using a microscope or viewing an image of something seen through a microscope. 	<p>describing the hierarchy of organization and function in organisms, and the similarities and differences in structure, function, and needs among and within organisms by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying that some living things are made of one cell and some living things are made of many cells <p>AND</p> <ul style="list-style-type: none"> identifying that all living things(single-celled and multi-celled) must have ways to get food and get rid of wastes. 	<p>describing structure and function of cells at the intracellular and molecular level including differentiation to form systems; interactions between cells and their environment; and the impact of cellular processes and changes on individuals by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> explaining that living things produce new cells <p>AND</p> <ul style="list-style-type: none"> explaining that cells produce complete copies of themselves when they divide. 	<p>describing structure and function of cells at the intracellular and molecular level including differentiation to form systems; interactions between cells and their environment; and the impact of cellular processes and changes on individuals by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying that cells have parts in them that help them to release energy, dispose of wastes, and build new parts <p>AND</p> <ul style="list-style-type: none"> explaining how changes can occur in cells that can cause them to work incorrectly.

Maine’s Accountability Standards, Chapter 131
 The Living Environment — Heredity and Reproduction

Alternate Science Content Standard/PI — E4
 Choice 4

Student understands that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Student understands the similarities and differences between humans and other organisms and the interconnections of these interdependent webs by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing characteristics of organisms and the reason why organisms differ from or are similar to their parents by doing the following:</p> <ul style="list-style-type: none"> identifying parents and their offspring by matching pictures of a baby organism to an adult of the same organism. 	<p>describing characteristics of organisms and the reason why organisms differ from or are similar to their parents by doing the following:</p> <ul style="list-style-type: none"> identifying things about offspring that are like and not like their parents. 	<p>describing characteristics of organisms and the reason why organisms differ from or are similar to their parents by doing the following:</p> <ul style="list-style-type: none"> demonstrating understanding of life cycles by explaining, drawing, or otherwise communicating knowledge of stages in given life cycles. 	<p>describing characteristics of organisms and the reason why organisms differ from or are similar to their parents by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> naming similarities between the adults and offspring of varied organisms <p>AND</p> <ul style="list-style-type: none"> identifying and describing, drawing, or otherwise communicating knowledge of stages in a life cycle.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing the general characteristics and mechanisms of reproduction and heredity in organisms, including humans, and ways in which organisms are affected by their genetic traits by doing the following:</p> <ul style="list-style-type: none"> identifying the characteristics of offspring and parents based on similarities and differences. 	<p>describing the general characteristics and mechanisms of reproduction and heredity in organisms, including humans, and ways in which organisms are affected by their genetic traits by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying living things that reproduce by getting all their inherited information from one parent <p>AND</p> <ul style="list-style-type: none"> identifying living things that reproduce by getting all their inherited information from two parents. 	<p>examining the role of DNA in transferring traits from generation to generation, in differentiating cells, and in evolving new species by doing the following:</p> <ul style="list-style-type: none"> identifying that cells contain information that makes living things look the way they do. 	<p>examining the role of DNA in transferring traits from generation to generation, in differentiating cells, and in evolving new species by doing the following:</p> <ul style="list-style-type: none"> explaining that different living things contain some information in their cells that is similar to other living things and some that is different.

The Living Environment — Evolution

Choice 5

Student understands that cells are the basic unit of life, that all life as we know it has evolved through genetic transfer and natural selection to create a great diversity of organisms, and that these organisms create interdependent webs through which matter and energy flow. Student understands the similarities and differences between humans and other organisms and the interconnections of these interdependent webs by:

Level of Complexity 1 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 2 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 3 (Grades 5, 8 and 3rd Year HS)	Level of Complexity 4 (Grades 5, 8 and 3rd Year HS)
<p>describing fossil evidence and present explanations that help us understand why there are differences among and between present and past organisms by doing the following:</p> <ul style="list-style-type: none"> identifying organisms from the local environment. 	<p>describing fossil evidence and present explanations that help us understand why there are differences among and between present and past organisms by doing the following:</p> <ul style="list-style-type: none"> matching pictures of organisms to the environment in which they live. 	<p>describing fossil evidence and present explanations that help us understand why there are differences among and between present and past organisms by doing both of the following:</p> <ul style="list-style-type: none"> identifying organisms that no longer live today <p>AND</p> <ul style="list-style-type: none"> describing features that organisms no longer living today share with organisms now alive and features that differ from those of organisms now alive. 	<p>describing fossil evidence and present explanations that help us understand why there are differences among and between present and past organisms by doing both of the following:</p> <ul style="list-style-type: none"> describing features that allow or allowed present and past organisms to live in their environment <p>AND</p> <ul style="list-style-type: none"> identifying organisms that once lived on Earth but no longer exist.
Level of Complexity 5 (Grade 8 and 3rd Year HS)	Level of Complexity 6 (Grade 8 and 3rd Year HS)	Level of Complexity 7 (3rd Year HS)	Level of Complexity 8 (3rd Year HS)
<p>describing the evidence that evolution occurs over many generations, allowing species to acquire many of their unique characteristics or adaptations, by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> identifying examples of fossils <p>AND</p> <ul style="list-style-type: none"> demonstrating understanding of how fossils are formed. 	<p>describing the evidence that evolution occurs over many generations, allowing species to acquire many of their unique characteristics or adaptations, by doing the following:</p> <ul style="list-style-type: none"> explaining how fossils are used to help us understand the past. 	<p>describing the interactions between and among species, populations, and environments that lead to natural selection and evolution, by doing of the following:</p> <ul style="list-style-type: none"> presenting explanations that help us understand similarities and differences among and between past and present organisms. 	<p>describing the interactions between and among species, populations, and environments that lead to natural selection and evolution, by doing <u>both</u> of the following:</p> <ul style="list-style-type: none"> explaining why some organisms survive to the next generation <p>AND</p> <ul style="list-style-type: none"> explaining why some organisms have traits that provide no apparent survival advantage.