

Achievement Level Descriptions B.E.S.T. Standards

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Introduction

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The Florida Department of Education develops ALDs to guide participants during the standard setting process for its statewide assessments, offer score interpretation on student reports, and further teacher understanding of expectations for the progressions of student performance at each achievement level. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Florida Statute specifies that Level 3 on its Achievement Level Scale, which ranges from Level 1 to Level 5, indicates On Grade Level performance. Levels 4 and 5 describe growth beyond the Level 3 expectations and indicate proficiency in the standards.

This document provides detailed descriptions for a student's content area knowledge and skill at each achievement level for each statewide assessment. You may use the table of contents on the previous page to navigate to a specific section.

For questions related to this document, please contact the Office of Assessment at Assessment@fldoe.org.

Grade 3 English Language Arts

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • uses knowledge of grade-level phonics and word-analysis skills to decode one- and two-syllable words, including those with common Greek and Latin roots and affixes, and derivational suffixes. • identifies the character traits, feelings, motivations, and/or responses to situations of one or more characters using grade-level mid complexity literary texts. • identifies a stated theme and how it develops, using minimal detail, in grade-level low complexity literary texts. • identifies and explains a character's perspective in grade-level low complexity literary texts. • identifies a feature of a type of poem: free verse, rhymed verse, haiku, or limerick. • explains how simple text features contribute to the meaning and identify the text structures of chronology, comparison, and/or cause/effect in grade-level low complexity texts. • identifies the explicitly stated central idea and explains how one explicitly stated detail supports that idea in a grade-level low-to-mid complexity text. • identifies an author's stated purpose and a detail that supports that purpose in a grade-level low-to-mid complexity text. • identifies an author's explicit claim and one piece of evidence used to support the claim in a grade-level low complexity text. • identifies simple metaphors, personification, and/or hyperbole in grade-level low complexity text(s). • summarizes a grade-level low complexity text with minimal accuracy; identifies the explicitly stated details to support a summary of a grade-level low complexity literary or informational text. • identifies similarities and/or differences in how two authors present information on the same topic or theme in grade-level low complexity texts. • identifies common Greek and Latin roots, base words, and/or affixes to determine the meaning of unfamiliar words in grade-level content with minimal accuracy. • uses context clues, figurative language, word relationships, basic reference materials, and/or common background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with minimal accuracy.

Achievement Level	Achievement Level Descriptions
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • uses knowledge of grade-level phonics and word-analysis skills to decode simple words, including those with common Greek and Latin roots and affixes, derivational suffixes, and multisyllabic words. • explains the character traits, feelings, motivations, and responses to situations of one or more characters using grade-level mid complexity literary texts. • explains a stated theme and how it develops, using some details, in grade-level mid complexity literary texts. • explains different characters' perspectives in grade-level mid complexity literary texts. • identifies some features of types of poems: free verse, rhymed, verse, haiku, and limerick. • explains how text features contribute to meaning and identifies the text structures of chronology, comparison, and/or cause/effect in grade-level low-to-mid complexity texts. • identifies the central idea and explains how explicitly stated details support that idea in a grade-level mid complexity text. • explains the development of an author's purpose using details in a grade-level mid complexity text. • identifies an author's explicit claim and explains how one piece of evidence supports the claim in a grade-level mid complexity text. • identifies and explains metaphors, personification, and hyperbole in grade-level low-to-mid complexity text(s). • summarizes a grade-level low-to-mid complexity text to enhance comprehension with some accuracy; includes plot and/or theme in a literary text; uses the central idea and/or relevant details for an informational text. • compares and contrasts how two authors present information on the same topic or theme in grade-level mid complexity texts. • identifies and applies knowledge of common Greek and Latin roots, base words, and/or affixes to determine the meaning of unfamiliar words in grade-level content with some accuracy. • use context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with some accuracy.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • uses knowledge of grade-level phonics and word-analysis skills to decode words, including those with common Greek and Latin roots and affixes, derivational suffixes, and multisyllabic words; describes how derivational suffixes turn words into different parts of speech. • explains how one or more characters develop throughout the plot in a literary text, using character traits, feelings, motivations, and response to situations using grade-level mid-to-high complexity texts.

Achievement Level	Achievement Level Descriptions
Level 4	- explains a theme and how it develops, using details, in grade-level mid-to-high complexity literary texts. - explains different characters' perspectives in grade-level mid-to-high complexity literary texts. - identifies types of poems: free verse, rhymed verse, haiku, and limerick. - explains how text features contribute to meaning and identifies the text structures of chronology, comparison, and cause/effect in grade-level mid-to-high complexity texts. - identifies the central idea and explains how relevant details support that idea in a grade-level mid-to-high complexity text. - explains the development of an author's purpose in a grade-level mid-to-high complexity text. - identifies an author's claim and explains how an author uses evidence to support the claim in a grade-level mid-to-high complexity text. - identifies and explains metaphors, personification, and hyperbole in grade-level mid-to-high complexity text(s). - summarizes a grade-level mid-to-high complexity text to enhance comprehension; includes plot and theme for a literary text; uses the central idea and relevant details for an informational text. - compares and contrasts how two authors present information on the same topic or theme in grade-level mid-to-high complexity texts. - identifies and applies knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in grade-level content. - uses context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - uses knowledge of grade-level phonics and word-analysis skills to decode complex words, including those with common Greek and Latin roots and affixes, derivational suffixes, and multisyllabic words; describes how derivational suffixes turn words into different parts of speech. - uses explicit and implicit details to explain how one or more characters develop throughout the plot in a literary text, using character traits, feelings, motivations, and response to situations in grade-level high complexity texts. - explains a complex theme and how it develops, using relevant details, in grade-level high complexity literary texts. - explains different characters' perspectives in a literary text using grade-level high complexity texts. - identifies and explains types of poems: free verse, rhymed verse, haiku, and limerick. - explains how complex text features contribute to meaning and uses explicit and implicit details to identify chronology, comparison, and cause/effect structures in grade-level high complexity texts.

Achievement Level	Achievement Level Descriptions
Level 5	- identifies the complex central idea and explains how relevant details support that idea in a grade-level high complexity text. - explains the complex development of an author's purpose in a grade-level high complexity text. - identifies an author's implied claim and explains how an author uses relevant evidence to support the claim in a grade-level high complexity text. - identifies and explains complex metaphors, personification, and hyperbole in grade-level high complexity text(s). - summarizes a grade-level high complexity text to enhance comprehension; includes complex plot and theme(s) for a literary text; uses an implicit central idea and relevant details for an informational text. - compares and contrasts how two authors present information on the same topic or theme, evaluating relevant evidence in grade-level high complexity texts. - identifies and applies knowledge of Greek and Latin roots, base words, and affixes to determine the meaning of complex unfamiliar words in grade-level high complexity content. - uses multiple context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.

Grade 4 English Language Arts

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • segments grade-level words by syllable when reading or writing. • uses explicitly stated details to explain how characters, settings, conflict, and/or events contribute to the plot in a grade-level low complexity literary text. • identifies a stated theme and the details to describe its development in a grade-level low complexity literary text. • identifies the narrator's point of view and perspective in a grade-level low complexity literary text. • identifies elements of rhyme and structure in a poem. • explains how a simple text feature contributes to the meaning and identifies the text structures of problem/solution, sequence, and/or description in grade-level low complexity texts. • identifies the relevant details that support an explicitly stated central idea in grade-level low complexity texts. • identifies an author's explicit perspective toward a topic in a grade-level low complexity informational text. • identifies an author's explicit claim and the stated reasons and/or evidence used to support the claim in a grade-level low complexity informational text. • explains how simple figurative language (e.g., a metaphor, simile, alliteration, personification, hyperbole, and/or idiom) contributes to meaning in grade-level low complexity text(s). • summarizes a grade-level low complexity text with minimal accuracy; identifies the explicitly stated details to support a summary of a grade-level low complexity literary or informational text. • identifies similarities and/or differences in accounts of the same event using a primary and/or secondary source found in grade-level low complexity texts. • writes personal or fictional narratives using a somewhat logical sequence of events and demonstrating minimal use of techniques such as descriptions and transitional words and phrases. • writes to make a claim partially supporting a perspective with minimal reasons; uses evidence from one or more sources, with limited or repetitive elaboration; demonstrates limited or uneven organizational structure with basic transitions. • writes expository texts about a topic using evidence from one or more sources; uses limited or repetitive elaboration; demonstrates limited or uneven organizational structure with basic transitions.

Achievement Level	Achievement Level Descriptions
Level 2	- improves writing minimally by planning, revising, and editing, with guidance and support from adults and feedback from peers. - follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with minimal control. - conducts research to address a topic using a source related to the topic; demonstrates inconsistent organization of information. - uses grade-level academic vocabulary in speaking and writing with little accuracy. - applies knowledge of common Greek and Latin roots, base words, and/or affixes to determine the meaning of unfamiliar words in low grade-level content with minimal accuracy. - uses explicit context clues, simple figurative language, word relationships, basic reference materials, and/or common background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with minimal accuracy.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - segments grade-level words by syllable and morphological structure in attempting to decode an unknown word in context when reading or writing. - uses explicit and implicit details to explain how setting, events, conflict, and/or character development contribute to the plot in a grade-level low-to-mid complexity literary text. - explains a stated theme and how it develops, using details in a grade-level low-to-mid complexity literary text. - identifies the narrator's point of view; explains the narrator's and a character's perspectives in a grade-level low-to-mid complexity literary text. - explains how the elements of rhyme or structure in a poem contribute to meaning. - explains how text features contribute to the meaning and identifies the text structures of problem/solution, sequence, and description in grade-level low-to-mid complexity texts. - explains how relevant details support the explicit central idea in grade-level low-to-mid complexity texts. - explains an author's explicit perspective toward a topic in a grade-level low-to-mid complexity informational text. - explains an author's explicit claim and the stated reasons and evidence used to support the claim in a grade-level low-to-mid complexity informational text. - explains how figurative language (e.g., metaphor, simile, alliteration, personification, hyperbole, and idiom) contributes to explicit meaning in grade-level low-to-mid complexity text(s). - summarizes a grade-level low-to-mid complexity text to enhance comprehension with some accuracy; includes plot and/or theme in a literary text; includes the central idea and/or relevant details for an informational text. - compares and contrasts accounts of the same event using primary and/or secondary sources found in grade-level low-to-mid complexity texts.

Achievement Level	Achievement Level Descriptions
Level 3	• writes personal or fictional narratives using a generally logical sequence of events and demonstrating adequate use of techniques such as descriptions and transitional words and phrases. • writes to make a claim generally supporting a perspective with logical reasons; uses evidence from multiple sources with some elaboration; demonstrates a basic organizational structure with transitions. • writes expository texts about a topic using some evidence from multiple sources; uses some elaboration and a basic organizational structure with transitions. • improves writing generally by planning, revising, and editing, with guidance and support from adults and feedback from peers. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with adequate control. • conducts research to answer a question about a topic using a valid source; demonstrates general organization of information. • uses grade-level academic vocabulary in speaking and writing with some accuracy. • applies knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in low-to-mid grade-level content with some accuracy. • uses context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with some accuracy.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • uses knowledge of grade-level phonics and word-analysis skills to decode words when reading or writing. • explains how setting, events, conflict, and character development contribute to the plot in a grade-level mid-to-high complexity literary text. • explains a stated or implied theme and how it develops, using details in a grade-level mid-to-high complexity literary text. • identifies the narrator’s point of view and explains the difference between a narrator’s point of view and character perspective in a grade-level mid-to-high complexity literary text. • explains how rhyme and structure create meaning in a poem. • explains how text features contribute to the meaning and identifies the text structures of problem/solution, sequence, and description in grade-level mid-to-high complexity texts. • explains how relevant details support the central idea, implied or explicit, in grade-level mid-to-high complexity texts. • explains an author’s perspective toward a topic in a grade-level mid-to-high complexity informational text. • explains an author’s claim and the reasons and evidence used to support the claim in a grade-level mid-to-high complexity informational text.

Achievement Level	Achievement Level Descriptions
Level 4	- explains how figurative language (e.g., metaphor, simile, alliteration, personification, hyperbole, and idiom) contributes to meaning in grade-level mid-to-high complexity text(s). - summarizes a grade-level mid-to-high complexity text to enhance comprehension; includes plot and theme for a literary text; includes the central idea and relevant details for an informational text. - compares and contrasts accounts of the same event using primary and/or secondary sources found in grade-level mid-to-high complexity texts. - writes personal or fictional narratives using a logical sequence of events and demonstrating an effective use of techniques such as descriptions and transitional words and phrases. - writes to make a claim supporting a perspective with logical reasons, using evidence from multiple sources, elaboration, and an organizational structure with transitions. - writes expository texts about a topic, using multiple sources, elaboration, and an organizational structure with transitions. - improves writing by planning, revising, and editing, with guidance and support from adults and feedback from peers. - follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to answer a question, organizing information about the topic, using multiple valid sources. - uses grade-level academic vocabulary in speaking and writing. - applies knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in mid-to-high grade-level content. - uses context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - uses knowledge of grade-level phonics and word-analysis skills to decode complex words when reading or writing. - uses explicit and implicit details to explain how setting, events, conflict, and character development contribute to the complex plot in a grade-level high complexity literary text. - explains a stated or implied theme and how it develops, using details in a grade-level high complexity literary text. - identifies the narrator's point of view and explains the difference between a narrator's point of view and character perspective in a grade-level high complexity literary text. - explains how rhyme and structure create meaning in a complex poem. - explains how complex text features contribute to the meaning and uses explicit and implicit details to identify problem/solution, sequence, and description structures in grade-level high complexity texts.

Achievement Level	Achievement Level Descriptions
Level 5	- explains how complex relevant details support the implied central idea in grade-level high complexity texts. - explains an author's perspective toward a complex topic using evidence and inferences in a grade-level high complexity informational text. - explains an author's implied claim and the relevant reasons and evidence used to support the claim in a grade-level high complexity informational text. - explains how complex and multiple uses of figurative language (e.g., metaphor, simile, alliteration, personification, hyperbole, and idiom) contribute to the implicit meaning in grade-level high complexity text(s). - summarizes a grade-level high complexity text to enhance comprehension; includes complex plot and theme(s) for a literary text; includes the implicit central idea and relevant details for an informational text. - compares and contrasts accounts of the same event by evaluating the details provided in primary and/or secondary sources found in grade-level high complexity texts for relevancy. - writes personal or fictional narratives using a logical sequence of events and demonstrating a skillful use of techniques such as descriptions and varied transitional words and phrases. - writes to make a strong claim supporting a perspective with logical reasons, using purposefully relevant evidence from multiple sources, skillful elaboration, and an organizational structure with varied transitions. - writes effective expository texts about a topic, using evidence from multiple sources, skillful elaboration, and an organizational structure with varied transitions. - improves writing skillfully by planning, revising, and editing, with guidance and support from adults and feedback from peers. - consistently follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. - conducts research to answer a complex question and explain the answer thoroughly using evidence; effectively organizes information about the topic and uses multiple valid sources. - uses complex grade-level academic vocabulary strategically in speaking and writing. - applies knowledge of complex Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar complex words in high grade-level content. - uses multiple strategies such as context clues, figurative language, word relationships, reference materials, and/or background knowledge skillfully to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.

Grade 5 English Language Arts

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - segments grade-level words by syllable when reading or writing. - explains how explicitly stated details about the setting, events, conflict, and/or characterization contribute to the plot in a grade-level low complexity literary text. - identifies the details that develop a simple theme in a grade-level low complexity literary text. - identifies simple details the author uses to develop the character's perspective in a grade-level low complexity literary text. - identifies how simple uses of figurative language and poetic elements work together in a poem. - explains how a simple text structure or feature contributes to the meaning of part of a grade-level low complexity text. - identifies relevant details that support an explicitly stated central idea in grade-level low complexity texts. - describes an author's purpose or perspective in a grade-level low complexity informational text. - tracks the development of a simple and directly stated argument and identifies explicit evidence to support a specific claim in a grade-level low complexity informational text. - explains how figurative language contributes to explicit meaning in grade-level low complexity text(s). - summarizes using simple details from a grade-level low complexity text with minimal accuracy; includes simple details from the text to support a partial summary of a grade-level low-complexity literary or informational text. - compares and contrasts simple primary and/or secondary sources with explicitly stated relationships to the same topic in grade-level low complexity texts. - writes personal or fictional narratives using a somewhat logical sequence of events and demonstrating minimal use of techniques such as dialogue, description, and transitional words and phrases. - writes to make a claim partially supporting a simple perspective with minimal reasons or evidence from one or more sources, limited or repetitive elaboration, and an uneven organizational structure with basic transitions. - writes expository texts about a topic using one or more sources with limited or repetitive elaboration, an uneven organizational structure, and basic transitions.

Achievement Level	Achievement Level Descriptions
Level 2	- improves writing minimally by planning, revising, and editing, with guidance and support from adults and feedback from peers. - minimally follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to address a topic, inconsistently organizing information and using a source that is related to the topic. - uses simple grade-level academic vocabulary in speaking and writing with minimal accuracy. - applies knowledge of common Greek and Latin roots and/or affixes to determine the meaning of unfamiliar words in low grade-level content with minimal accuracy. - uses explicit context clues, simple figurative language, word relationships, basic reference materials, and/or common background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with minimal accuracy.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - segments words by syllable and morphological structure in attempting to decode an unknown word in context when reading or writing. - explains how explicit and implicit details about the setting, events, conflict, and/or characterization contribute to the plot in a grade-level low-to-mid complexity literary text. - explains the development of a stated theme in a grade-level low-to-mid complexity literary text. - describes how an author develops a character's perspective using simple details in a grade-level low-to-mid complexity literary text. - explains how simple uses of figurative language and poetic elements work together in a poem. - explains how a text structure and/or feature contributes to the overall meaning of a grade-level low-to-mid complexity text. - explains how relevant details support the explicit central idea(s) in grade-level low-to-mid complexity texts. - explains an author's purpose and/or perspective in a grade-level low-to-mid complexity informational text. - tracks the development of a simple argument, identifying a specific claim, explicit evidence, and/or reasoning used to support that claim in a grade-level low-to-mid complexity informational text. - explains how figurative language contributes to meaning in grade-level low-to-mid complexity text(s). - summarizes a grade-level low-to-mid complexity text to enhance comprehension with some accuracy; includes details from the plot and/or theme in a literary text; includes the central idea and/or details for an informational text. - compares and contrasts primary and/or secondary sources related to the same topic in grade-level low-to-mid complexity texts.

Achievement Level	Achievement Level Descriptions
Level 3	• writes personal or fictional narratives using a generally logical sequence of events and demonstrating an adequate use of techniques such as dialogue, description, and transitional words and phrases. • writes to make a claim generally supporting a perspective with logical reasons, using evidence from sources, some elaboration, and a basic organizational structure with transitions. • writes expository texts about a topic using multiple sources and including a basic organizational structure, some relevant elaboration, and transitions. • improves writing generally by planning, revising, and editing, with guidance and support from adults and feedback from peers. • adequately follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. • conducts research to answer a question, generally organizing information about a topic from one or more reliable and valid sources. • uses grade-level academic vocabulary adequately in speaking and writing with some accuracy. • applies knowledge of common Greek and Latin roots and affixes, and uses the connection between affixes and parts of speech, to determine the meaning of unfamiliar words in low-to-mid grade-level content with some accuracy. • uses context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning or unknown words and phrases appropriate to grade level with general control and some accuracy.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • uses knowledge of grade-level phonics and word-analysis skills to decode words. • analyzes how setting, events, conflict, and characterization contribute to the plot in a grade-level mid-to-high complexity literary text. • explains the development of stated or implied theme(s) throughout a grade-level mid-to-high complexity literary text. • describes how an author develops a character’s perspective in a grade-level mid-to-high complexity literary text. • explains how figurative language and other poetic elements work together in a poem. • explains how text structures and/or features contribute to the overall meaning of grade-level mid-to-high complexity texts. • explains how relevant details support the central idea(s), implied or explicit, in grade-level mid-to-high complexity texts. • analyzes an author’s purpose and/or perspective in a grade-level mid-to-high complexity informational text. • tracks the development of an argument, identifying the specific claim(s), evidence, and reasoning in a grade-level mid-to-high complexity informational text. • analyzes how figurative language contributes to meaning in grade-level mid-to-high complexity text(s).

Achievement Level	Achievement Level Descriptions
Level 4	- summarizes a grade-level mid-to-high complexity text to enhance comprehension; includes plot and theme for a literary text; includes the central idea and relevant details for an informational text. - compares and contrasts primary and secondary sources related to the same topic in grade-level mid-to-high complexity texts. - writes personal or fictional narratives using a logical sequence of events and demonstrating an effective use of techniques such as dialogue, description, and transitional words and phrases. - writes to make a claim supporting a perspective with logical reasons, relevant evidence from sources, elaboration, and an organizational structure with varied transitions. - writes expository texts about a topic using multiple sources and including an organizational structure, relevant elaboration, and varied transitions. - improves writing by planning, revising, and editing, with guidance and support from adults and feedback from peers. - follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to answer a question, organizing information about the topic and using multiple reliable and valid sources. - uses grade-level academic vocabulary in speaking and writing. - applies knowledge of Greek and Latin roots and affixes, recognizing the connection between affixes and parts of speech, to determine the meaning of unfamiliar words in grade-level content. - uses context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - uses knowledge of grade-level phonics and word-analysis skills to decode complex words when reading or writing. - analyzes how setting, events, conflict, and characterization contribute to a complex plot in a grade-level high complexity literary text. - explains the development of complex stated and implied theme(s) throughout a grade-level high complexity literary text. - describes how an author develops multiple characters' perspectives using relevant details from a grade-level high complexity literary text. - analyzes how complex uses of figurative language and other poetic elements work together in a poem. - explains how complex text structures and/or features contribute to the overall meaning of grade-level high complexity texts. - explains how complex relevant details support the implied central idea(s) in grade-level high complexity texts. - analyzes thoroughly an author's purpose and complex perspective in a grade-level high complexity informational text. - tracks the development of a complex argument, identifying multiple claims, evidence, and reasoning in a grade-level high complexity informational text.

Achievement Level	Achievement Level Descriptions
Level 5	• analyzes how multiple uses of figurative language contribute to implicit meaning in grade-level high complexity text(s). • provides a thorough summary of a grade-level high complexity text to enhance comprehension; includes plot and implicit theme/s for a literary text; includes the implicit central idea and relevant details for an informational text. • compares and contrasts primary and secondary sources and explains how they are related to the same topic using grade-level high complexity texts. • writes personal or fictional narratives using a logical sequence of events and demonstrating a purposeful use of techniques such as dialogue, description, and transitional words and phrases. • writes to make a claim supporting a perspective using a logical development of ideas, skillful elaboration, purposeful and relevant evidence from sources, and an organizational structure with varied transitions that progress the response. • writes expository texts about a topic purposefully using evidence from multiple sources with relevant and skillful elaboration and an organizational structure with varied transitions that progress the response. • improves writing skillfully by planning, revising, and editing, with guidance and support from adults and feedback from peers. • follows skillfully the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts thorough research to answer a complex question, skillfully organizing information about the topic and using multiple reliable and valid sources. • uses grade-level academic vocabulary purposefully in speaking and writing. • applies knowledge of Greek and Latin roots and affixes, explaining the connection between affixes and parts of speech, to determine the meaning of unfamiliar multisyllabic words in high grade-level content. • uses multiple strategies such as context clues, figurative language, word relationships, reference materials, and background knowledge skillfully to determine the meaning of multiple-meaning and unknown words and phrases appropriate to grade level.

Grade 6 English Language Arts

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - explains one interaction between characters and its effect on a specific element of the plot in a grade-level low complexity literary text. - identifies the basic details that contribute to a stated theme in a grade-level low complexity literary text. - identifies simple details that reveal a change in narrator or shift in point of view in a grade-level low complexity literary text. - identifies the specific characteristics of a sonnet or villanelle. - explains the meaning of a simple text section or feature that explicitly conveys meaning in a grade-level low complexity informational text. - explains an explicit central idea and some details of its development in a grade-level low complexity informational text. - explains authors' purpose(s) in multiple accounts of the same event or topic in a grade-level low complexity informational text. - tracks the development of a basic argument and identifies simple reasons used to support the claim in a grade-level low complexity informational text(s). - identifies examples of figurative language and explains how they relate to tone or meaning in part of a grade-level low complexity text(s). - paraphrases content from grade-level texts with some accuracy; may focus only on central idea and make limited changes in wording. - explains how authors from different time periods address the same topic in grade-level low complexity texts. - identifies one simple rhetorical appeal of ethos, pathos, or logos in a grade-level low complexity text. - write personal or fictional narratives using narrative techniques with limited success, simple words and phrases, and figurative language. - writes and supports a simple claim minimally using reasons, evidence from sources, elaboration, and a basic organizational structure with few transition words; citations may not be present. - writes expository texts to explain information using limited sources, uneven organizational structure, simple elaboration, and basic transitions; citations may not be present. - improves writing minimally by planning, revising, and editing with little consideration of feedback from adults and peers.

Achievement Level	Achievement Level Descriptions
Level 2	- minimally follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to answer a simple question, using some reliable and valid sources. - uses simple academic vocabulary in speaking and writing appropriate to grade level with minimal accuracy. - applies knowledge of common Greek and Latin roots and/or affixes to determine the meaning of words in grade-level content with limited accuracy. - applies knowledge of basic context clues, simple figurative language, word relationships, reference materials, and/or background knowledge to determine the denotative meaning of words appropriate to grade level with some imprecision or misinterpretation.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - analyzes how a specific interaction between characters contributes to the development of a plot in a grade-level low-to-mid complexity literary text. - explains the development of a stated or implied theme throughout a grade-level low-to-mid complexity literary text. - describes the influence of multiple narrators and/or shifts in point of view in a grade-level low-to-mid complexity literary text. - describes how a specific feature of a sonnet or villanelle affects its meaning. - explains the meaning of an individual text section or feature in a grade-level low-to-mid complexity informational text. - explains the central idea(s), implied or explicit, and its development throughout a grade-level low-to-mid complexity informational text. - compares and/or contrasts authors' purpose(s) in multiple accounts of the same event or topic in grade-level low-to-mid complexity informational texts. - tracks the development of an argument, identifying some reasoning used in a grade-level low-to-mid complexity informational text. - explains how uses of figurative language contribute to tone and meaning in part of a grade-level low-to-mid complexity text(s). - paraphrases content from grade-level texts with some accuracy; may miss key details. - compares or contrasts how authors from different time periods address the same or related topics in sections of grade-level low-to-mid complexity texts. - identifies basic uses of rhetorical appeals of ethos, pathos, and logos in grade-level low-to-mid complexity texts. - writes personal or fictional narratives adequately using narrative techniques, words and phrases, and figurative language. - writes and supports a claim adequately using logical reasoning, evidence from multiple sources, elaboration, and organizational structure with transitions; evidence is appropriately cited. - writes expository texts to explain information from multiple sources, using an adequate organizational structure, elaboration, and transitions; evidence is appropriately cited.

Achievement Level	Achievement Level Descriptions
Level 3	- improves writing by adequately planning, revising, and editing, considering feedback from adults and peers. - adequately follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to answer a question, generally drawing on multiple reliable and valid sources and adjusting the inquiry when appropriate. - uses academic vocabulary in speaking and writing appropriate to grade level with accuracy. - applies knowledge of common Greek and Latin roots and affixes to determine the meaning of words in grade-level content with general accuracy. - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases appropriate to grade level with general control and some accuracy.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - analyzes how the interaction between characters contributes to the development of a plot in a grade-level mid-to-high complexity literary text. - analyzes the development of stated or implied theme(s) throughout a grade-level mid-to-high complexity literary text. - explains the influence of multiple narrators and/or shifts in point of view in a grade-level mid-to-high complexity literary text. - describes the structural impact of sonnets and/or villanelles on meaning and style. - explains how individual text sections and/or features convey meaning in grade-level mid-to-high complexity informational texts. - analyzes the central idea(s), implied or explicit, and its development throughout a grade-level mid-to-high complexity informational text. - analyzes authors' purpose(s) in multiple accounts of the same event or topic in grade-level mid-to-high complexity informational texts. - tracks the development of an argument, identifying the types of reasoning used in a grade-level mid-to-high complexity informational text(s). - explains how figurative language contributes to tone and meaning in grade-level mid-to-high complexity text(s). - paraphrases content from grade-level texts. - compares and contrasts how authors from different time periods address the same or related topics in grade-level mid-to-high complexity texts. - identifies rhetorical appeals of ethos, pathos, and logos in mid-to-high complexity texts. - writes personal or fictional narratives using narrative techniques, precise words and phrases, and figurative language. - writes and supports a claim using logical reasoning, relevant evidence from multiple sources, elaboration, and a logical organizational structure with varied transitions; evidence is appropriately cited.

Achievement Level	Achievement Level Descriptions
Level 4	• writes expository texts to explain and/or analyze information from multiple sources, using a logical organizational structure, relevant elaboration, and varied transitions; evidence is appropriately cited. • improves writing by planning, revising, and editing, considering feedback from adults and peers. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. • conducts research to answer a question, drawing on multiple reliable and valid sources and refocusing the inquiry when appropriate. • integrates academic vocabulary appropriate to grade level in speaking and writing. • applies knowledge of Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level content. • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases appropriate to grade level content.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • analyzes thoroughly how interactions between complex characters contribute to the overall development of a plot in a grade-level high complexity literary text. • analyzes thoroughly the development of implied themes throughout a grade-level high complexity literary text. • explains thoroughly the influence of multiple narrators and/or subtle shifts in point of view in a grade-level high complexity literary text. • explains the structural impact of sonnets and villanelles on meaning and style. • explains thoroughly how individual text sections and/or features work together to convey meaning in grade-level high complexity informational texts. • analyzes thoroughly an implied central idea(s) and its development throughout a grade-level high complexity informational text. • analyzes thoroughly authors' purpose(s) in multiple complex accounts of the same event or topic from varied grade-level high complexity informational texts. • tracks thoroughly the development of a complex argument, explaining types of reasoning used in a grade-level high complexity informational text(s). • analyzes thoroughly how complex uses of figurative language contribute to tone and meaning in grade-level high complexity text(s). • paraphrases content from grade-level texts by strategically synthesizing the text to convey the author's original message with sophistication. • compares and contrasts thoroughly how and why authors from different time periods address the same or related topics in grade-level high complexity texts. • identifies complex uses of rhetorical appeals of ethos, pathos, and logos in high complexity texts. • writes personal and fictional narratives, skillfully using narrative techniques, precise words and phrases, and figurative language.

Achievement Level	Achievement Level Descriptions
Level 5	• writes and supports a claim, effectively using logical reasoning, convincing evidence from multiple sources, skillful elaboration, and a logical organizational structure with smooth transitions within and between paragraphs; evidence is specifically cited. • writes expository texts to effectively explain and/or analyze information from multiple sources, using skillful elaboration and a purposeful organization with varied transitions and sentence structure; evidence is specifically cited. • improves writing by effectively planning, revising, and editing, incorporating appropriate feedback from adults and peers. • follows skillfully the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts research thoroughly to answer a complex question, drawing on multiple reliable and valid sources, refocusing and/or expanding the inquiry when appropriate. • integrates complex academic vocabulary appropriate to grade level purposefully in speaking and writing. • applies knowledge of Greek and Latin roots and affixes effectively to determine the meaning of complex words and phrases in grade-level content. • applies knowledge of complex context clues, figurative language, word relationships, reference materials, and/or background knowledge skillfully to determine the connotative and denotative meaning of words and phrases appropriate to grade level content.

Grade 7 English Language Arts

Achievement level descriptions (ALDs) describe a student’s level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state’s content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - explains the setting and identifies one way it influences the characters and/or plot in a grade-level low complexity literary text. - explains the details that contribute to the development of two themes in a grade-level low complexity literary text. - identifies detail(s) that reveal a shift in point of view or an unreliable narrator in a grade-level low complexity literary text. - describes one feature of a poetic form, specifically a sonnet or villanelle, and how it affects meaning. - explains the purpose of an individual text section or feature in a grade-level low complexity informational text. - explains an explicit central idea and identifies details that support its development in a grade-level low complexity informational text. - describes examples of an author’s use of diction and/or syntax to establish a purpose in a grade-level low complexity informational text. - tracks the development of a simple argument, identifying at least one type of logical and/or fallacious reasoning in a grade-level low complexity text. - explains how figurative language contributes to tone or meaning and identifies one example of allusion in grade-level low complexity text(s). - paraphrases content from grade-level texts with limited accuracy using basic words, phrases, and sentences. - explains how authors with differing perspectives address the same topic or theme from grade-level low complexity texts. - identifies examples of rhetorical devices, including figurative language, explicit uses of irony, and/or rhetorical questioning, in a grade-level low complexity text. - writes personal or fictional narratives minimally using narrative techniques, point of view, word choice, and figurative language. - writes a claim and supports it with limited reasoning, evidence from sources, elaboration, and an organizational structure with transitions. - writes expository texts to explain information using limited supporting details and/or sources and an organizational pattern. - improves writing by simplistically planning, revising, and editing, considering feedback from adults and peers.

Achievement Level	Achievement Level Descriptions
Level 2	• follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with minimal or inconsistent control. • conducts basic research to answer a simple question, drawing on some valid and reliable sources and generating additional loosely related questions. • uses simple grade-level academic vocabulary in writing with inconsistent control. • applies knowledge of basic Greek and Latin roots and/or affixes to determine the meaning of simple words and phrases in grade-level low complexity text. • applies knowledge of basic context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level low complexity text.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • analyzes how setting influences character development and/or plot in a grade-level low-to-mid complexity literary text. • compares the development of two themes throughout a grade-level low-to-mid complexity literary text. • describes the influence of narrator(s), including unreliable narrator(s), and/or shifts in point of view in a grade-level low-to-mid complexity literary text. • explains how the form of a poem, specifically a sonnet or villanelle, affects meaning and style. • explains the purpose of an individual text section or feature in a grade-level mid complexity informational text. • compares two central ideas and their development throughout a grade-level low-to-mid complexity informational text. • describes how an author establishes and/or achieves purpose(s) through diction and/or syntax in grade-level low-to-mid complexity informational texts. • tracks the development of an argument, explaining types of logical and/or fallacious reasoning used in a grade-level low-to-mid complexity text. • analyzes how figurative language contributes to tone or meaning and identifies examples of allusions in grade-level low-to-mid complexity text(s). • paraphrases content from grade-level texts with accuracy using general variation in words, phrases, and sentence structure while attributing sources. • compares or contrasts how authors with differing perspectives address the same or related topic or theme in grade-level low-to-mid complexity texts. • explains the meaning or significance of rhetorical devices, including figurative language, irony, and/or rhetorical questioning, in a grade-level low-to-mid complexity text. • writes personal or fictional narratives appropriately using narrative techniques, a point of view, clear word choice, and figurative language. • writes a claim and supports it using adequate reasoning, evidence from sources, elaboration, and an organizational structure with transitions, acknowledging at least one counterclaim.

Achievement Level	Achievement Level Descriptions
Level 3	• writes expository texts to adequately explain and analyze information from multiple sources, using relevant supporting details and an organizational pattern. • improves writing by adequately planning, revising, and editing, considering feedback from adults and peers. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with some control. • conducts research to answer a question, drawing on multiple valid and reliable sources and generating additional questions. • uses grade-level academic vocabulary in writing with some control. • applies knowledge of Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level low-to-mid complexity text. • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level low-to-mid complexity text.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • analyzes the impact of setting on character development and plot in a grade-level mid-to-high complexity literary text. • compares two or more themes and their development throughout a grade-level mid-to-high complexity literary text. • explains the influence of narrator(s), including unreliable narrator(s), and/or shifts in point of view in a grade-level mid-to-high complexity literary text. • analyzes the impact of various poetic forms on meaning and style, specifically sonnets and villanelles. • explains how individual text sections and/or features convey a purpose in grade-level mid-to-high complexity informational texts. • compares two or more central ideas and their development throughout a grade-level mid-to-high complexity informational text. • explains how an author establishes and achieves purpose(s) through diction and syntax in grade-level mid-to-high complexity informational texts. • tracks the development of an argument, analyzing the types of logical and/or fallacious reasoning used in a grade-level mid-to-high complexity text. • analyzes how figurative language contributes to tone and meaning and explains examples of allusions in grade-level mid-to-high complexity text(s). • paraphrases content from grade-level texts. • compares and contrasts how authors with differing perspectives address the same or related topics or themes in grade-level mid-to-high complexity texts. • explains the meaning and/or significance of rhetorical devices, including figurative language, irony, and/or rhetorical questioning, in a grade-level mid-to-high complexity text. • writes personal or fictional narratives using narrative techniques, a recognizable point of view, precise words and phrases, and figurative language.

Achievement Level	Achievement Level Descriptions
Level 4	• writes and supports a claim using logical reasoning, relevant evidence from sources, elaboration, a logical organizational structure with varied transitions, acknowledging at least one counterclaim. • writes expository texts to explain and analyze information from multiple sources, using relevant supporting details and a logical organizational pattern. • improves writing by effectively planning, revising, and editing, considering feedback from adults and peers. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. • conducts research to answer a question, drawing on multiple reliable and valid sources and generating additional questions for further, related research. • integrates academic vocabulary appropriate to grade level in writing with consistent control. • applies knowledge of Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level mid-to-high complexity text. • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level mid-to-high complexity text.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • analyzes thoroughly the influence of setting on the development of complex characters and plot in a grade-level high complexity literary text. • compares thoroughly two or more complex themes and details their development throughout a grade-level high complexity literary text. • analyzes the influence of narrator(s), including unreliable narrators, and/or shifts in point of view in a grade-level high complexity literary text. • analyzes thoroughly the effect of various poetic forms on meaning and style, specifically sonnets and villanelles. • explains thoroughly how individual text sections and/or features convey a purpose in grade-level high complexity informational texts. • compares thoroughly two or more complex central ideas and their development throughout a grade-level high complexity informational text. • explains thoroughly how an author establishes and achieves purpose(s) through complex uses of diction and syntax in grade-level high complexity informational texts. • tracks thoroughly the development of a complex argument, effectively analyzing the types of logical and/or fallacious reasoning used in the grade-level high complexity text. • analyzes thoroughly how complex uses of figurative language contribute to tone and meaning and effectively explains reasons for allusions in grade-level high complexity text(s). • paraphrases content from grade-level texts with accuracy using the student's original language, varied words and phrases, and complex grammatical structure while attributing sources.

Achievement Level	Achievement Level Descriptions
Level 5	• compares and contrasts thoroughly how authors with differing perspectives address the same or related topics or themes, including reasons for differences and similarities, in grade-level high complexity texts. • explains thoroughly the meaning and/or significance of complex rhetorical devices, including figurative language, irony, and/or rhetorical questioning, in a grade-level high complexity text. • writes personal or fictional narratives, skillfully using narrative techniques, a recognizable point of view, purposeful words and phrases, and effective figurative language. • writes a focused claim and supports it using skillful reasoning, evidence from sources, elaboration, an organizational structure with varied transitions and sentence structure, acknowledging at least one counterclaim. • writes expository texts to skillfully explain and analyze information from multiple sources, using relevant supporting details, elaboration, and an organizational pattern with varied transitions and sentence structure. • improves writing strategically for content, clarity, and cohesiveness by planning, revising, and editing, considering feedback from adults and peers. • follows skillfully the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts thorough research to answer a complex question, drawing on multiple reliable and valid sources and generating additional questions that narrow the focus of the original research. • integrates complex grade-level academic vocabulary strategically in writing to create a deliberate effect. • applies knowledge of complex Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level high complexity text. • applies knowledge of complex context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level high complexity text.

Grade 8 English Language Arts

Achievement level descriptions (ALDs) describe a student’s level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state’s content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - explains simple interactions between character development, setting, and plot in a grade-level low complexity literary text. - describes the development of themes throughout grade-level low complexity literary text. - describes how an author explicitly states and individualizes the perspectives of one or more characters in a grade-level low complexity literary text. - describes simple structure, sound, imagery, and/or figurative language in grade-level low complexity poetry. - identifies how individual text sections and/or features convey a simplistic purpose and/or meaning in a grade-level low complexity text. - explains two explicit central ideas and their development in a grade-level low complexity text. - explains how an author establishes and achieves stated purpose(s) through straightforward rhetorical appeals and/or figurative language in grade-level low complexity texts. - tracks the development of a simple argument, explaining the reasoning used and its effectiveness, identifying where the argument could be improved in a grade-level low complexity text. - explains how figurative language relates to meaning and identifies examples of symbolism in grade-level low complexity informational text(s). - paraphrases content from grade-level texts with limited accuracy; may focus only on central idea and/or make limited changes in wording. - describes the characteristics of simple archetypes in grade-level low-to-mid complexity texts. - describes how an author uses simple rhetorical devices to support an appeal in a low-complexity text. - writes personal or fictional narratives minimally using narrative techniques, transitions, and/or point of view. - writes to argue a position supporting at least one simply stated claim and acknowledging at least one counterclaim, using insufficient reasoning, confusing evidence from sources, ineffective elaboration, and minimal organizational structure.

Achievement Level	Achievement Level Descriptions
Level 2	• writes expository texts to simply explain and partially analyze information from sources, using minimal supporting details, inconsistent organization, and an attempt to connect ideas with transitions. • improves writing by minimally planning, editing, considering feedback from adults and peers, and superficially revising for clarity and cohesiveness. • follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with minimal or inconsistent control. • conducts basic research to answer a simple question, drawing on a single or marginally reliable source and generating additional questions for loosely related research. • uses simple grade-level academic vocabulary in writing with inconsistent control. • applies knowledge of basic Greek and Latin roots and/or affixes to determine the meaning of simple words and phrases in grade-level low complexity text. • applies knowledge of basic context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level low complexity text.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • analyzes straightforward interactions between character development, setting, and plot in a grade-level low-to-mid complexity literary text. • explains two or more themes and their development throughout a grade-level mid complexity literary text. • explains how an author develops and/or individualizes perspectives of different characters in a grade-level low-to-mid complexity literary text. • explains structure, sound, imagery, and/or figurative language in grade-level low- to mid-complexity poetry. • explains how individual text sections and/or features convey a straightforward purpose and/or meaning in a grade-level mid complexity text. • explains two central ideas and their development throughout a grade-level mid complexity text. • explains how an author establishes and achieves explicit purpose(s) through rhetorical appeals and/or figurative language in grade-level mid complexity texts. • tracks the development of a straightforward argument, analyzing the reasoning used and its effectiveness, identifying ways in which the argument could be improved in a grade-level mid complexity text. • analyzes how figurative language contributes to meaning and describes examples of symbolism in grade-level mid complexity informational text(s). • paraphrases content from grade-level texts with accuracy, including some details from the author's original message. • compares and contrasts the use or discussion of simple archetypes in grade-level low-to-mid complexity texts.

Achievement Level	Achievement Level Descriptions
Level 3	- explains how an author uses simple rhetorical devices to support or advance an appeal in a mid-complexity text. - writes personal or fictional narratives appropriately using narrative techniques, logical transitions, and a recognizable point of view. - writes to argue a position adequately supporting at least one claim and rebutting at least one counterclaim, using straightforward reasoning, relevant evidence from sources, adequate elaboration, and basic organizational structure. - writes expository texts to adequately explain and analyze information from multiple sources, using generally relevant supporting details, evident organization, and adequate purposeful transitions. - improves writing by adequately planning, editing, considering feedback from adults and peers, and revising for clarity and cohesiveness. - follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with some control. - conducts research to answer a question, partially drawing on multiple valid and reliable sources and generating additional questions for further research. - uses grade-level academic vocabulary in writing with some control. - applies knowledge of Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level low-to-mid complexity text. - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level low-to-mid complexity text.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - analyzes the interaction between character development, setting, and plot in a grade-level mid-to-high complexity literary text. - analyzes two or more themes and their development throughout a grade-level mid-to-high complexity literary text. - analyzes how an author develops and individualizes the perspectives of different characters in a grade-level mid-to-high complexity literary text. - analyzes structure, sound, imagery, and figurative language in grade-level mid-to-high complexity poetry. - analyzes how individual text sections and/or features convey a purpose and/or meaning in grade-level mid-to-high complexity texts. - analyzes two or more central ideas and their development throughout a grade-level mid-to-high complexity text. - explains how an author establishes and achieves purpose(s) through rhetorical appeals and/or figurative language in grade-level mid-to-high complexity texts. - tracks the development of an argument, analyzing the types of reasoning used and their effectiveness, identifying ways in which the argument could be improved in a grade-level mid-to-high complexity text. - analyzes how figurative language contributes to meaning and explains examples of symbolism in grade-level mid-to-high complexity informational text(s). - paraphrases content from grade-level texts.

Achievement Level	Achievement Level Descriptions
Level 4	• compares and contrasts the use or discussion of archetypes in grade-level mid-to-high complexity texts. • explains how an author uses rhetorical devices to support or advance an appeal in a mid-to-high complexity text. • writes personal or fictional narratives using narrative techniques, varied transitions, and a clearly established point of view. • writes to argue a position supporting at least one claim and rebutting at least one counterclaim, with logical reasoning, credible evidence from sources, elaboration, and a logical organizational structure. • writes expository texts to explain and analyze information from multiple sources, using relevant supporting details, logical organization, and varied purposeful transitions. • improves writing by planning, editing, considering feedback from adults and peers, and revising for clarity and cohesiveness. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. • conducts research to answer a question, drawing on multiple reliable and valid sources and generating additional questions for further research. • integrates academic vocabulary appropriate to grade level in writing. • applies knowledge of Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level mid-to-high complexity text. • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level mid-to-high complexity text.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • analyzes thoroughly complex interactions between character development, setting, and plot in a grade-level high complexity literary text. • analyzes thoroughly two or more abstract themes and details their development throughout a grade-level high complexity literary text. • analyzes thoroughly how an author develops and individualizes complex perspectives of different characters in a grade-level high complexity literary text. • analyzes thoroughly complex structure, sound, imagery, and figurative language in grade-level high complexity poetry. • analyzes thoroughly how complex individual text sections and/or features convey a layered purpose and/or meaning in grade-level high complexity texts. • analyzes thoroughly two or more complex central ideas and their development throughout a grade-level high complexity text. • explains thoroughly how an author establishes and achieves implicit purpose(s) through complex rhetorical appeals and/or figurative language in grade-level high complexity texts. • tracks the development of layered arguments, analyzing the types of complex reasoning used and their effectiveness, identifying ways in which the argument could be improved in a grade-level high complexity text.

Achievement Level	Achievement Level Descriptions
Level 5	• analyzes thoroughly how complex uses of figurative language contributes to meaning and explains examples of symbolism in grade-level high complexity informational text(s). • paraphrases strategically content from grade-level texts by synthesizing the text to convey the author’s original message with sophistication. • compares and contrasts thoroughly the use or discussion of complex archetypes in grade-level high complexity texts. • explains thoroughly how an author uses complex rhetorical devices to support or advance an appeal in a high complexity text. • writes personal or fictional narratives skillfully using advanced narrative techniques, purposeful transitions, and a consistently established point of view. • writes to argue a position effectively supporting at least one complex claim and rebutting at least one counterclaim, using convincing reasoning, credible and relevant evidence from sources, skillful elaboration, and strong and purposeful organizational structure. • writes expository texts to effectively explain and skillfully analyze information from multiple sources, using relevant and effective supporting details, strong and logical organization, and varied purposeful transitions. • improves writing by strategically planning, editing, incorporating feedback from adults and peers, and skillfully revising multiple drafts for clarity and cohesiveness. • follows consistently the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts thorough research to answer a complex question, drawing on multiple reliable and valid sources and generating additional questions that narrow the focus of the original research. • integrates complex grade-level academic vocabulary strategically in writing to create a deliberate effect. • applies knowledge of complex Greek and Latin roots and affixes to determine the meaning of words and phrases in grade-level high complexity text. • applies knowledge of complex context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level high complexity text.

Grade 9 English Language Arts

Achievement level descriptions (ALDs) describe a student’s level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state’s content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - describes how simplistic key elements enhance or add a single layer of meaning and/or style in a grade-level low-to-mid complexity literary text. - explains simple or explicitly stated universal themes and their development throughout a grade-level low complexity literary text. - explains an explicitly stated perspective and how the author creates simplistic irony or satire in a grade-level low complexity literary text. - describes simple characters, structures, and/or explicitly stated themes of grade-level low complexity epic poetry. - explains how simplistic text structures and/or features convey a purpose and/or meaning in grade-level low-to-mid complexity informational text(s). - explains the explicit support an author uses to develop the explicit central idea(s) throughout a grade-level low complexity informational text. - explains how an author establishes and achieves straightforward purpose(s) through a rhetorical appeal and/or figurative language in grade-level low complexity informational text(s). - explains some elements of development of an opposing argument on the same topic and describes the validity of simple claims in a grade-level low-to-mid complexity informational text(s). - describes how simplistic uses of figurative language is related to explicitly stated mood in grade-level low-to-mid complexity informational text(s). - paraphrases content from grade-level texts with some accuracy; may focus only on central idea and make limited changes in wording. - compares or contrasts ways in which authors have adapted mythical, classical, or religious grade-level low-to-mid complexity literary text(s). - describes an author’s use of simple rhetoric in a grade-level low-to-mid complexity text. - writes narratives using limited narrative techniques, simple transitions, and an inconsistent point of view. - writes to argue a position supporting simple claims, using insufficient reasoning and confusing evidence from sources, attempting to rebut counterclaims with ineffective evidence, using limited organizational structure, ineffective elaboration, attempted transitions, and an inconsistent tone. - writes expository texts to simplistically explain and partially analyze information from sources, using limited organization, attempted transitions, and an inconsistent tone.

Achievement Level	Achievement Level Descriptions
Level 2	- improves writing by considering feedback from adults, peers, and/or online editing tools, minimally or superficially revising for clarity and cohesiveness. - inconsistently follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with minimal or inconsistent control. - conducts basic research to answer a simple question, drawing on a single or marginally reliable source and minimally refining the scope of the question to align with findings. - inconsistently uses academic vocabulary appropriate to grade level in writing with inconsistent control. - applies knowledge of etymology and derivations to determine the meaning of simple words and phrases in grade-level low complexity text(s). - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of simple words and phrases appropriate to grade level in low complexity text(s).
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - explains how simplistic key elements enhance or add layers of meaning and/or style in a grade-level low-to-mid-complexity literary text. - analyzes simple or explicitly stated universal themes and their development throughout a grade-level low-to-mid complexity literary text. - analyzes the basic influence of narrator perspective on a text, explaining how the author creates simplistic irony or satire in a grade-level low- to-mid complexity literary text. - explains simple characters, structures, and themes of grade appropriate low-to-mid complexity epic poetry. - analyzes how basic text structures and/or features convey a straightforward purpose and/or meaning in grade-level low-to-mid complexity informational text(s). - analyzes the explicit support an author uses to develop the simple central idea(s) throughout a grade-level mid complexity informational text. - explains how an author establishes and achieves a straightforward purpose(s) through rhetorical appeals and/or figurative language in grade-level mid complexity informational text(s). - explains the development of one or two opposing arguments on the same topic and describes the effectiveness and the validity of the simple claims in a grade-level low-to-mid complexity informational text(s). - explains how simplistic uses of figurative language creates mood in grade-level low-to-mid complexity informational text(s). - paraphrases content from grade-level texts with some accuracy and includes some details from the author’s original message; may miss key details. - compares and contrasts the explicit ways in which authors have adapted mythical, classical, or religious grade-level low-to-mid complexity literary text(s).

Achievement Level	Achievement Level Descriptions
Level 3	- explains an author’s use of simple rhetoric in a grade-level low-to-mid complexity text. - writes narratives using basic narrative techniques, appropriate transitions, and a recognizable point of view. - writes to argue a position adequately supporting claims, using general reasoning and credible evidence from multiple sources, rebutting counterclaims with sufficient evidence, using a clear organizational structure, adequate elaboration, logical transitions, and a tone appropriate to the task. - writes expository texts to adequately explain and analyze information from multiple sources, using a clear organization, logical transitions, and a tone appropriate to the task. - improves writing by considering feedback from adults, peers, and/or online editing tools, adequately revising for clarity and cohesiveness. - adequately follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with some control. - conducts research to answer a question, partially drawing on multiple reliable and valid sources and adequately refining the scope of the question to align with findings. - uses academic vocabulary appropriate to grade level in writing with some control. - applies knowledge of etymology and derivations to determine the meaning of words and phrases in grade-level low-to-mid complexity text(s). - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases appropriate to grade level in low-to-mid complexity text(s).
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - explains how key elements enhance or add layers of meaning and/or style in a grade-level mid-to-high complexity literary text. - analyzes universal themes and their development throughout a grade-level mid-to-high complexity literary text. - analyzes the influence of narrator perspective on a text, explaining how the author creates irony or satire in a grade-level mid-to-high complexity literary text. - analyzes the characters, structures, and themes of grade-level mid-to-high complexity epic poetry. - analyzes how multiple text structures and/or features convey a purpose and/or meaning in grade-level mid-to-high complexity informational text(s). - evaluates the support an author uses to develop the central idea(s) throughout a grade-level mid-to-high complexity informational text. - analyzes how an author establishes and achieves purpose(s) through rhetorical appeals and/or figurative language in grade-level mid-to-high complexity informational text(s).

Achievement Level	Achievement Level Descriptions
Level 4	• compares the development of two opposing arguments on the same topic, evaluating the effectiveness and validity of the claims in a grade-level mid-to-high complexity informational text(s). • explains how figurative language creates mood in grade-level mid-to-high complexity informational text(s). • paraphrases content from grade-level texts. • compares and contrasts the ways in which authors have adapted mythical, classical, or religious grade-level mid-to-high complexity literary texts. • explains an author’s use of rhetoric in a grade-level mid-to-high complexity text. • writes narratives using narrative techniques, varied transitions, and a clearly established point of view. • writes to argue a position supporting claims, using logical reasoning and credible evidence from multiple sources, rebutting counterclaims with relevant evidence, using a logical organizational structure, elaboration, purposeful transitions, and a tone appropriate to the task. • writes expository texts to explain and analyze information from multiple sources, using a logical organization, varied purposeful transitions, and a tone appropriate to the task. • improves writing by considering feedback from adults, peers, and/or online editing tools, effectively revising for clarity and cohesiveness. • follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. • conducts research to answer a question, drawing on multiple reliable and valid sources and refining the scope of the question to align with findings. • integrates academic vocabulary appropriate to grade-level writing. • applies knowledge of etymology and derivations to determine meanings of words and phrases in grade-level mid-to-high complexity text(s). • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases appropriate to grade level in mid-to-high complexity text(s).
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • explains thoroughly how complex key elements enhance or add layers of meaning and/or style in a grade-level high complexity literary text. • analyzes thoroughly complex and/or abstract universal themes and their development throughout a grade-level high complexity literary text(s). • analyzes thoroughly the influence of narrator perspective on a text, explaining how the author creates complex or understated irony or satire in a grade-level high complexity literary text(s). • analyzes thoroughly complex characters, structures, and implied themes of grade-level high complexity epic poetry. • analyzes thoroughly how multiple text structures and/or features convey a complex purpose and/or meaning in grade-level high complexity informational text(s).

Achievement Level	Achievement Level Descriptions
Level 5	• evaluates the support an author uses to develop implicit and complex central idea(s) throughout a grade-level high complexity informational text(s). • analyzes thoroughly how an author establishes and achieves complex purpose(s) through multiple types of rhetorical appeals and/or figurative language in grade-level high complexity informational text(s). • compares the development of two or more opposing arguments on the same topic, evaluating the effectiveness and validity of the complex claims in a grade-level high complexity informational text(s). • explains thoroughly how complex uses of figurative language creates understated mood in grade-level high complexity informational text(s). • paraphrases content from grade-level texts by strategically synthesizing the text to convey the author's original message with sophistication. • compares and contrasts thoroughly the ways in which authors have created a complex adaptation of mythical, classical, or religious grade-level mid-to-high complexity literary texts. • explains thoroughly an author's use of complex rhetoric in a grade-level high complexity text(s). • writes narratives using advanced narrative techniques, purposeful transitions, and a consistent point of view. • writes to argue a position supporting sophisticated claims, using logical reasoning and credible evidence from multiple sources, rebutting counterclaims with well-chosen, convincing evidence, using strong and logical organizational structure, skillful elaboration, purposeful and varied transitions, and a consistent tone appropriate to tasks. • writes expository texts to effectively explain and analyze information from multiple sources, using strong and logical organization, varied purposeful transitions, and a consistent tone appropriate to the task. • improves writing by strategically incorporating feedback from adults, peers, and/or online editing tools, skillfully and substantively revising multiple drafts for clarity and cohesiveness. • follows consistently the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts thorough research to answer a complex question, drawing on multiple reliable and valid sources and skillfully refining the scope of the question to align with findings. • integrates skillfully complex academic vocabulary appropriate to grade level in writing to create a deliberate effect. • applies knowledge of etymology and derivations to determine meanings of complex words and phrases in grade-level high complexity text(s). • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of complex words and phrases appropriate to grade level in high complexity text(s).

Grade 10 English Language Arts

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - explains how simplistic key elements enhance or add a single layer of meaning and/or style in a grade-level low-to-mid complexity literary text. - explains and compares simple or explicitly stated universal themes and their development throughout a grade-level low-to-mid complexity literary text. - explains coming of age experiences reflected in a text and how the author represents straightforward conflicting perspectives in a grade-level low complexity literary text. - explains how authors create multiple simple layers of meaning and/or ambiguity in a grade-level low complexity poem. - explains simplistic text structures and the use of basic feature/s in grade-level low-to-mid complexity text(s). - explains the explicitly stated central idea(s) of grade-level low complexity historical American speeches and essays. - explains an author's choices in establishing and achieving explicitly stated purpose(s) in grade-level low complexity historical American speeches and essays. - compares the general development of two explicitly stated opposing arguments on the same topic, determining the effectiveness and validity of the claims and explaining the ways in which the authors use the same information to achieve different ends in grade-level low-to-mid complexity informational texts. - explains how simplistic uses of figurative language is related to an explicitly stated mood in grade-level low-to-mid complexity informational text(s). - paraphrases content from grade-level texts with some accuracy; may focus only on central idea and make limited changes in wording. - explains how mythical, classical, or religious texts have been adapted in grade-level low-to-mid complexity texts. - explains an author's use of simple rhetoric in grade-level low-to-mid complexity text(s). - writes narratives using an inconsistent pace to create tension, mood, and/or tone. - writes to argue a position partially supporting simple claims, using insufficient reasoning and confusing evidence from sources, attempting to rebut counterclaims with ineffective evidence, using limited organizational structure and ineffective elaboration while generally neglecting a formal and objective tone.

Achievement Level	Achievement Level Descriptions
Level 2	• writes expository texts to simplistically explain and partially analyze information from sources, using limited organization, attempting to use transitions, and using an inconsistent tone and voice. • improves writing by considering feedback from adults, peers, and/or online editing tools, minimally or superficially revising to address the needs of a specific audience. • inconsistently follows the basic rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with minimal or inconsistent control. • conducts basic research to answer a simple question, partially refining the scope of the question to align with findings and minimally synthesizing information from multiple reliable and valid sources. • inconsistently uses academic vocabulary appropriate to grade level in writing with inconsistent control. • applies knowledge of etymology and derivations to determine the meaning of simple words and phrases in grade-level low complexity text(s). • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of simple words and phrases appropriate to grade level in low complexity text(s).
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • analyzes how simplistic key elements enhance or add layers of meaning and/or style in a grade-level low-to-mid complexity literary text. • analyzes and compares simple or explicitly stated universal themes and their development throughout a grade-level low-to-mid complexity literary text. • analyzes coming of age experiences reflected in a text and how the author represents straightforward conflicting perspectives in a grade-level low-to-mid complexity literary text. • analyzes how authors create multiple simple layers of meaning and/or ambiguity in a grade-level low-to-mid complexity poem. • analyzes the impact of multiple straightforward text structures and the use of features in grade-level low-to-mid complexity text(s). • analyzes the explicitly stated central idea(s) of grade-level low-to-mid complexity historical American speeches and essays. • analyzes an author's choices in establishing and achieving explicitly stated purpose(s) in grade-level low-to-mid complexity historical American speeches and essays. • compares the development of two simply stated opposing arguments on the same topic, explaining the effectiveness and validity of the claims and generally analyzing the ways in which the authors use the same information to achieve different ends in grade-level low-to-mid complexity informational texts. • analyzes how simplistic uses of figurative language creates a mood in grade-level low-to-mid complexity informational text(s). • paraphrases content from grade-level texts with some accuracy, including some details from the author's original message.

Achievement Level	Achievement Level Descriptions
Level 3	- analyzes how mythical, classical, or religious texts have been adapted in grade-level mid complexity texts. - analyzes an author's use of simple rhetoric in grade-level low-to-mid complexity text(s). - writes narratives using an adequate pace to create tension, mood, and/or tone. - writes to argue a position adequately supporting claims, using with general reasoning and credible evidence from multiple sources, rebutting counterclaims with sufficient evidence, using a clear organizational structure, adequate elaboration, and logical transitions while generally maintaining a formal and objective tone. - writes expository texts to adequately explain and analyze information from multiple sources, using a clear organization, logical transitions, and a tone and voice appropriate to the task. - improves writing by considering feedback from adults, peers, and/or online editing tools, adequately revising to address the needs of a specific audience. - adequately follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with some control. - conducts research to answer a question, refining the scope of the question to align with findings and adequately synthesizing information from multiple reliable and valid sources. - uses academic vocabulary appropriate to grade level in writing with some control. - applies knowledge of etymology and derivations to determine the meaning of words and phrases in grade-level low-to-mid complexity text(s). - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases in grade-level low-to-mid complexity text(s).
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - analyzes how key elements enhance or add layers of meaning and/or style in a grade-level mid-to-high complexity literary text. - analyzes and compares universal themes and their development throughout a grade-level mid-to-high complexity literary text. - analyzes coming of age experiences reflected in a text and how the author represents conflicting perspectives in a grade-level mid-to-high complexity literary text. - analyzes how authors create multiple layers of meaning and/or ambiguity in a grade-level mid-to-high complexity poem. - analyzes the impact of multiple text structures and the use of features in grade-level mid-to-high complexity text(s). - analyzes the central idea(s) of grade-level mid-to-high complexity historical American speeches and essays. - analyzes an author's choices in establishing and achieving purpose(s) in grade-level mid-to-high complexity historical American speeches and essays. - compares the development of two opposing arguments on the same topic, evaluating the validity of the claims and analyzing the ways in which the

Achievement Level	Achievement Level Descriptions
Level 4	authors use the same information to achieve different ends in grade-level mid-to-high complexity informational texts. - analyzes how figurative language creates mood in grade-level mid-to- high complexity informational text(s). - paraphrases content from grade-level texts. - analyzes how mythical, classical, or religious texts have been adapted in grade-level mid-to-high complexity texts. - analyzes an author’s use of rhetoric in grade-level mid-to-high complexity text(s). - writes narratives using an appropriate pace to create tension, mood, and/or tone. - writes to argue a position supporting claims, using logical reasoning and credible evidence from multiple sources, rebutting counterclaims with relevant evidence, using a logical organizational structure, elaboration, and purposeful transitions while maintaining a formal and objective tone. - writes expository texts to explain and analyze information from multiple sources, using a logical organization, purposeful transitions, and a tone and voice appropriate to the task. - improves writing by considering feedback from adults, peers, and/or online editing tools, revising to address the needs of a specific audience. - follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level. - conducts research to answer a question, refining the scope of the question to align with findings and synthesizing information from multiple reliable and valid sources. - integrates academic vocabulary appropriate to grade level in writing. - applies knowledge of etymology and derivations to determine the meaning of words and phrases in grade- level mid-to-high complexity text(s). - applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases appropriate to grade level in mid-to-high complexity text(s).
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - analyzes thoroughly how complex key elements enhance or add layers of meaning and/or style in grade-level high complexity literary text(s). - analyzes thoroughly and compares complex and/or abstract universal themes and their development throughout a grade-level high complexity literary text(s). - analyzes thoroughly coming of age experiences reflected in a text and how the author represents complex conflicting perspectives in a grade-level high complexity literary text(s). - analyzes thoroughly how authors create multiple complex layers of meaning and/or ambiguity in a grade-level high complexity poem. - analyzes thoroughly the impact of multiple complex text structures and the use of features in grade- level high complexity text(s). - analyzes thoroughly the complex central idea(s) of grade-level high complexity historical American speeches and essays.

Achievement Level	Achievement Level Descriptions
Level 5	• analyzes thoroughly an author’s choices in establishing and achieving complex purpose(s) in grade-level high complexity historical American speeches and essays. • compares the complex development of two complex opposing arguments on the same topic, evaluating the effectiveness and validity of the complex claims and thoroughly analyzing the ways in which the authors use the same information to achieve different ends in grade-level high complexity informational texts. • analyzes thoroughly how complex uses of figurative language creates mood in grade-level high complexity informational text(s). • paraphrases content from grade-level texts, strategically synthesizing the text to convey the author’s original message with sophistication. • analyzes thoroughly how complex elements of mythical, classical, or religious texts have been adapted in grade-level high complexity texts. • analyzes thoroughly an author’s use of complex rhetoric in grade-level high complexity text(s). • writes narratives using a purposeful pace to create tension, mood, and/or tone. • writes to argue a position supporting sophisticated claims, using insightful reasoning and evidence from multiple sources, rebutting counterclaims with well- chosen evidence, using strong and logical organizational structure, skillful elaboration, and purposeful and varied transitions while consistently maintaining a formal and objective tone. • writes expository texts to effectively explain and analyze information from multiple sources, using strong and logical organization, varied purposeful transitions, and a consistent tone and voice appropriate to the task. • improves writing by strategically incorporating feedback from adults, peers, and/or online editing tools, skillfully and substantively revising to address the needs of a specific audience. • consistently follows the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level with deliberate control. • conducts thorough research to answer a complex question, refining the scope of the question to align with findings and skillfully synthesizing information from multiple reliable and valid sources. • integrates complex academic vocabulary skillfully appropriate to grade level in writing to create a deliberate effect. • applies knowledge of etymology and derivations to determine meanings of complex words and phrases in grade-level high complexity text(s). • applies knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of complex words and phrases appropriate to grade level in high complexity text(s).

Grade 3 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - composes four-digit numbers in multiple ways using thousands, hundreds, tens, and ones; demonstrates each composition using objects or drawings. - plots whole numbers up to 10,000. - rounds a three-digit number to the nearest 10. - adds and subtracts within 100 using a standard algorithm. - explores multiplication of two single-digit whole numbers (using factors of 1, 2, or 5) and related division facts. - multiplies one-digit whole numbers by 10. - multiplies and divides factors of 1, 2, or 5. - represents unit fractions with denominators of 2 to 6 using models and fraction notations. - represents fractions in the form of $\frac{m}{n}$ as the result of adding the unit fraction $\frac{1}{n}$ to itself m times using a visual model. - reads and writes fractions up to one (where the denominator is 2, 3, 4), using standard form, numeral-word form, or word form. - plots fractional numbers with the same numerator or the same denominator. - identifies equivalent fractions that equal 1 or $\frac{1}{2}$ (e.g., $\frac{2}{2}$ and $\frac{3}{3}$ or $\frac{1}{2}$ and $\frac{2}{4}$). - applies commutative property of multiplication to find the product of one-digit whole numbers. - solves one-step real-world problems involving addition and subtraction or involving multiplication and division where one of the factors and divisors is 1, 2, or 5. - restates multiplication equations to solve division problems with unknown factors where one of the factors is 1, 2, or 5. - determines whether an equation with no more than three terms involving multiplication or division is true or false. - determines the unknown whole number in a multiplication or division equation when the unknown number is the product or quotient (where one of the factors is 1, 2, or 5). - determines whether a whole number from 1 to 20 is even or odd. - determines whether a whole number in the range of 1 to 100 is a multiple of a given one-digit number, given visual representations. - identifies numerical patterns.

Achievement Level	Achievement Level Descriptions
Level 2	• selects appropriate tools to measure the length of an object to the nearest half inch, the volume of liquid, and temperature. • solves one-step word problems involving addition or subtraction of time intervals in minutes when the interval does not include a new hour (e.g., 8:15 to 8:25). • identifies points, lines, line segments, rays, intersecting lines, and perpendicular and parallel lines. • identifies parallelograms, rhombi, rectangles, squares, and trapezoids as examples of quadrilaterals. • draws a single line of symmetry in a two-dimensional figure. • understands that area is measured in square units. • finds the area of a rectangle by counting outlines using a visual model with square units tiled along the perimeter. • solves mathematical or real-world problems involving the perimeter of rectangles with whole number side lengths using unit squares. • decomposes a composite figure into non-overlapping rectangles. • given the data, creates a table, scaled pictograph, or scaled bar graph with appropriate titles, labels, and units. • solves one-step problems using a given scaled pictograph or scaled bar graph.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • reads and writes numbers from 0 to 10,000 using standard form and word form. • composes four-digit numbers in multiple ways using thousands, hundreds, tens, and ones; demonstrates each composition using objects, drawings, and expressions or equations. • plots and compares whole numbers up to 10,000 using comparison symbols (<, >, =). • rounds whole numbers from 0 to 1,000 to the nearest 100. • adds and subtracts multi-digit whole numbers within 1,000 using a standard algorithm. • explores multiplication of two whole numbers with products from 0 to 100 and related division facts. • multiplies one-digit whole numbers by multiples of 10 in the range 10 to 90. • multiplies and divides numbers with factors up to and including 10. • represents unit fractions with denominators of 2 to 6, 8, and 10 using models and fraction notations. • represents and interprets fractions up to one in the form of $\frac{m}{n}$ as the result of adding the unit fraction $\frac{1}{n}$ to itself m times. • reads and writes fractions up to one (with denominators of 2 to 6, 8, and 10), using standard form, numeral-word form, and word form. • plots and compares fractional numbers with the same numerator or the same denominator. • identifies equivalent fractions that include wholes, halves, quarters, thirds, and sixths. • applies commutative and associative properties of multiplication to find a product of three or more whole numbers limited to factors within 12.

Achievement Level	Achievement Level Descriptions
Level 3	• solves one- and two-step real-world problems involving addition and subtraction and one-step problems involving multiplication and division where factors and divisors are less than or equal to 12. • restates a division problem as a missing factor problem using the relationship between multiplication and division where the factors are less than or equal to 10. • determines and explains whether an equation with no more than three terms involving multiplication or division is true or false. • determines the unknown whole number in a multiplication or division equation when the unknown number is the multiplier or divisor. • determines whether a whole number from 1 to 100 is even or odd. • determines whether a whole number in the range of 1 to 100 is a multiple of a given one-digit number. • identifies and extends numerical patterns. • selects and uses appropriate tools to measure the length of an object to the nearest quarter inch and the volume of liquid to the nearest half and quarter cup. • solves real-world problems involving addition and subtraction with whole-number lengths, masses, weights, temperatures, or liquid volumes. • using analog and digital clocks, tells and writes time to the nearest minute. • solves one-step word problems involving elapsed time. • draws points, lines, line segments, rays, intersecting lines, and perpendicular and parallel lines; identifies these in two-dimensional figures. • identifies and draws parallelograms, rhombi, rectangles, squares, and trapezoids as examples of quadrilaterals. • draws two or more lines of symmetry for two-dimensional figures. • explores area of a rectangle by counting the given square units. • finds the area of a rectangle labelled with whole number side lengths by using a visual model. • solves mathematical or real-world problems involving the perimeter and area of rectangles with whole number side lengths using unit squares. • solves mathematical problems involving the perimeter and area of composite figures composed of two non-overlapping rectangles with whole number side lengths using unit squares. • represents numerical and categorical data with whole number values using tables, scaled pictographs, or scaled bar graphs with appropriate titles, labels, and units. • interprets data with whole number values presented in tables, scaled pictographs, circle graphs, or scaled bar graphs by solving one-step problems.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • reads and writes numbers from 0 to 10,000 using standard form, expanded form, and word form. • composes and decomposes four-digit numbers in multiple ways using thousands, hundreds, tens, and ones; demonstrates each composition or decomposition using objects, drawings, and expressions or equations. • plots, orders, and compares whole numbers up to 10,000. • rounds whole numbers from 0 to 1,000 to the nearest 10 or 100.

Achievement Level	Achievement Level Descriptions
Level 4	• adds and subtracts multi-digit whole numbers using a standard algorithm with procedural fluency. • explores multiplication of two whole numbers with products from 0 to 144 and related division facts. • multiplies one-digit whole numbers by a multiple of 10, up to 90, or a multiple of 100, up to 900 with procedural reliability. • multiplies two whole numbers from 0 to 12 and divides using related facts with procedural reliability. • represents and interprets unit fractions in the form $\frac{1}{n}$ as the quantity formed by one part when a whole is partitioned into n equal parts. • represents and interprets fractions, including fractions greater than one, in the form of $\frac{m}{n}$ as the result of adding the unit fraction $\frac{1}{n}$ to itself m times. • reads and writes fractions, including fractions greater than one, using standard form, numeral-word form, and word form. • plots, orders, and compares fractional numbers with the same numerator or the same denominator. • identifies equivalent fractions and explains why they are equivalent. • applies the distributive property to multiply a one-digit number and two-digit number; applies properties of multiplication to find a product of one-digit whole numbers. • solves one- and two-step real-world problems involving any of four operations with whole numbers. • restates a division problem as a missing factor problem using the relationship between multiplication and division. • determines and explains whether an equation involving multiplication or division is true or false. • determines the unknown whole number in a multiplication or division equation, relating three whole numbers, with the unknown in any position. • determines and explains whether a whole number from 1 to 1,000 is even or odd. • determines whether a whole number from 1 to 144 is a multiple of a given one-digit number. • identifies, creates, and extends numerical patterns. • selects and uses appropriate tools to measure the length of an object, the volume of liquid within a beaker, and temperature. • solves real-world problems involving any of the four operations with whole-number lengths, masses, weights, temperatures, or liquid volumes. • using analog and digital clocks, tells and writes time to the nearest minute using a.m. and p.m. appropriately. • solves one- and two-step real-world problems involving elapsed time. • describes and draws points, lines, line segments, rays, intersecting lines, perpendicular lines, and parallel lines; identifies these in two-dimensional figures. • identifies and draws quadrilaterals based on their defining attributes. (Quadrilaterals include parallelograms, rhombi, rectangles, squares, and trapezoids.) • draws line(s) of symmetry in a two-dimensional figure and identifies line-symmetric two-dimensional figures.

Achievement Level	Achievement Level Descriptions
Level 4	- explores area as an attribute of a two-dimensional figure by covering the figure with unit squares without gaps or overlaps; finds areas of rectangles by counting unit squares. - finds the area of a rectangle with whole number side lengths using a visual model and a multiplication formula. - solves mathematical or real-world problems involving the perimeter and area of rectangles with whole number side lengths using a visual model and a formula. - solves mathematical or real-world problems involving the perimeter and area of composite figures composed of non-overlapping rectangles with whole number side lengths. - collects and represents numerical and categorical data with whole number values using tables, scaled pictographs, scaled bar graphs, or line plots; uses appropriate titles, labels, and units. - interprets data with whole number values represented with tables, scaled pictographs, circle graphs, scaled bar graphs, or line plots by solving one- and two-step problems.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - reads and writes numbers from 0 to 10,000 using standard form, expanded form, and word form interchangeably. - identifies an error; composes and decomposes four-digit numbers in multiple ways using thousands, hundreds, tens, and ones; demonstrates and explains each composition or decomposition. - identifies an error; plots, orders, and compares whole numbers up to 10,000 using comparison symbols ($<$, $>$, $=$). - justifies the steps in adding and subtracting multi-digit whole numbers, including identifying an error. - multiplies one-digit whole numbers by a multiple of 10, up to 90, or a multiple of 100, up to 900, with procedural reliability; and identifies and corrects an error in an equation. - multiplies two whole numbers from 0 to 12 and divides using related facts with procedural reliability; and identifies and corrects an error in an equation. - represents and interprets unit fractions in the form $\frac{1}{n}$ as the quantity formed by one part when a whole is partitioned into n equal parts; understands that more equal parts result in smaller units. - reads, writes, and identifies errors in reading or writing fractions, including fractions greater than one, using standard form, numeral-word form, and word form. - identifies an error; plots, orders, and compares fractional numbers with the same numerator or the same denominator. - identifies an error in the application of the distributive property when multiplying a one-digit number and a two-digit number. - explains the solution within the context of one- and two-step real-world problems and solves using any of four operations with whole numbers. - determines and explains whether an equation involving multiplication or division is true or false and rewrites false equations as true.

Achievement Level	Achievement Level Descriptions
Level 5	- identifies an error and determines and explains whether a whole number from 1 to 1,000 is even or odd. - identifies, creates, explains, and extends numeric patterns. - identifies an error and selects and uses appropriate tools to measure the length of an object, the volume of liquid within a beaker, and temperature. - identifies an error and solves real-world problems involving any of the four operations with whole-number lengths, masses, weights, temperatures, or liquid volumes. - using analog and digital clocks, identifies an error and tells and writes time to the nearest minute using a.m. and p.m. appropriately. - identifies an error and solves one- and two-step real-world problems involving elapsed time. - determines the number of lines of symmetry in a two-dimensional figure and completes a partial figure given a line of symmetry. - creates and explains a scenario where area measurement is applicable. - solves problems involving the perimeter and area of rectangles with whole number side and analyzes errors in given solutions. - solves mathematical or real-world problems involving the perimeter and area of composite figures composed of non-overlapping rectangles with whole number side lengths in more than one way. - collects and represents numerical and categorical data with whole number values using tables, scaled pictographs, scaled bar graphs, or line plots; uses appropriate titles, labels, and units; explains how different scale factors affect representation of data. - interprets and compares multiple data sets with whole number and/or missing values represented with tables, scaled pictographs, circle graphs, scaled bar graphs, or line plots by solving one- and two-step problems.

Grade 4 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - identifies the value of the digits in the 1s, 10s, 100s, 1000s to the 100,000 places. - reads and writes numbers from 0 to 100,000 using standard form. - plots whole numbers up to 100,000. - rounds whole numbers from 0 to 10,000 to the nearest 10 and 100 where the digit to the left is not affected. - plots and compares decimals up to the tenths using comparison symbols ($<$, $>$, $=$). - recalls multiplication facts with factors up to 5 and related division facts. - multiplies two whole numbers up to two digits by one digit with procedural reliability. - divides a whole number up to three digits by a one-digit whole number without a remainder. - multiplies multi-digit whole numbers by factors of 10 and 100. - identifies the value of the digits in the tenth and hundredth place. - models a fraction less than one with the denominator 10 as an equivalent fraction with the denominator 100. - represents fractions less than one with denominators of 10 or 100 in decimal notation including the use of models. - identifies equivalent fractions, including fractions greater than one, using models. - plots fractions less than one with different numerators and different denominators using a number line. - decomposes fractions less than one into a sum of two fractions where all fractions have the same denominator. - adds and subtracts fractions with like denominators, limited to 2, 3, 4, 5, 6, 8, and 10, when given models. - recognizes equivalent fractions with denominators of 10 and 100. - solves real-world problems involving multiplication of whole numbers up to three digits by two digits and related division factors. - solves one-step real-world problems involving addition and subtraction of fractions with like denominators, limited to 2, 3, 4, 5, 6, 8, and 10. - solves real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction involving denominators limited to 2, 3, 4, 5, 10, or 100 using visual models.

Achievement Level	Achievement Level Descriptions
Level 2	- determines whether an equation of no more than two operands on either side, involving any of the four operations of whole numbers, is true or false. - matches a mathematical or real-world problem to an equation involving multiplication or division to determine the whole number with the result unknown. - determines whether a number is prime, composite, or neither for a whole number from 0 to 20. - extends a numerical pattern from a given rule. - converts within a single system of measurement using hours, minutes, seconds. - solves one-step real-world problems involving whole numbers representing distances and intervals of time using any of the four operations. - solves one-step addition problems involving money using decimal notation. - informally explores angles as an attribute of two-dimensional figures. - estimates angle measures of benchmark angles (45, 90, 180); using a protractor, measures angles of 30, 45, 60, 90, and 180. - solves mathematical problems with a given equation involving unknown whole-number angle measures. - solves perimeter and area mathematical problems, including problems with rectangles with unknown side of one or two digits given the equation. - solves problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters with whole number side lengths limited to one digit each using a visual model of unit squares. - collects and represents numerical data using tables or line plots including fractions less than one with the denominator of 2, 4, 5, 10, and 100. - identifies the mode to answer questions about numerical data, including fractions with the denominator of 2, 4, 5, 10, and 100, represented in tables or line plots. - solves real-world problems involving numerical data including fractions less than one with denominators of 2, 4, 5, 10, and 100, and decimals to the tenths.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - expresses that a digit in one place represents 10 times as much as it represents in the place to its right. - reads and writes multi-digit whole numbers from 0 to 100,000 using standard form, expanded form, and word form. - plots and compares whole numbers up to 1,000,000 using comparison symbols ($<$, $>$, $=$). - rounds whole numbers from 0 to 10,000 to the nearest 10 and 100. - plots and compares decimals up to the hundredths using comparison symbols ($<$, $>$, $=$). - recalls multiplication facts with factors up to 10 and related division facts. - multiplies two whole numbers up to two digits each with procedural reliability. - multiplies two whole numbers, one digit by two digits, including using a standard algorithm with procedural fluency.

Achievement Level	Achievement Level Descriptions
Level 3	- divides a whole number up to three digits by a one-digit whole number; represents remainders as whole numbers or fractional parts of the divisor. - estimates products and quotients of multi-digit whole numbers with factors and divisors that are multiples of 10 and 100. - identifies the number that is one-tenth more, one-tenth less than a given number. - relates and represents dollars and cents as whole numbers and decimals. - models and expresses a fraction including mixed numbers with the denominator 10 as an equivalent fraction with the denominator 100. - uses decimal notation to represent fractions less than one with denominators of 10 or 100 and uses fractional notation with denominators of 10 or 100 to represent decimals. - identifies and generates equivalent fractions, including fractions greater than one. - compares fractions with different numerators and different denominators by reasoning about their size, including mixed numbers and fractions greater than one. - decomposes fractions, including fractions greater than one, into a sum of fractions with the same denominator. - adds and subtracts fractions with like denominators, including fractions greater than one, with procedural reliability. - when given a number line or models, adds a fraction with a denominator of 10 to a fraction with denominator of 100 using equivalent fractions. - multiplies a fraction by a whole number or a whole number by a fraction using models or number lines. - solves real-world problems involving multiplication of whole numbers up to three digits by two digits and division of whole numbers up to three digits by one digit without remainders. - solves real-world problems involving addition and subtraction of fractions with like denominators, including fractions greater than one. - solves real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction involving denominators limited to 2, 3, 4, 5, 10, or 100. - determines whether an equation involving any of the four operations of whole numbers is true or false. - solves a mathematical or real-world context with an equation provided involving multiplication or division to determine the unknown whole number with the unknown in any position. - determines whether a whole number from 0 to 144 is prime, composite, or neither. - describes and extends numerical patterns that follow a given rule. - selects appropriate tools to measure attributes of objects. - converts within a single system of measurement using the units kilometers, meters, centimeters, millimeters; kilograms, grams; liters, milliliters; and hours, minutes, seconds; limited to whole number measurements. - solves two-step real-world problems involving distances and intervals of time less than 60 minutes, using any combination of the four operations limited to whole numbers. - solves one-step addition and subtraction real-world problems involving money using decimal notation.

Achievement Level	Achievement Level Descriptions
Level 3	- identifies angles as acute, right, obtuse, straight, or reflex. - estimates angle measures using benchmark angles (30, 45, 60, 90, 180); using a protractor, measures angles in whole-number degrees; recognizes that angle measure is additive. - solves real-world and mathematical problems with a given equation involving unknown whole-number angle measures. - solves perimeter and area mathematical problems, including problems with unknown sides, for rectangles with whole number side lengths. - solves problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters with whole number side lengths using a visual model. - collects and represents numerical data, including fractional values, using tables, stem-and-leaf plots, or line plots including fractions less than one. - identifies the mode and median to answer questions about numerical data, including fractional values, represented with tables, stem-and-leaf plots, or line plots. - solves real-world problems involving numerical data including fractions less than one and decimals to the hundredths.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - expresses how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right. - reads and writes multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form, and word form. - plots, orders, and compares multi-digit whole numbers from 0 to 1,000,000. - rounds whole numbers from 0 to 10,000 to the nearest 10, 100, or 1,000. - plots, orders, and compares decimals up to the hundredths. - recalls multiplication facts with factors up to 12 and related division facts with automaticity. - multiplies two whole numbers up to three digits by up to two digits with procedural reliability. - multiplies two whole numbers, each up to two digits, including using a standard algorithm with procedural fluency. - divides a whole number up to four digits by a one-digit whole number with procedural reliability; represents remainders as fractional parts of the divisor. - explores the multiplication and division of multi-digit whole numbers using estimation, rounding, and place value. - identifies the number that is one-tenth more, one-tenth less, one-hundredth more, and one-hundredth less than a given number. - explores the addition and subtraction of multi-digit numbers with decimals to the hundredths. - models and expresses a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100. - uses decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and uses fractional notation with denominators of 10 or 100 to represent decimals.

Achievement Level	Achievement Level Descriptions
Level 4	- identifies and generates equivalent fractions, including fractions greater than one; describes how the numerator and denominator are affected when the equivalent fraction is created. - plots, orders, and compares fractions, including mixed numbers and fractions greater than one, with different numerators and denominators. - decomposes fractions, including mixed numbers and fractions greater than one, into a sum of fractions with the same denominator in multiple ways. - adds and subtracts fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability. - explores the addition of a fraction with a denominator of 10 to a fraction with a denominator of 100 using equivalent fractions. - extends previous understanding of multiplication to explore the multiplication of a fraction by a whole number or a whole number by a fraction. - solves real-world problems involving multiplication and division of whole numbers, including problems in which remainders must be interpreted within the context. - solves real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one. - solves real-world problems involving multiplication of a fraction by a whole number or a whole number by a fraction. - determines and explains whether an equation involving any of the four operations of whole numbers is true or false. - given a mathematical or real-world context, writes and solves an equation involving multiplication or division to determine the unknown whole number with the unknown in any position. - determines factor pairs for a whole number from 0 to 144; determines whether a whole number from 0 to 144 is prime, composite, or neither. - generates, describes, and extends a numerical pattern that follows a given rule. - selects and uses appropriate tools to measure attributes of objects. - converts within a single system of measurement using the units yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liters, milliliters; and hours, minutes, seconds. - solves two-step real-world problems involving distances and intervals of time using any combination of the four operations. - solves one- and two-step addition and subtraction real-world problems involving money using decimal notation. - informally explores angles as an attribute of two-dimensional figures; identifies and classifies angles as acute, right, obtuse, straight, or reflex. - estimates angle measures; using a protractor, measures angles in whole-number degrees and draws angles of specified measure in whole-number degrees; demonstrates that angle measure is additive. - solves real-world or mathematical problems involving unknown whole-number angle measures and writes an equation to represent the unknown. - solves perimeter and area mathematical and real-world problems, including problems with unknown sides, for rectangles with whole number side lengths. - solves problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters.

Achievement Level	Achievement Level Descriptions
Level 4	- collects and represents numerical data, including fractional values, using tables, stem-and-leaf plots, or line plots. - determines the mode, median, or range to interpret numerical data, including fractional values, represented with tables, stem-and-leaf plots, or line plots. - solves real-world problems involving numerical data.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - expresses and explains how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right. - reads and writes multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form, and word form interchangeably and in multiple forms. - identifies an error; plots, orders, and compares two or more multi-digit whole numbers from 0 to 1,000,000 using comparison symbols ($<$, $>$, $=$). - identifies an error and generates possible numbers given their rounded value. - identifies an error; plots, orders, and compares decimals up to the hundredths. - identifies an error and divides a whole number up to four digits by a one-digit whole number; represents remainders as fractional parts of the divisor. - multiplies and divides multi-digit whole numbers using estimation, rounding, and place value. - identifies the number that is one-tenth more, one-tenth less, one-hundredth more, and one-hundredth less than a given number where more than two place values are affected; uses error analysis. - adds and subtracts multi-digit numbers with decimals to the hundredths. - identifies an error and models and expresses a fraction, including mixed numbers and fractions greater than one, with the denominator 10 as an equivalent fraction with the denominator 100. - identifies an error and represents fractions as decimals and decimals as fractions. - identifies an error and generates equivalent fractions using a variety of different methods and describes why they are equivalent. - identifies an error; plots, orders, and compares fractions, including mixed numbers and fractions greater than one, with different numerators and denominators. - identifies an error and adds and subtracts fractions with like denominators, including mixed numbers and fractions greater than one, with procedural reliability. - adds a fraction with a denominator of 10 to a fraction with a denominator of 100 using equivalent fractions. - multiplies a fraction by a whole number or a whole number by a fraction. - identifies an error and solves real-world problems involving multiplication and division of whole numbers, including problems in which remainders must be interpreted within the context. - solves multi-step real-world problems involving addition and subtraction of fractions with like denominators, including mixed numbers and fractions greater than one; creates a real-world situation based on an equation including a variable to represent the unknown.

Achievement Level	Achievement Level Descriptions
Level 5	- creates real-world situations based on an equation having a variable to represent the unknown and solving for the unknown by multiplying a fraction by a whole number or a whole number by a fraction. - explains why a number is prime, composite, or neither and identifies all factor pairs for a whole number from 0 to 144. - identifies an error and generates, explains, and extends numerical patterns that follow a given rule. - measures attributes of objects placed on non-zero starting points. - solves conversion word problems within a single system of measurement using the units yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liters, milliliters; and hours, minutes, seconds. - identifies an error and solves two-step real-world problems involving distances and intervals of time using any combination of the four operations. - identifies an error and solves two-step addition and subtraction real-world problems involving money using decimal notation. - identifies and classifies angles as acute, right, obtuse, straight, or reflex using two-dimensional figures and real-world pictures; justifies the classification. - estimates angle measures; using a protractor, measures angles in whole-number degrees and draws angles of specified measure in whole-number degrees; demonstrates that angle measure is additive including straight or reflex angles. - identifies an error and writes an equation to solve perimeter and area mathematical or real-world problems, including problems with unknown sides, for rectangles with whole number side lengths. - identifies an error and solves problems involving rectangles with the same perimeter and different areas or with the same area and different perimeters. - collects and represents numerical data, including fractional values, using tables, stem-and-leaf plots, or line plots and justifies choice of data representation. - solves problems and draws conclusions using the mode, median, or range to interpret numerical data, including fractional values, represented with tables, stem-and-leaf plots, or line plots. - solves real-world, multistep problems and draws conclusions when analyzing numerical data.

Grade 5 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - recognizes that a digit in one place represents 10 times as much as it represents in the place to its right or 1/10 as much as it represents in the place to its left, with a decimal. - reads and writes multi-digit numbers with decimals to the tenths using standard form, word form, and expanded form. - composes and decomposes multi-digit numbers with decimals to the tenths in multiple ways using the values of the digits in each place; demonstrates the compositions or decompositions using objects and expressions or equations. - plots and compares multi-digit numbers with decimals up to the hundredths, using scaled number lines and place value. - rounds multi-digit numbers with decimals to the tenths to the whole number. - multiplies and divides multi-digit numbers with decimals to the tenths using models based on place value and the properties of operations. - multiplies and divides a multi-digit whole number by one-tenth. - recognizes that a fraction represents the division of the numerator by the denominator. - adds and subtracts fractions less than a whole with unlike denominators, using models and various strategies. - multiplies two fractions less than a whole by using models and various strategies. - recognizes that multiplying a whole number by a fraction less than one will produce a smaller product. - extends previous understanding of division to explore the division of a whole number by a unit fraction using drawings and models. - solves two-step real-world problems involving addition and subtraction and two-step real-world problems involving multiplication and division with whole numbers. - solves real-world problems involving addition and subtraction of fractions with unlike denominators, using models and various strategies. - solves real-world problems involving division of a whole number by a unit fraction using models. - translates one-step written real-world or mathematical descriptions into numerical expressions. - evaluates a two-step expression involving adding and subtraction using order of operations.

Achievement Level	Achievement Level Descriptions
Level 2	- determines whether an equation, with whole numbers and parentheses or multiple operations on at least one side of the equation, involving any of the four operations is true or false. - given a mathematical context, recognizes an equation involving any of the four operations to determine the unknown whole number with the unknown standing alone on one side of the equation. - given a rule for a numerical pattern, uses a two-column table to record the missing outputs when given all inputs and some of the outputs. - solves two-step real-world problems that involve converting whole measurement units to equivalent measurements within a single system of measurement. - solves one-step real-world problems involving money using decimal notation with multiplication or division. - given the classification attribute, explains why a triangle or quadrilateral would or would not belong to a category. - identifies three-dimensional figures, limited to right pyramids, right prisms, right circular cylinders, and right circular cones. - given a visual model, finds the perimeter and area of a rectangle with no more than one fractional side length. - explores volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps; finds the volume of a right rectangular prism with whole-number side lengths not greater than 3 by counting unit cubes. - when given a model, solves volume problems of a right rectangular prism with whole-number side lengths not greater than 3. - solves real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths not greater than 3 using a visual model. - represents mathematical problems by graphing points in the first quadrant of the coordinate plane.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - expresses how the value of a digit in a multi-digit number with decimals to the hundredths changes if the digit moves one or more places to the left or right. - reads and writes multi-digit numbers with decimals to the hundredths using standard form, word form, and expanded form. - composes and decomposes multi-digit numbers with decimals to the hundredths in multiple ways using the values of the digits in each place; demonstrates the compositions or decompositions using objects and expressions or equations. - plots, orders, and compares multi-digit numbers with decimals up to the hundredths. - rounds multi-digit numbers with decimals to the hundredths to the nearest tenth or whole number. - multiplies multi-digit whole numbers, four digits by two digits or five digits by two digits, using a standard algorithm.

Achievement Level	Achievement Level Descriptions
Level 3	- divides multi-digit whole numbers, up to five digits by one digit, with remainders and represents remainders as fractions. - adds and subtracts multi-digit numbers with decimals to the hundredths including using a standard algorithm. - multiplies and divides multi-digit numbers with decimals to the hundredths using models based on place value and the properties of operations. - multiplies and divides a multi-digit number with decimals to the tenths by one-tenth. - given a mathematical problem, represents the division of two whole numbers as a fraction. - adds and subtracts fractions including mixed numbers and fractions greater than one, with unlike denominators, using models and various strategies. - multiplies a fraction, including fractions greater than one, by a fraction less than a whole. - recognizes that multiplying a whole number by a fraction less than one will produce a smaller product and by a fraction greater than one will produce a larger product. - extends previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction using drawings and models. - solves two-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within the context. - solves real-world problems involving addition and subtraction or multiplication of fractions with unlike denominators and those greater than one. - solves real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction using models. - translates written real-world or mathematical descriptions into numerical expressions. - evaluates multi-step expressions using order of operations but no use of parentheses. - determines whether an equation with decimals or fractions involving any of the four operations is true or false. - given a mathematical context, identifies an equation involving any of the four operations to determine the unknown whole number with the unknown in any position. - given a numerical pattern, identifies a rule, using one procedural step involving any of the four operations, that describes the pattern as an expression. - given a rule with one procedural step involving addition or subtraction for a numerical pattern, uses a two-column table to record the outputs when given the inputs. - solves two-step real-world problems that involve converting measurement units that may include decimals to equivalent measurements within a single system of measurement. - solves two-step real-world problems involving money using decimal notation with at least one step including multiplication or division.

Achievement Level	Achievement Level Descriptions
Level 3	- classifies triangles or quadrilaterals into different categories based on a given attribute; explains why a triangle or quadrilateral would or would not belong to a category. - identifies and classifies three-dimensional figures into categories when given attributes; figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones, and spheres. - finds the perimeter and area of a rectangle with fractional or decimal side lengths using models. - explores volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps; finds the volume of a right rectangular prism with whole-number side lengths not greater than 5 by counting unit cubes. - when given a model and a formula, finds the volume of a right rectangular prism with whole-number side lengths not greater than 5. - solves real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths not greater than 5 using a visual model or a formula; writes an equation with a variable for the unknown to represent the problem. - identifies the origin and axes in the first quadrant of a coordinate system. - represents mathematical and real-world problems by graphing points in the first quadrant of the coordinate plane. - collects and represents numerical data, including decimal values, using tables or line plots. - interprets numerical data, represented with tables or line plots, by determining the mean.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - expresses how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right. - reads and writes multi-digit numbers with decimals to the thousandths using standard form, word form, and expanded form. - composes and decomposes multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place; demonstrates the compositions or decompositions using objects, drawings, and expressions or equations. - plots, orders, and compares multi-digit numbers with decimals up to the thousandths. - rounds multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth, or whole number. - multiplies multi-digit whole numbers including using a standard algorithm with procedural fluency. - divides multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm with procedural fluency, and represents remainders as fractions. - adds and subtracts multi-digit numbers with decimals to the thousandths, using a standard algorithm with procedural fluency.

Achievement Level	Achievement Level Descriptions
Level 4	- explores the multiplication and division of multi-digit numbers with decimals to the hundredths using estimation, rounding, and place value. - multiplies and divides a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability. - given a mathematical or real-world problem, represents the division of two whole numbers as a fraction. - adds and subtracts fractions with unlike denominators, including mixed numbers and fractions greater than one, with procedural reliability. - extends previous understanding of multiplication to multiply a fraction by a fraction, including mixed numbers and fractions greater than one, with procedural reliability. - when multiplying a given number by a fraction less than one or a fraction greater than one, predicts and explains the relative size of the product to the given number without calculating. - extends previous understanding of division to explore the division of a unit fraction by a whole number and a whole number by a unit fraction. - solves multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within terms of the context. - solves real-world problems involving the addition, subtraction, or multiplication of fractions, including mixed numbers and fractions greater than one. - solves real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction. - translates written real-world and mathematical descriptions into numerical expressions and numerical expressions into written mathematical descriptions. - evaluates multi-step numerical expressions using order of operations. - determines and explains whether an equation involving any of the four operations is true or false. - given a mathematical or real-world context, determines an equation involving any of the four operations to determine the unknown whole number with the unknown in any position. - given a numerical pattern, identifies and writes a rule that can describe the pattern as an expression. - given a rule for a numerical pattern, uses a two-column table to record the inputs and outputs. - solves multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement. - solves multi-step real-world problems involving money using decimal notation. - classifies triangles or quadrilaterals into different categories based on shared defining attributes; explains why a triangle or quadrilateral would or would not belong to a category. - identifies and classifies three-dimensional figures into categories based on their defining attributes; figures are limited to right pyramids, right prisms, right circular cylinders, right circular cones, and spheres. - finds the perimeter and area of a rectangle with fractional or decimal side lengths using visual models and formulas.

Achievement Level	Achievement Level Descriptions
Level 4	- explores volume as an attribute of three-dimensional figures by packing them with unit cubes without gaps; finds the volume of a right rectangular prism with whole-number side lengths by counting unit cubes. - finds the volume of a right rectangular prism with whole-number side lengths using a visual model and a formula. - solves real-world problems involving the volume of right rectangular prisms, including problems with an unknown edge length, with whole-number edge lengths using a visual model or a formula; writes an equation with a variable for the unknown to represent the problem. - identifies the origin and axes in the coordinate system; plots and labels ordered pairs in the first quadrant of the coordinate plane. - represents mathematical and real-world problems by plotting points in the first quadrant of the coordinate plane and interpreting coordinate values of points in the context of the situation. - collects and represents numerical data, including fractional and decimal values, using tables, line graphs, or line plots. - interprets numerical data, with whole-number values, represented with tables or line plots by determining the mean, mode, median, or range.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - identifies an error and expresses how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right. - reads and writes multi-digit numbers with decimals to the thousandths using standard form, word form, and expanded form interchangeably and in multiple forms. - identifies an error and composes and decomposes multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. - identifies an error and plots, orders, and compares multi-digit numbers with decimals up to the thousandths, when presented in multiple forms. - identifies an error and generates possible numbers given their rounded value. - identifies an error and multiplies multi-digit whole numbers including using a standard algorithm with procedural fluency. - identifies an error and divides multi-digit whole numbers, up to five digits by two digits, including using a standard algorithm and represents remainders as fractions with procedural fluency. - identifies an error and adds and subtracts multi-digit numbers with decimals to the thousandths, using a standard algorithm with procedural fluency. - multiplies and divides multi-digit numbers with decimals to the hundredths using estimation, rounding, and place value. - identifies an error and multiplies and divides a multi-digit number with decimals to the tenths by one-tenth and one-hundredth with procedural reliability. - given a mathematical or real-world problem, represents the division of two whole numbers as a fraction and identifies errors. - solves for an unknown numerator or denominator given the sum or difference.

Achievement Level	Achievement Level Descriptions
Level 5	- identifies an error and multiplies a fraction by a fraction, including mixed numbers and fractions greater than one. - when multiplying a given number by a fraction less than one or a fraction greater than one, predicts and explains the relative size of the product to the given number without calculating and identifies errors. - divides a unit fraction by a whole number and a whole number by a unit fraction. - identifies an error and solves multi-step real-world problems involving any combination of the four operations with whole numbers, including problems in which remainders must be interpreted within terms of the context. - identifies an error and solves multi-step, real-world problems involving the addition, subtraction, or multiplication of fractions, including mixed numbers and fractions greater than one. - identifies an error and solves real-world problems involving division of a unit fraction by a whole number and a whole number by a unit fraction with an equation. - uses error analysis for determining whether a given evaluated expression includes an error at any given step in the evaluation process and evaluates multi-step numerical expressions using order of operations. - given a numerical pattern, identifies and writes multiple rules that describe the pattern as an expression. - identifies an error and solves multi-step real-world problems that involve converting measurement units to equivalent measurements within a single system of measurement. - identifies an error and solves multi-step real-world problems involving money using decimal notation. - classifies triangles or quadrilaterals into more than one category based on shared defining attributes; explains why a triangle or quadrilateral would or would not belong to a category. - identifies and classifies three-dimensional figures, including right pyramids, right prisms, right circular cylinders, right circular cones, and spheres, into multiple categories based on their defining attributes. - finds the perimeter and area of a rectangle with missing fractional or decimal side lengths using formulas. - finds the volume of a right rectangular prism counting unit cubes where all unit cubes are not present/shown. - identifies figures with different dimensions that have the same volume. - solves real-world problems involving the volume of composite figures with an unknown edge length and whole-number edge lengths. - collects and represents numerical data, including fractional and decimal values, using tables, line graphs, or line plots and justifies choice of data representation.

Grade 6 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • defines a rational number; plots, orders, and compares integers. • given a mathematical context, represents quantities on a horizontal number line that have opposite direction using rational numbers. • finds the absolute value of a rational number. • solves mathematical problems with one step involving absolute value; or compares absolute values. • multiplies and divides positive multi-digit numbers with decimals to the hundredths. • using models, computes products of positive fractions and computes quotients involving unit fractions and fractions. • solves two-step real-world problems involving addition, subtraction, and multiplication with positive multi-digit decimals or positive fractions. • given a mathematical context, finds the greatest common factor within 500 or least common multiple with factors to 15 of two whole numbers. • identifies the common factor between the sum of two composite whole numbers. • evaluates positive whole numbers with natural number exponents up to 5. • identifies composite whole numbers as products of single prime factors. • identifies equivalent forms of positive terminating decimals with fraction notation with denominators of 1000. • given a mathematical context, translates written descriptions into linear algebraic expressions limited to one term. • represents an algebraic inequality on a number line wherein the variable is on the left side of the inequality. • evaluates algebraic expressions using substitution and order of operations with one variable and using positive integers. • applies properties of operations to identify equivalent algebraic expressions with positive integer coefficients. • given an equation or inequality and a specified set of positive integers, determines which values make the equation or inequality true or false. • given a visual model such as a number line, solves for a variable in a one-step equation within a mathematical context using addition or subtraction, where all terms and solutions are positive integers.

Achievement Level	Achievement Level Descriptions
Level 2	- given a visual model such as a number line, solves for a variable in a one-step equation within a mathematical context using multiplication and division, where all terms and solutions are positive integers. - using a visual model, determines the unknown decimals or fractions in an equation involving any of the four operations, relating three numbers, with the unknown in any position. - given a real-world context, writes part-to-part ratios to show the relative sizes of two quantities in the same units using appropriate notation: a/b, a to b, or $a:b$ where $b \neq 0$. - using a visual model and given a real-world context, identifies a rate for a ratio of quantities with different units. - uses a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios. - identifies ratio relationships to solve mathematical problems involving percentages using the relationship between two quantities. - using visual models, solves mathematical and real-world problems involving ratios, rates, and unit rates. - plots integer ordered pairs in all four quadrants and on both axes. - finds distances between integer ordered pairs, limited to either the same x-coordinate or y-coordinate in the same quadrant. - solves mathematical problems by plotting integer ordered pairs on a coordinate plane. - identifies the relationship between the area of a rectangle and the area of a right triangle. - solves mathematical problems with positive integers involving the area of quadrilaterals by decomposing them into triangles or rectangles. - solves mathematical problems with a given visual model or using a formula, finds the volume of a right rectangular prism with one positive rational number as edge length. - given a mathematical context, finds the surface area of right rectangular prisms and right rectangular pyramids given the figure's net using positive integers. - given a numerical data set limited to positive integers, within a real-world context, finds mean, median, mode, and range. - given a box plot within a real-world context, determines the minimum, the lower quartile, the median, the upper quartile, and the maximum. - given a histogram or line plot within a real-world context, describes the spread and distribution of the data including any symmetry, skewness, and the range. - identifies histograms to corresponding sets of numerical data within real-world contexts. - given a real-world scenario, describes how changes in data values impact measures of center.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: defines a rational number; plots, orders, and compares positive and negative rational numbers when given in the same form.

Achievement Level	Achievement Level Descriptions
Level 3	• given a mathematical or real-world context, represents and compares quantities on a number line that have opposite direction using rational numbers. • given a mathematical context, interprets the absolute value of a rational number as the distance from zero on a number line. • solves mathematical problems with one step involving absolute value, including the comparison of absolute value. • multiplies positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm, and divides positive multi-digit numbers with decimals to hundredths, including using a standard algorithm. • with or without models, computes products and quotients of positive fractions, involving at least one unit fraction. • solves two-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions. • given a mathematical context, finds the greatest common factor within 1000 and least common multiple with factors to 25 of two whole numbers. • identifies the sum of two composite whole numbers having a common factor, as a common factor multiplied by the sum of two whole numbers. • evaluates positive rational numbers with natural number exponents up of 5. • expresses two-digit composite whole numbers as products of prime factors using natural number exponents. • identifies equivalent forms of positive rational numbers including fractions, terminating decimals, and percentages. • using a visual model such as manipulatives or a number line, adds and subtracts integers. • using a visual model such as manipulatives or a number line, multiplies and divides integers. • given a mathematical or real-world context, translates written descriptions into linear algebraic expressions limited to one term and translates linear algebraic expressions limited to one term into written descriptions. • translates a real-world written description into algebraic inequality form and represents that inequality on a number line. • evaluates algebraic expressions using substitution and order of operations with one variable and any integer. • applies properties of operations to generate equivalent algebraic expressions with positive integer coefficients. • given an equation or inequality and a specified set of integers, determines which values make the equation or inequality true or false, including variables in multiple terms. • without a visual model, solves for a variable in a one-step equation within a mathematical context using addition and subtraction, where all terms and solutions are integers. • without a visual model, solves for a variable in a one-step equation within a mathematical context using multiplication and division, where all terms and solutions are integers. • without a visual model, determines the unknown decimals or fractions in an equation involving any of the four operations, relating three numbers, with the unknown in any position.

Achievement Level	Achievement Level Descriptions
Level 3	- given a real-world context, writes and interprets part-to-part and part-to-whole ratios to show the relative sizes of two quantities in the same units using appropriate notation: a/b, a to b, or $a:b$ where $b \neq 0$. - with or without a visual model, given a real-world context, calculates a rate for a ratio of quantities with different units. - completes a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios. - applies ratio relationships to solve mathematical problems involving percentages using the relationship between two quantities. - solves mathematical problems involving ratios, rates, and unit rates, including comparisons and mixtures. - plots rational number ordered pairs in all four quadrants and on both axes. - finds distances between ordered pairs of rational numbers, limited to the same y-coordinate or the same x-coordinate, in the same quadrant, represented on a coordinate plane. - solves mathematical or real-world problems by plotting ordered pairs of rational numbers on a coordinate plane, including finding the perimeter or area of a rectangle contained in one quadrant. - applies the formula for the area of a triangle to find the area of a triangle. - solves mathematical problems with positive rational numbers involving the area of composite figures by decomposing them into triangles or rectangles. - solves mathematical problems with a given visual model or using a formula, finds the volume of a right rectangular prism with positive rational number edge lengths. - given a mathematical context, finds the surface area of right rectangular prisms and right rectangular pyramids using the figure's net using dimensions with one rational number. - recognizes statistical questions that would generate numerical data. - given a numerical data set within a real-world context, finds mean, median, mode, and range. - given a box plot within a real-world context, determines the interquartile range and range. - given a histogram or line plot within a real-world context, qualitatively describes the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers, and the range. - identifies box plots and histograms to corresponding sets of numerical data within real-world contexts. - given a real-world scenario, determines and describes how changes in data values impact measures of center; identifies measures of center appropriate for the scenario.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - defines a rational number; plots, orders, and compares positive rational numbers when given in different forms. - given a mathematical or real-world context, represents quantities that have opposite direction using rational numbers, compares the quantities on a number line, and explains the meaning of zero within its context.

Achievement Level	Achievement Level Descriptions
Level 4	• given a real-world context, interprets the absolute value of a rational number as the distance from zero on a number line. • solves mathematical problems with two steps or real-world problems with up to two steps involving absolute value, including the comparison of absolute value. • multiplies and divides positive multi-digit numbers with decimals to the thousandths, including using a standard algorithm with procedural fluency. • computes products and quotients of positive fractions, including mixed numbers with procedural fluency. • solves multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers. • given a real-world context, finds the greatest common factor within 1000 and least common multiple with factors to 25 of two whole numbers. • rewrites the sum of two composite whole numbers having a common factor as a common factor multiplied by the sum of two whole numbers. • evaluates positive rational numbers and integers with natural number exponents up to 5. • expresses composite whole numbers as products of prime factors using natural number exponents. • rewrites positive rational numbers in different but equivalent forms including fractions, terminating decimals, and percentages. • adds and subtracts integers with procedural fluency. • multiplies and divides integers with procedural fluency. • given a mathematical or real-world context, translates written descriptions into linear algebraic expressions limited to two terms and translates linear algebraic expressions limited to two terms into written descriptions. • translates a real-world written description into algebraic inequality form and represents an inequality with the variable on the right or left side of the inequality on a number line. • evaluates algebraic expressions using substitution and order of operations with two or more variables and any integer. • applies properties of operations to generate equivalent algebraic expressions with integer coefficients. • given an equation or inequality and a specified set of integers, determines which values make the equation or inequality true or false, including variables in multiple terms and variables on either side of the equal sign or inequality symbol. • writes and solves for a variable in an equation within a mathematical or real-world context using addition and subtraction, where all terms and solutions are integers, including variables on either side of the equal sign. • writes and solves for a variable in an equation within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers, including variables on either side of the equal sign. • determines the unknown decimals or fractions, including mixed numbers and fractions greater than one, in an equation involving any of the four operations, relating three numbers, with the unknown in any position, including the unknown and different operations on either side of the equal sign.

Achievement Level	Achievement Level Descriptions
Level 4	• given a real-world context, writes and interprets part-to-part and part-to-whole ratios to show the relative sizes of two quantities in the different units using appropriate notation: a/b, a to b, or $a:b$ where $b \neq 0$. • given a real-world context, calculates and interprets a unit rate for a ratio of quantities with different units. • generates a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios. • applies ratio relationships to solve real-world problems involving percentages using the relationship between two quantities. • solves mathematical or real-world problems involving ratios, rates, and unit rates, including comparisons, mixtures, and ratios of lengths and a conversion within the same measurement system. • plots rational number ordered pairs in all four quadrants and on both axes and identifies the x- or y-axis as the line of reflection when two ordered pairs have an opposite x- or y-coordinate. • finds distances between ordered pairs of rational numbers, limited to the same y-coordinate or the same x-coordinate, in any quadrant, represented on a coordinate plane. • solves mathematical or real-world problems by plotting ordered pairs of rational numbers on a coordinate plane, including finding the perimeter or area of a rectangle with vertices in multiple quadrants. • derives a formula for the area of a right triangle using a rectangle and applies that formula to find the area of a triangle. • solves mathematical or real-world problems with positive rational numbers involving the area of quadrilaterals and composite figures by decomposing them into triangles or rectangles or finds a missing side when given the area. • solves mathematical or real-world problems involving the volume of right rectangular prisms with positive rational number edge lengths or finds a missing edge length when given a volume. • given a mathematical or real-world context, finds the surface area of right rectangular prisms and right rectangular pyramids using the figure's net using positive rational numbers. • formulates statistical questions that would generate numerical data. • given a numerical data set within a real-world context, finds and interprets mean, median, mode, and range. • given a box plot within a real-world context, uses this summary of the data to describe the spread and distribution. • given a histogram or line plot within a real-world context, qualitatively describes and interprets the spread and distribution of the data, including any symmetry, skewness, gaps, clusters, outliers, and the range. • creates box plots and histograms to represent the set of the numerical data within real-world contexts. • given a real-world scenario, determines and describes how changes in data values impact measures of center and variation; identifies measures of center and variation appropriate for the scenario.

Achievement Level	Achievement Level Descriptions
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • defines a rational number; explains and justifies how to plot, order, and compare positive and negative rational numbers when given in the same form and when positive rational numbers are represented in different forms. • given a real-world context, interprets and explains the meaning of the absolute value of a rational number in its context. • solves and explains mathematical or real-world problems with up to two steps involving absolute value, including the justification of the comparison of absolute value. • analyzes an error in the multiplication or division computation using a standard algorithm and justifies the reasoning. • computes products and quotients of positive fractions by positive fractions, including mixed numbers with procedural fluency and explains relationship between multiplication and division, reciprocals, and algorithms. • solves multi-step real-world problems involving any of the four operations with positive multi-digit decimals or positive fractions, including mixed numbers, and interprets the solution in the context of the situation. • given a mathematical or real-world context, finds the greatest common factor within 1000 and least common multiple with factors to 25 of two whole numbers and explains the relationship between the greatest common factor and rewriting equivalent fractions. • rewrites the sum of two composite whole numbers having a common factor, as a common factor multiplied by the sum of two whole numbers and justifies rewriting it multiple ways. • uses reasoning to determine the unknown exponential value when given an equation with a known integer base equal to an equivalent value. • rewrites positive rational numbers in equivalent forms including fractions, terminating decimals, and percentages, and explains the relationship between representations. • adds and subtracts integers with procedural fluency and explains and justifies why the inverse relationship exists between addition and subtraction with integers using properties of operations. • multiplies and divides integers with procedural fluency and explains why the inverse relationship exists between multiplication and division with integers using properties of operations. • given a mathematical or real-world context, analyzes an error in the translation of a written description into a linear algebraic expression or in the translation of a linear algebraic expression into a written description and justifies the reasoning. • translates a real-world written description into algebraic inequality form and represents an inequality with the variable on the right or left side of the inequality on a number line and translates an algebraic inequality into a real-world written description. • evaluates algebraic expressions using substitution and order of operations and justifies using the order of operations. • explains how the properties of operations generate equivalent algebraic expressions.

Achievement Level	Achievement Level Descriptions
Level 5	- identifies multiple representations of the same equation using addition and subtraction, demonstrating how multiple equations can answer the same question. - identifies multiple representations of the same equation using multiplication and division, demonstrating how multiple equations can answer the same question. - describes how comparative relational thinking is used to determine the unknown decimal or fraction, including mixed numbers and fractions greater than one, in an equation involving any of the four operations, relating three numbers, with the unknown in any position, including the unknown and different operations on either side of the equal sign. - interprets and explains the relationship between ratios presented in a two- or three-column table. - explains the relationship between the percent, the part, and the whole and how it generates equivalent ratios. - solves mathematical or real-world problems involving ratios, rates, and unit rates, including comparisons, mixtures, ratios of lengths and more than one conversion within the same measurement system. - plots rational number ordered pairs in all four quadrants and on both axes; identifies and explains why the x- or y-axis is the line of reflection when two ordered pairs have an opposite x- or y-coordinate. - solves mathematical and real-world problems including determining the fourth vertex of a rectangle. - justifies the relationship between the area of a rectangle and the area of a right triangle. - solves mathematical or real-world problems with positive rational numbers involving the area of quadrilaterals and composite figures by decomposing the shapes in different ways and showing how they are equivalent. - explains what makes a question statistical. - creates box plots and histograms to represent and interpret sets of numerical data within real-world contexts; distinguishes between truthful and deceptive data.

Grade 7 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • applies the Laws of Exponents to identify equivalent numerical expressions, using whole number bases with whole number exponents. • identifies different but equivalent forms of rational numbers including fractions, mixed numbers, repeating decimals, and percentages to solve mathematical problems. • solves mathematical problems using order of operations of up to four steps with integers including grouping symbols, whole-number exponents, and absolute value. • adds, subtracts, multiplies, and divides positive rational numbers in the same form. • solves real-world problems involving one of the four operations with rational numbers in the same form and at least one number is negative. • applies properties of operations to add and subtract linear expressions with one term having a rational coefficient. • solves one-step inequalities in one variable within a mathematical context and represents solutions algebraically or graphically. • solves two-step equations in one variable within a mathematical context, where all terms are rational numbers of the same form. • identifies the ratios to solve real-world percent problems. • given the proportion involving whole numbers, applies ratios to solve real-world problems involving proportions having no conversions. • solves mathematical problems involving a single conversion of units across different measurement systems wherein the given measurement is a whole number. • determines whether two quantities have a proportional relationship by examining the relationship from a graph. • given a mathematical context, graphs proportional relationships from a table. • given any representation except a written description of a proportional relationship, translates the representation into a table or equation. • solves one-step real-world problems involving proportional relationships wherein the values are whole numbers. • identifies expressions that could be used to find the areas of trapezoids, parallelograms, or rhombi. • solves mathematical problems involving the area of regular polygons by decomposing them into triangles or quadrilaterals.

Achievement Level	Achievement Level Descriptions
Level 2	- explores the proportional relationship between circumferences and diameters of circles and identifies expressions that could be used for the circumference of a circle to solve mathematical problems when an image is given. - identifies an expression that could be used to find the area of a given circle. - identifies the scale factor in mathematical problems involving dimensions of geometric figures. - given a net in a mathematical or real-world context, determines the corresponding right circular cylinder, or, given the right circular cylinder, determines the corresponding net. - determines the expression that can be used to find the surface area for a given visual model with labeled dimensions for a right circular cylinder. - determines the expression that could be used to find the volume of right circular cylinders using a visual model. - identifies if the data set contains an outlier. - given two numerical representations of data, calculates the means, medians, and ranges and uses those measures to make comparisons between the two populations. - given categorical data from a random sample, identifies a ratio that describes the proportional relationship. - uses proportional reasoning to construct and display data of no more than four categories in circle graphs. - given a real-world numerical data set, chooses an appropriate graphical representation. - determines the sample space for a single experiment involving tossing a fair coin or rolling a fair die. - classifies a given probability of a chance event written as a percentage or decimal as likely or unlikely. - finds the theoretical probability of an event related to a simple experiment, which include tossing a fair coin or rolling a fair die, and expresses that probability as a fraction. - uses a simulation of a simple experiment to find experimental probabilities.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - applies the Laws of Exponents to evaluate numerical expressions and identify equivalent numerical expressions, limited to whole-number exponents and rational number bases. - rewrites rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals, and percentages to solve mathematical problems. - solves mathematical problems using multi-step order of operations with positive rational numbers, including grouping symbols, whole-number exponents, and absolute value. - adds, subtracts, multiplies, and divides rational numbers in the same form. - solves real-world problems involving one of the four operations with rational number and at least one number is a different form and at least one number is a negative.

Achievement Level	Achievement Level Descriptions
Level 3	• applies properties of operations to add and subtract linear expressions with more than one term having rational coefficients in the same form. • determines whether two linear expressions with rational coefficients in the same form are equivalent. • writes or solves one-step inequalities in one variable within a mathematical context and represents solutions algebraically or graphically. • writes or solves two-step equations in one variable within a mathematical context, where all terms are rational numbers of the same form. • identifies the ratios and applies the ratio to solve real-world percent problems. • applies ratios, involving whole numbers, to solve real-world problems involving proportions having no conversions. • solves mathematical problems involving the conversion of units across different measurement systems. • determines whether two quantities have a proportional relationship by examining a table or a graph. • determines the constant of proportionality within a mathematical context from a table or graph. • given a mathematical context, graphs proportional relationships from a table or equation. • given a written description of a proportional relationship, translates the representation into a table or equation. • solves one-step real-world problems involving proportional relationships wherein at least one value is a rational number. • applies formulas to find the areas of parallelograms and rhombi. • solves mathematical problems involving the area of polygons or composite figures by decomposing them into triangles or rectangles. • explores the proportional relationship between circumferences and diameters of circles and applies a formula for the circumference of a circle to solve mathematical problems. • applies a formula to find the area of a circle to solve mathematical problems. • solves mathematical problems involving dimensions and areas of geometric figures, including scale drawings and scale factors. • given a mathematical context, finds the surface area of a right circular cylinder given the figure's net. • solves real-world problems involving surface area of right circular cylinders using a visual model. • solves mathematical problems involving volume of right circular cylinders using a visual model. • determines an appropriate measure of center or measure of variation to summarize numerical data, represented graphically without outliers in a given context. • given two graphical representations of data, calculates and/or determines the measures of center or measures of variability and uses those measures to make comparisons and interpret results about the two populations. • given categorical data from a random sample, determines the ratio that can be used to make predictions about a population. • uses proportional reasoning to construct, display, and interpret data of no more than four categories in circle graphs.

Achievement Level	Achievement Level Descriptions
Level 3	- given a real-world numerical or categorical data set, chooses an appropriate graphical representation. - determines the sample space for a simple experiment with non-repeated elements (for example a bag containing 1 red marble, 1 green marble, and 1 yellow marble). - given the probability of a chance event, interprets the likelihood of it occurring and compares probabilities of chance events wherein the probabilities are given in the same form. - finds the theoretical probability of an event related to a simple experiment, which include tossing a fair coin, rolling a fair die, picking a card randomly from a deck, picking marbles randomly from a bag, and spinning a fair spinner, and expresses that probability as a fraction. - uses a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities, and expresses that probability as a fraction.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: - applies the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational number bases. - rewrites rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals, and percentages to solve real-world problems. - solves mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents, and absolute value. - adds, subtracts, multiplies, and divides rational numbers in different forms with procedural fluency. - solves real-world problems involving more than one of the four operations with rational numbers and at least one number is a negative and/or at least one is a different form. - applies properties of operations to add and subtract linear expressions with rational coefficients. - determines whether two linear expressions are equivalent. - writes and solves one-step inequalities in one variable within a mathematical context and represents solutions algebraically and graphically. - writes and solves two-step equations in one variable within a mathematical or real-world context, where all terms are rational numbers. - solves multi-step real-world percent problems. - applies ratios, involving rational numbers, to solve real-world problems involving proportions. - solves mathematical or real-world problems involving multiple conversions of units across different measurement systems. - determines whether two quantities have a proportional relationship by examining any of these representations: table, graph, or written description.

Achievement Level	Achievement Level Descriptions
Level 4	- determines the constant of proportionality within a mathematical or real-world context from any of these representations: table, graph, or written description of a proportional relationship. - given a mathematical or real-world context, graphs proportional relationships from a table, equation, or written description. - given any representation of a proportional relationship, translates the representation into a written description. - solves multi-step real-world problems involving proportional relationships. - applies formulas to find the areas of trapezoids, parallelograms, and rhombi. - solves mathematical or real-world problems involving the area of polygons or composite figures by decomposing them into triangles and quadrilaterals. - explores the proportional relationship between circumferences and diameters of circles; applies a formula for the circumference of a circle to solve mathematical and real-world problems. - determines an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context with outliers. - given two numerical or graphical representations of data, calculates and/or determines the measures of center and measures of variability and uses those measures to make comparisons, interpret results, and draw conclusions about the two populations. - given categorical data from a random sample, uses proportional relationships to make predictions about a population. - uses proportional reasoning to construct, display, and interpret data for up to six categories in circle graphs. - given a real-world numerical or categorical data set, chooses and creates an appropriate graphical representation. - determines the sample space for a simple experiment including repeated elements (such as a bag containing 2 red marbles, 1 green marble, and 3 yellow marbles). - given the probability of a chance event, interprets the likelihood of it occurring and compares probabilities of chance events wherein the probabilities are given in different forms. - finds the theoretical probability of an event related to a simple experiment, which include tossing a fair coin, rolling a fair die, picking a card randomly from a deck, picking marbles randomly from a bag, and spinning a fair spinner, and expresses that probability as a percentage and/or as a decimal. - uses a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities, and expresses that probability as a percentage and/or as a decimal.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - applies the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational number bases, and provides justification. - rewrites rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals, and percentages to solve

Achievement Level	Achievement Level Descriptions
Level 5	mathematical and real-world problems, and provides justification for the form chosen. - analyzes an error in a mathematical problem using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents, and absolute value, and justifies the reasoning. - solves real-world problems involving more than one of the four operations with rational numbers and interprets the solution in the context of the situation. - analyzes an error in applying the properties of operation to add and subtract linear expressions with rational coefficients and justifies the reasoning. - justifies why two linear expressions are or are not equivalent using properties of operations. - writes and solves one-step inequalities in one variable within a mathematical context, represents solutions algebraically and graphically, and interprets the solution in context of the situation. - writes and solves two-step equations in one variable within a real-world context, where all terms are rational numbers and interprets the solution in context of the situation. - solves multi-step real-world percent problems and interprets the solution in the context of the situation. - applies previous understanding of ratios to solve real-world problems involving proportions and interprets the solution in the context of the situation. - solves and interprets the solution in the context of the situation of real-world problems involving multiple conversions of units across different measurement systems. - determines whether two quantities have a proportional relationship by examining any of these representations: table, graph, or written description; for a proportional relationship, makes the connection between the constant of proportionality and explains that the ratio between the two quantities is a proportional relationship. - determines and interprets the constant of proportionality within a mathematical or real-world context from any of these representations: table, graph, or written description of a proportional relationship. - given a mathematical or real-world context, graphs proportional relationships from a table, equation or a written description and uses the graph, table, or equation to find any values in the proportional relationship. - given any representation of a proportional relationship, translates the representation to any of the following: written description, table, or equation and provides a justification for why the two representations show the same proportional relationship. - solves real-world problems involving proportional relationships and interprets the solution in the context of the problem. - solves mathematical or real-world problems involving the area of multiple polygons or multiple composite figures by decomposing the shapes in different ways and showing how they are equivalent. - applies a formula for the circumference of a circle to solve mathematical and real-world problems, and interprets the solution in the context of the situation. - describes the relationship between the formula for the area of a rectangle and that of a circle; applies a formula to find the area of a circle to solve

Achievement Level	Achievement Level Descriptions
Level 5	mathematical and real-world problems; and interprets the solution in the context of the situation. • solves mathematical or real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors, and interprets the solution in context of the situation. • solves real-world problems involving surface area of right circular cylinders, and interprets the solution in the context of the situation. • solves mathematical or real-world problems involving volume of right circular cylinders, and interprets the solution in the context of the situation. • determines an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, and compares the effect of the outlier on each measure of data. • given two numerical or graphical representations of data, calculates and/or determines the measures of center and measures of variability and uses those measures to make comparisons, interpret results, draw conclusions, and make predictions about the two populations. • given categorical data from a random sample, uses proportional relationships, make predictions and make suggestions for improving the likelihood of the prediction. • given a real-world numerical or categorical data set, chooses, creates, and justifies an appropriate graphical representation. • analyzes an error in finding the theoretical probability of an event related to a simple experiment and justifies the reasoning. • uses a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities, and expresses that probability as a percentage, fraction, and/or as a decimal, and explains the relationship between the number of trials of an experiment and its theoretical probability.

Grade 8 Mathematics

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: - identifies numbers as rational or irrational. - given an irrational square root or cube root, determines the integer values it lies between. - applies the Laws of Exponents to identify equivalent numerical expressions, limited to integer exponents and rational number bases, and applies one property from the Law of Exponents. - given two numbers in scientific notation with different powers of 10, determines which one is larger or smaller. - adds and subtracts numbers expressed in scientific notation in the same power of 10 wherein the sum of the coefficients is not larger than 10. - solves real-world problems by adding and subtracting numbers expressed in scientific notation in the same power of 10 wherein the sum of the coefficients is not larger than 10. - solves multi-step mathematical problems with up to 4 steps involving the order of operations with rational numbers including integer exponents. - applies the Laws of Exponents to identify equivalent algebraic expressions, using integer exponents and monomial bases using one law of exponents. - applies properties of operations to multiply two linear expressions with integer coefficients where both factors are monomials. - identifies a common monomial factor in the sum of two algebraic expressions. - solves multi-step linear equations in one variable, with variables on one side of the equation and rational number coefficients that generate one solution. - solves two-step linear inequalities in one variable with whole number coefficients and represents solutions algebraically. - given an equation in the form of $x^2=p$, where p is a perfect square between 0 and 225, determines a positive solution. - determines whether a linear relationship is also a proportional relationship from a graph. - given a graph of a linear relationship involving integer values, determines the slope. - given a graph of a linear relationship, identifies the equivalent equation in slope-intercept form. - given a two-variable linear equation in slope-intercept form, identifies the graph that represents the given linear equation.

Achievement Level	Achievement Level Descriptions
Level 2	• given a real-world context, determines the slope and y-intercept of a two-variable linear equation from an equation in slope-intercept form. • recognizes that a solution to a system of equations can be represented as an ordered pair. • when given a system of two linear equations represented graphically, identifies the solution. • given a graph or mapping diagram, determines whether the relationship is a function. • given a function defined by a graph, determines whether the function is a linear function. • given a specific section of a graph that represents a function, analyzes the specific section as increasing or decreasing. • applies the Pythagorean Theorem in a mathematical problem to find the hypotenuse of a right triangle resulting in a whole number. • applies the Pythagorean Theorem to solve mathematical problems involving the distance between two points in the first quadrant of a coordinate plane when the two points are shown as part of a right triangle. • identifies the relationship between supplementary, complementary, vertical, or adjacent angles with numerical angle measures. • given a triangle including two interior numerical angle measures, identifies the corresponding equation to solve for the third unknown interior angle measure. • given a preimage and image generated by a translation, identifies the transformation that describes the relationship. • given a preimage and image generated by a single dilation, identifies the scale factor of the dilation as less than 1 or greater than 1. • identifies the two-dimensional figure resulting from a single translation. • solves mathematical problems involving proportional relationships between similar triangles where a diagram and the scale factor are provided and the scale factor is a whole number. • given a set of real-world bivariate numerical data, identifies the corresponding scatter plot or line graph. • given a scatter plot, identifies a positive or negative association and any outliers. • determines the sample space for a repeated experiment, that is repeated two times, involving a coin. • finds the theoretical probability of an event related to a repeated experiment, which include tossing a fair coin or rolling a fair die, and expresses that probability as a fraction. • solves real-world problems involving probabilities related to single experiments involving coins, dice, or a given fair spinner.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • defines irrational numbers within the real number system and locates an approximate value of an irrational number on a number line. • plots, orders, and compares, using $<$, $>$, $=$, rational and irrational numbers (when roots are included, roots will have the same index).

Achievement Level	Achievement Level Descriptions
Level 3	• applies the Laws of Exponents to evaluate numerical expressions and identify equivalent numerical expressions, limited to integer exponents and rational number bases. • expresses numbers in scientific notation to represent and approximate very large quantities. • adds and subtracts numbers expressed in scientific notation in the same power of 10, and multiplies and divides numbers expressed in scientific notation. • solves real-world problems by adding and subtracting numbers expressed in scientific notation in the same power of 10, and multiplies and divides numbers expressed in scientific notation. • solves multi-step mathematical and real-world problems with up to 5 steps involving the order of operations with rational numbers including integer exponents. • applies the Laws of Exponents to identify equivalent algebraic expressions, using positive exponents and monomial bases using laws of exponents. • applies properties of operations to multiply two linear expressions with rational coefficients where both factors are monomials. • given a sum of two algebraic expressions, identifies the equivalent expression having a common monomial factor as a common factor multiplied by the sum of two algebraic expressions. • solves multi-step linear equations in one variable, with variables on both sides of the equation and rational number coefficients that generate one solution. • solves two-step linear inequalities in one variable with positive rational coefficients and represents solutions algebraically or graphically. • given an equation in the form of $x^2=p$ and $x^3=q$, where p is a perfect square between 0 and 225 and q is a perfect cube between 0 and 125, determines a positive solution. • determines whether a linear relationship is also a proportional relationship using tables and equations. • given a table of a linear relationship involving integer values, determines the slope. • given a table (including the y-intercept), graph, or written description (including ordered pairs where one is the y-intercept) of a linear relationship involving integer values, writes the equation in slope-intercept form. • given a mathematical context, graphs a two-variable linear equation from a table, or an equation in slope-intercept form. • given a real-world context involving integer values, determines and interprets the slope and y-intercept of a two-variable linear equation from a written description, a table, a graph, or an equation in slope-intercept form. • given a system of two linear equations that has one solution with integer values and a specified set of possible solutions, determines the ordered pair that satisfies the system of linear equations. • given a system of two linear equations represented graphically on the same coordinate plane, determines whether there is one solution. • given a mathematical or real-world context, solves systems of two linear equations by graphing; solutions are integers. • given a set of ordered pairs, a table, a graph, or mapping diagram, determines whether the relationship is a function, and given a set of ordered pairs, a table, or mapping diagram, identifies the domain and range of the relation as a list of numbers.

Achievement Level	Achievement Level Descriptions
Level 3	• given a function defined by an equation, determines whether the function is a linear function. • analyzes a graphical representation of a functional relationship between two quantities and identifies where the function is increasing, decreasing, or constant. • applies the Pythagorean Theorem to solve mathematical problems involving unknown side lengths in right triangles. • applies the Pythagorean Theorem to solve mathematical problems involving the distance between two points in a coordinate plane when the two points are shown as part of a right triangle. • uses the Triangle Inequality Theorem to determine whether a triangle can be formed from a given set of sides. • solves mathematical problems with one relationship between supplementary, complementary, vertical, or adjacent angles with numerical angle measures. • solves problems involving the relationships of interior angles of a triangle. • develops formulas for the sums of interior angles of regular polygons by decomposing them into triangles. • given a preimage and image generated by a reflection, identifies the transformation that describes the relationship. • given a scale factor for generating a single dilation, identifies the corresponding preimage and image generated by the given scale factor and single dilation. • applies a single transformation, either a reflection over the x- or y-axis or translation, on two-dimensional figures using the coordinate plane. • solves mathematical problems involving proportional relationships between similar triangles where a diagram is provided and the scale factor is a whole or rational number. • given a set of real-world bivariate numerical data, constructs either a scatter plot or a line graph as directed. • given a scatter plot, identifies a positive or negative association and whether it is strong or weak and has any outliers. • given a scatter plot with a linear association, identifies a straight line that appropriately fits the data. • determines the sample space for a repeated experiment involving a coin, a die, or a given fair spinner. • finds the theoretical probability of an event related to a repeated experiment, which include tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement, and spinning a fair spinner, and expresses that probability as a fraction. • solves real-world problems involving probabilities related to single or repeated experiments involving coins, dice, or a given fair spinner, including making predictions based on theoretical probability.

Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • defines irrational numbers within the real number system and locates an approximate value of a two-term numerical expression involving irrational numbers on a number line. • plots, orders, and compares, using $<$, $>$, $=$, rational and irrational numbers represented in various forms (must include at least one square root and one cube root). • applies the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to integer exponents and rational number bases, with procedural fluency. • expresses numbers in scientific notation to represent and approximate very large or very small quantities and determines how many times larger or smaller one number is compared to a second number. • adds, subtracts, multiplies, and divides numbers expressed in scientific notation. • solves real-world problems by adding, subtracting, multiplying, and dividing numbers expressed in scientific notation. • solves multi-step mathematical and real-world problems with up to 6 steps involving the order of operations with rational numbers including exponents and radicals. • applies the Laws of Exponents to generate equivalent algebraic expressions, using integer exponents and monomial bases using laws of exponents. • applies properties of operations to multiply two linear expressions with rational coefficients where one factor is a monomial. • rewrites the sum of two algebraic expressions having a common monomial factor with a common factor multiplied by the sum of two algebraic expressions. • solves multi-step linear equations in one variable, with rational number coefficients that generate one solution, no solution, or infinitely many solutions. • solves two-step linear inequalities in one variable and represents solutions algebraically and graphically. • given an equation in the form of $x^2=p$ and $x^3=q$, where p is a perfect square between 0 and 225 and q is a perfect cube between -125 and 125, determines positive and negative solutions. • determines whether a linear relationship is also a proportional relationship using written descriptions. • given a table, graph, or written description of a linear relationship involving rational values, determines the slope. • given a table, graph, or written description of a linear relationship, writes the equation in slope-intercept form. • given a mathematical or real-world context, graphs a two-variable linear equation from a written description, a table, or an equation in slope-intercept form. • given a real-world context involving rational values, determines and interprets the slope and y-intercept of a two-variable linear equation from a written description, a table, a graph, or an equation in slope-intercept form.
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Level 4	• given a system of two linear equations and a specified set of possible solutions, determines the ordered pairs that satisfy the system of linear equations. • given a system of two linear equations represented graphically on the same coordinate plane, determines whether there is no solution or infinitely many solutions. • given a mathematical or real-world context, solves systems of two linear equations by graphing; solutions can be rational numbers. • given a set of ordered pairs, a table, a graph, or mapping diagram, determines whether the relationship is a function and determines the domain and range of the relation as a list of numbers or as a simple inequality (e.g. $x \geq 1$). • given a function defined by an input-output table, determines whether the table could represent a linear function. • analyzes a real-world written description or graphical representation of a functional relationship between two quantities and identifies where the function is increasing, decreasing, or constant. • applies the Pythagorean Theorem to solve real-world problems involving unknown side lengths in right triangles. • applies the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points with a given coordinate plane. • uses the Triangle Inequality Theorem to determine whether a triangle can be formed from a given set of sides and uses the converse of the Pythagorean Theorem to determine whether the resulting triangle is a right triangle. • solves mathematical problems involving multiple relationships between supplementary, complementary, vertical, or adjacent angles with numerical angle measures. • solves problems involving the relationships of interior and exterior angles of a triangle when one angle measure is given as an algebraic expression. • develops and uses formulas for the sums of interior angles of regular polygons by decomposing them into triangles. • given a preimage and image generated by a rotation, identifies the transformation that describes the relationship. • given a preimage and image generated by a single dilation, identifies the scale factor of the dilation. • describes and applies a single transformation, either a rotation about the origin or a dilation centered at the origin on two-dimensional figures using coordinates and the coordinate plane. • solves mathematical or real-world problems involving proportional relationships between similar triangles with or without a diagram where the scale factor is a whole or rational number. • given a set of real-world bivariate numerical data, constructs a scatter plot or a line graph as appropriate for the context. • given a scatter plot within a real-world context, describes patterns of association, including linear or nonlinear and any outliers. • given a scatter plot with a linear association, informally fits a straight line. • determines the sample space for a repeated experiment including experiments that involve replacement (marbles in a bag and cards from a deck).
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Level 4	- finds the theoretical probability of an event related to a repeated experiment, which include tossing a fair coin, rolling a fair die, picking a card randomly from a deck with replacement, picking marbles randomly from a bag with replacement, and spinning a fair spinner, and expresses that probability as a percentage and/or as a decimal. - solves real-world problems involving probabilities related to single or repeated experiments, including experiments that involve replacement, including making predictions based on theoretical probability.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - defines irrational numbers within the real number system and locates an approximate value of a numerical expression involving irrational numbers on a number line and explains their reasoning. - explains and justifies how to plot, order, and compare rational and irrational numbers represented in various forms. - analyzes an error in the application of the Laws of Exponents used to evaluate numerical expressions and justifies the reasoning. - adds, subtracts, multiplies, and divides numbers expressed in scientific notation, including combinations of these operations. - solves real-world problems by adding, subtracting, multiplying, and dividing numbers expressed in scientific notation and interprets the solution in the context of the situation. - solves and explains multi-step mathematical and real-world problems with up to 6 steps and justifies each step in applying the order of operations with rational numbers including exponents and radicals. - applies the Laws of Exponents to generate equivalent algebraic expressions, limited to integer exponents and monomial bases using laws of exponents and provides justification. - rewrites the sum of two algebraic expressions having a common monomial factor in different ways (including factoring out the GCF) with a common factor multiplied by the sum of two algebraic expressions. - solves multi-step linear equations in one variable, with rational number coefficients that generate one solution, no solution, or infinitely many solutions and interprets the solution in the context of the situation. - solves two-step linear inequalities in one variable and represents solutions algebraically and graphically and interprets the solution in context of the situation. - given an equation in the form of $x^2=p$ and $x^3=q$, where p is a perfect square between 0 and 225 and q is a perfect cube between -125 and 125, determines positive and negative solutions and explains why both are valid. - given a table, graph, or written description of a linear relationship involving rational values, determines the slope, and explains the connection between slope and the constant of proportionality or explains the connection between slope and similar triangles on the coordinate plane. - given a system of two linear equations and a specified set of possible solutions, determines the ordered pairs that satisfy the system of linear equations and interprets the solution in the context of the situation.

Level 5	• given a system of two linear equations represented graphically on the same coordinate plane, determines and provides a justification as to whether there is one solution, no solution, or infinitely many solutions. • given a real-world context, solves systems of two linear equations by graphing, and interprets the solution in the context of the situation. • given a set of ordered pairs, a table, a graph, or mapping diagram, determines whether the relationship is a function, determines the independent and dependent variables, and identifies the domain and range of the relation as a list of numbers or as a simple inequality (e.g. $x \geq 1$) and interprets the domain constraints in terms of the context. • analyzes a real-world written description of a functional relationship between two quantities and draws a graph to identify where the function is increasing, decreasing, or constant. • applies the Pythagorean Theorem more than once to solve mathematical and real-world problems involving unknown side lengths in right triangles. • applies the Pythagorean Theorem to solve mathematical and real-world problems involving the distance between two points in a coordinate plane without the coordinate plane given. • given three side lengths that do not make a triangle, determine which side should be changed to form a triangle, and uses the converse of the Pythagorean Theorem to determine whether a given triangle is a right triangle. • solves mathematical problems involving the relationships between supplementary, complementary, vertical, or adjacent angles with at least one angle measures given as an algebraic expression. • solves problems involving the relationships of interior and exterior angles of a triangle when multiple angle measures are given as algebraic expressions. • develops and uses formulas for the sums of the interior angles of regular polygons by decomposing them into triangles; includes finding a missing angle measure and includes representing angle measures as algebraic expressions. • given a preimage and image generated by a single transformation, analyzes the transformation that describes the relationship and recognizes that translations, rotations, and reflections preserve congruence. • given a preimage and image generated by a single dilation, identifies the scale factor that describes the relationship, and recognizes and explains that dilations do not preserve congruence unless the scale factor is 1. • solves mathematical or real-world problems involving proportional relationships between similar triangles, having at least one side represented as an algebraic expression, where a diagram is not provided and the scale factor is a rational number. • given a set of real-world bivariate numerical data, justifies whether the construction of a scatter plot or a line graph is appropriate for the context. • given a scatter plot with a linear association, informally fits a straight line and uses the number of points above and below to justify. • analyzes an error and justifies a reasoning in a sample space for a corresponding repeated experiment. • analyzes an error in finding the theoretical probability of an event related to a repeated experiment and justifies the reasoning.
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Algebra 1 EOC

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • applies the Laws of Exponents to identify equivalent numerical expressions involving rational exponents. • identifies an equivalent algebraic expression using properties of exponents. • adds and subtracts numerical radicals limited to two with the same radicand. • identifies parts of an equation or expression that represent a quantity in terms of a mathematical context. • rearranges equations or formulas using the four arithmetic operations to isolate a quantity of interest. • adds and subtracts binomial expressions with integer coefficients. • rewrites a polynomial expression with at least two variables as a product of a monomial expression and a polynomial expression. • given a real-world context, solves one-variable multi-step linear equations. • identifies a linear two-variable equation in point-slope form or standard form that best represents the relationship between quantities from a graph, a written description, or a table of values within a mathematical context. • identifies a linear equation that is parallel or perpendicular to a given equation or a graph. • identifies the solution and graph of mathematical problems that are modeled with linear functions; identifies domain, range, and rate of change. • given a mathematical context, solves multi-step one-variable linear inequalities, representing solutions algebraically or graphically. • identifies a two-variable linear inequality that best represents the relationship between quantities from a graph within a mathematical context. • given a mathematical context, solves one-variable quadratic equations in factored form or the form $ax^2 + c = 0$ with integral coefficients over the real number system. • identifies a quadratic function in vertex form when $a = 1$ that represents the relationship between two quantities from its graph. • given an expression or equation representing a real-world quadratic function in factored form, identifies the zeroes or given in vertex form and identifies the vertex. • given a table or equation in vertex or factored form of a quadratic function, identifies the graph that represents the function and/or identifies the domain, intercepts, and/or vertex.

Achievement Level	Achievement Level Descriptions
Level 2	- identifies the solution and graph of mathematical problems that are modeled with a quadratic function, given in vertex form or factored form; identifies domain, intercepts, and vertex. - given a mathematical context and an equation, solves one-variable absolute value equations. - given a table or equation of an absolute value function, identifies the graph that represents the function and/or identifies the domain, intercepts, and/or vertex. - given a mathematical context, classifies a given graph of an exponential function as representing growth or decay. - identifies an exponential function that represents the relationship between two quantities from a graph. - given a table or equation in $f(x) = ab^x$ form of an exponential function, identifies the graph that represents the function and/or determines domain, range, and/or constant percent rate of change. - given a mathematical context, solves a system of two-variable linear equations algebraically or graphically. - identifies the graph or solution set of a system of two-variable inequalities. - given a real-world context, identifies a linear equation or an inequality to represent given constraints. - given a graph that defines a function, classifies the function type. - calculates the average rate of change of a real-world situation represented in a table over a specified interval. - compares key features of linear functions each represented graphically. - compares key features of linear and nonlinear functions each represented graphically. - identifies the resulting graph of a given function after replacing (x) with $(x)+k$ or $f(x + k)$ for specific values of k. - calculates the total amount of an investment earning simple interest. - identifies the graphical representation of a given data set as numerical or categorical and univariate or bivariate. - identifies a linear function based on a given scatter plot and identifies the slope and y-intercept. - completes a two-way frequency table summarizing bivariate categorical data.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: - applies the Laws of Exponents, with at least one law, to evaluate numerical expressions and generate equivalent numerical expressions involving rational exponents. - generates equivalent algebraic expressions using a single property of exponents. - adds, subtracts, and multiplies numerical radicals limited to a single arithmetic operation. - identifies and interprets a single part of an equation or expression that represents a quantity in terms of a mathematical or real-world context. - rearranges equations or formulas, limited to two steps, to isolate a quantity of interest.

Achievement Level	Achievement Level Descriptions
Level 3	• adds, subtracts, and multiplies binomial and/or trinomial expressions with integer coefficients that results in a polynomial expression with no more than three terms. • divides a binomial expression by a monomial expression with integer coefficients. • rewrites a binomial expression or a trinomial expression as a product of linear binomial expressions. • given a real-world context, identifies and solves one-variable multi-step linear equations. • writes a linear two-variable equation to represent relationships between quantities from a graph, a written description, or a table of values within a mathematical context. • writes a linear two-variable equation for a line that is parallel or perpendicular to a given line on a graph that goes through a given point. • given a table or equation in slope-intercept or point-slope form of a linear function, identifies a graph of that function and determines the domain, range, and rate of change. • solves and graphs mathematical problems that are modeled with linear functions, given in slope-intercept or point-slope form, and interprets key features. • given a mathematical or real-world context, writes and solves multi-step one-variable linear inequalities, representing solutions algebraically or graphically. • writes a two-variable linear inequality that best represents the relationship between quantities from a graph or a written description within a mathematical context. • given a mathematical context, graphs the solution set to a two-variable linear inequality, given in slope-intercept or point-slope form. • given a mathematical or real-world context, identifies and/or solves one-variable quadratic equations over the real number system. • writes a quadratic function when $a = 1$ to represent the relationship between two quantities from a graph or a written description within a mathematical context. • given the x-intercepts and another point on the graph of a quadratic function where $a = 1$ or $a = -1$, identifies the equation of the function in factored form. • given an expression or equation representing a real-world quadratic function in factored form, identifies and interprets the zeroes or given in vertex form and identifies and interprets the vertex. • given a table or equation in vertex or factored form of a quadratic function, graphs the function and identifies its domain, range, intercepts, and/or vertex. • solves and graphs mathematical problems that are modeled with quadratic functions given in vertex or factored form and identifies key features. • given a mathematical or real-world context, identifies the equation and solves one-variable absolute value equations. • given a table or equation of an absolute value function, graphs the function and determines the domain, range, intercepts, and vertex. • given a mathematical context, classifies an exponential function as representing growth or decay, given $f(x) = a(1 \pm r)^x$.

Achievement Level	Achievement Level Descriptions
Level 3	• writes an exponential function to represent a relationship between two quantities from a graph or a written description within a mathematical context. • given a table or equation in $f(x) = ab^x$ form of an exponential function, graphs the function and determines its domain, range, y-intercept, constant percent rate of change, and interval behavior. • given a mathematical or real-world context, identifies and solves a system of two-variable linear equations algebraically or graphically. • graphs the solution set of a system of two-variable linear inequalities given slope-intercept form. • given a real-world context, represents constraints as a system of linear equations or inequalities. • given an equation or graph that defines a function, classifies the function type. • given a function represented in function notation, evaluates the function for an input in its domain given in mathematical context. • calculates the average rate of change of a real-world situation represented graphically or in a table over a specified interval. • compares key features of linear functions each represented graphically or algebraically. • compares key features of linear and nonlinear functions each represented graphically or algebraically. • determines whether a linear, quadratic, or exponential function best models a given real-world situation from a written description. • identifies the resulting graph of a given function after replacing (x) with $(x)+k$, $kf(x)$, and $f(x)+k$ for specific values of k. • calculates the total amount of an investment earning compound interest. • identifies simple interest as linear growth and compound interest as exponential growth. • given a set of data, selects an appropriate method to represent bivariate data, depending on whether it is numerical or categorical. • identifies different components and quantities of data distributions represented in various ways and identifies as numerical or categorical and univariate or bivariate. • identifies when there is correlation and not necessarily causation. • estimates a population total, using data from a sample survey. • fits a linear function to bivariate numerical data that suggests a linear association and interprets the slope and y-intercept of the model. • given a scatter plot with a line of fit, identifies which points will have positive and negative residuals. • completes a two-way frequency table summarizing bivariate categorical data and finds the joint and marginal frequencies.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • applies the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions involving rational exponents. • generates multiple equivalent algebraic expressions using properties of exponents.

Achievement Level	Achievement Level Descriptions
Level 4	• adds, subtracts, multiplies, and divides numerical radicals limited to a single arithmetic operation. • identifies and interprets parts of an equation or expression that represent a quantity in terms of a mathematical or real-world context, including viewing one or more of its parts as a single entity. • rearranges equations or formulas to isolate a quantity of interest. • adds, subtracts, and multiplies polynomial expressions with rational number coefficients. • divides a polynomial expression by a monomial expression with rational number coefficients. • rewrites a polynomial expression as a product of polynomials. • given a real-world context, writes and solves one-variable multi-step linear equations. • writes a linear two-variable equation to represent relationships between quantities from a graph, a written description, or a table of values within a mathematical or real-world context. • writes a linear two-variable equation for a line that is parallel or perpendicular to a given line and goes through a given point. • given a table, equation, or written description of a linear function, graphs that function and determines and interprets its key features. • solves and graphs mathematical or real-world problems that are modeled with linear functions, interprets key features, and determines constraints in terms of the context. • given a mathematical or real-world context, writes and solves one-variable linear inequalities, including compound inequalities, representing solutions algebraically or graphically. • writes two-variable linear inequalities to represent relationships between quantities from a graph or a written description within a mathematical or real-world context. • given a mathematical or real-world context, graphs the solution set to a two-variable linear inequality. • given a mathematical or real-world context, writes and solves one-variable quadratic equations over the real number system. • writes a quadratic function to represent the relationship between two quantities from a graph, a written description, or a table of values within a mathematical or real-world context. • given the x-intercepts and another point on the graph of a quadratic function, writes the equation for the function. • given an expression or equation representing a quadratic function, determines the vertex and zeros and interprets them in terms of a real-world context. • given a table, equation, or written description of a quadratic function, graphs the function and determines and interprets its key features. • solves and graphs mathematical or real-world problems that are modeled with quadratic functions; interprets key features and determines constraints in terms of context. • given a mathematical or real-world context, writes and solves one-variable absolute value equations. • given a table, equation, or written description of an absolute value function, graphs the function and determines its key features.

Achievement Level	Achievement Level Descriptions
Level 4	- given a mathematical or real-world context, classifies an exponential function as representing growth or decay. - writes an exponential function to represent a relationship between two quantities from a graph, a written description, or a table of values within a mathematical or real-world context. - given a table, equation, or written description of an exponential function, graphs that function and determines its key features. - given a mathematical or real-world context, writes and solves a system of two-variable linear equations algebraically or graphically. - graphs the solution set of a system of two-variable linear inequalities. - given a real-world context, represents constraints as systems of linear equations or inequalities. Interprets solutions to problems as viable or non-viable options. - given an equation or graph that defines a function, classifies the function type; given an input-output table, determines a function type that could represent it. - given a function represented in function notation, evaluates the function for an input in its domain; for real-world context, interprets the output. - calculates and interprets the average rate of change of a real-world situation represented graphically, algebraically, or in a table over a specified interval. - compares key features of linear functions each represented algebraically, graphically, in tables, or in written descriptions. - compares key features of linear and nonlinear functions each represented algebraically, graphically, in tables, or in written descriptions; identifies that a quantity increasing exponentially will eventually exceed a quantity increasing linearly or quadratically. - determines whether a linear, quadratic, or exponential function best models a given real-world situation. - identifies the effect on the graph or table of a given function after replacing (x) with $(x)+k$, $kf(x)$, $f(kx)$, and $f(x)+k$ for specific values of k. - solves real-world problems involving simple interest and compound interest. - explains the relationship between simple interest and linear growth or the relationship between compound interest and exponential growth. - given a set of data, selects an appropriate method to represent the data, depending on whether it is numerical or categorical data and on whether it is univariate or bivariate. - interprets data distributions represented in various ways; states whether the data is numerical or categorical and univariate or bivariate; interprets the different components and quantities in the display. - explains the difference between correlation and causation in the contexts of both numerical and categorical data. - estimates a population total, mean, or percentage using data from a sample survey; calculates the minimum and maximum of a population given a margin of error. - fits a linear function to bivariate numerical data that suggests a linear association and interprets the slope and y-intercept of the model; uses the model to solve real-world problems in terms of the context of the data.

Achievement Level	Achievement Level Descriptions
Level 4	- given a scatter plot with a line of fit and residuals, determines the strength and direction of the correlation; interprets strength and direction within a real-world context. - constructs a two-way frequency table summarizing bivariate categorical data; interprets joint and marginal frequencies and determines possible associations in terms of real-world context.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: - applies the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions involving rational exponents; analyzes the error or justifies why expressions are or are not equivalent. - generates multiple equivalent algebraic expressions using properties of exponents; uses error analysis, justification, or explanation to show why expressions are or are not equivalent. - interprets parts of an equation or expression in comparison to an equivalent equation or expression in terms of a real-world context. - rearranges equations or formulas using factoring or properties of exponents to isolate a quantity of interest. - determines a missing polynomial expression in an equation that results in a given solution; demonstrates understanding of the closure property of polynomial expressions for addition, subtraction, and multiplication. - determines a missing dividend that is a polynomial expression in an equation that results in a given quotient. - rewrites a polynomial expression as a product of three or more polynomials. - given a real-world context, analyzes errors in equations written or steps solved for one-variable multi-step linear equations. - analyzes errors of linear two-variable equations written that represent relationships between quantities from a graph, a written description, or a table of values within a mathematical or real-world context. - analyzes errors of an equation written for a line that is parallel or perpendicular to a given line and goes through a given point. - given key features of a linear function, identifies the corresponding equation. - justifies solutions and/or constraints in terms of the context. - given a mathematical or real-world context, writes and solves one-variable linear inequalities, including compound inequalities, representing solutions algebraically or graphically; identifies and interprets possible solutions in the solution set in terms of the context. - analyzes errors of two-variable linear inequalities written that represent relationships between quantities from a graph or a written description within a mathematical or real-world context. - identifies and interprets possible solutions in the solution set in terms of the context.

Achievement Level	Achievement Level Descriptions
Level 5	• given a mathematical or real-world context, writes and solves one-variable quadratic equations over the real number system, then justifies or interprets the solution in context. • analyzes multiple representations of a quadratic function for a relationship between two quantities to determine errors. • given the x-intercepts, another point on the graph of a quadratic function, and the equation of the quadratic function, analyzes errors in the written equation. • analyzes errors in the interpretation of the identified vertex and/or zeroes for a given expression or equation representing a quadratic function. • given key features and/or a graph of a quadratic function, identifies the corresponding equation. • justifies the solutions and/or constraints in terms of the context. • given a mathematical or real-world context, writes and solves one-variable absolute value equations, then justifies or interprets the solution in context. • given key features and/or a graph of an absolute value function, identifies the corresponding equation. • given a mathematical or real-world context, classifies an exponential function as representing growth or decay and justifies within the context why it does or does not model growth or decay. • analyzes errors of a written exponential function that represents a relationship between quantities from a graph, a written description, or a table of values within a mathematical or real-world context. • given key features and/or a graph of an exponential function, identifies the corresponding equation and/or graph. • given a real-world context, writes, solves, and interprets a system of two-variable linear equations algebraically and graphically. • given a point and an inequality, determines another inequality that would make the given point a solution to the system. • given a real-world context, analyzes errors in written constraints or interpretations of solutions for given systems of linear equations or inequalities. • given a function represented in function notation, identifies and explains the error when the function has been evaluated for an input in its domain and interprets the output in a real-world context. • compares the average rates of change of at least two specified intervals and explains which one is greater or less than. • verifies and explains that a quantity increasing exponentially will eventually exceed a quantity increasing linearly or quadratically. • analyzes errors in the interpretation of a chosen function that models a given real-world situation. • analyzes errors in an identified effect on the graph or table of a function after replacing (x) with $(x)+k$, $kf(x)$, $f(kx)$, and $f(x+k)$ for specific values of k. • compares merits of two investments involving simple interest and/or compound interest. • analyzes errors in the interpretation and explanation of the relationship between simple interest and linear growth or the relationship between compound interest and exponential growth. • given a set of data, selects and explains an appropriate method to represent the data, depending on whether it is numerical or categorical data and on whether it is univariate or bivariate.

Achievement Level	Achievement Level Descriptions
Level 5	- explains the difference between correlation and causation in the contexts of both numerical and categorical data to draw conclusions or inferences. - estimates a population total, mean, or percentage using data from a sample survey and explains a given margin of error. - fits a linear function to bivariate numerical data that suggests a linear association and interprets the slope and y-intercept of the model; uses the model to solve real-world problems in terms of the context of the data; makes a prediction inside the range of data and compares it to the actual data. - justifies or explains the correlation and strength using residuals. - uses joint and marginal frequencies defined as verbal ratios to justify possible associations in terms of a real-world context.

Geometry EOC

Achievement level descriptions (ALDs) describe a student's level of achievement (e.g., Below Grade Level, On Grade Level, Proficient) on a large-scale assessment. The purpose of the ALD development framework is to enable valid inferences about student content area knowledge and skill in relation to a state's content standards measured on a large-scale assessment.

Achievement Level	Achievement Level Descriptions
Level 1	Students at this level demonstrate that they are well below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i> .
Level 2	Students at this level demonstrate that they are below grade level with respect to the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 2: • solves mathematical problems that include numerical values involving postulates, relationships, and theorems of lines and angles. • identifies a missing statement or reason of a two-column, flow-chart, or informal proof for proving congruence or similarity using Side-Side-Side, Side-Angle-Side, Angle-Side-Angle, and Angle-Angle. • solves mathematical problems that include numerical values involving the postulates, relationships, and theorems related to the triangle sum theorem, triangle inequality theorem, base angles of an isosceles triangle, or exterior angles. • solves mathematical problems that include numerical values involving postulates, relationships, and theorems of parallelograms or classifies parallelograms based on their properties. • solves mathematical problems that include numerical values involving postulates, relationships, and theorems of trapezoids or identifies trapezoids based on their properties. • solves a mathematical problem involving similarity with two-dimensional figures using one algebraic expression. • given a pre-image and image, identifies the correct transformation, either a translation or a reflection over the x- or y-axis, and represents the transformation algebraically using coordinates. • given the pre-image and image on a coordinate plane, recognizes that translations and reflections preserve distance. • identifies the correct transformations, using words, to describe a sequence of two transformations that maps a given figure onto itself or another congruent figure, wherein the transformations include translations and reflections. • given a geometric figure and two transformations, identifies the transformed figure on a coordinate plane, where the transformations include translations or reflections about an axis. • identifies corresponding sides and angles that are congruent between two transformed figures. • identifies the corresponding sides that are proportional and the corresponding angles that are congruent between two transformed figures. • identifies the equation that can be used to find the weighted average between two points.

Achievement Level	Achievement Level Descriptions
Level 2	• given a mathematical context, uses coordinate geometry to classify triangles or right quadrilaterals using definitions, properties, and theorems. • uses coordinate geometry to solve mathematical problems involving lines and triangles using midpoints and slope criteria of lines. • uses coordinate geometry to find the perimeter of a polygon that does not require the use of the distance formula more than two times. • identifies the shapes of two-dimensional cross-sections of right cylinders and right rectangular prisms. • identifies a three-dimensional object generated by rotation of a square or rectangle about one of its sides or a right triangle about one of its legs. • compares the surface area of two three-dimensional figures to determine the dilation scale factor. • determines the equation that can be used to find the population density given a quadrilateral or triangle. • solves mathematical problems involving the volume of three-dimensional figures limited to right cylinders, right pyramids, and right prisms. • solves mathematical problems involving the surface area of three-dimensional figures limited to right pyramids and right prisms. • identifies the result of a construction of a copied segment or angle, or properties that result from the construction. • identifies the result of a construction of a bisector of a segment or an angle, including the perpendicular bisector of a segment or properties that result from the construction. • identifies the result of a construction of an inscribed and circumscribed circle of a triangle or properties that result from the construction. • solves mathematical problems that include numerical values involving the lengths of chords in a given circle. • solves mathematical problems that include numerical values involving the measures of central angles, inscribed angles, and their related arcs. • solves mathematical problems involving right triangles inscribed in a circle. • solves mathematical problems involving the area of a sector or arc length of a circle in terms of π when the radius is provided. • identifies the equation of a circle given the radius and center. • identifies the graph of mathematical problems that are modeled with an equation of a circle and identifies the center of the circle. • determines the lengths of the missing sides of a right triangle given a triangle with one side measure and at least one acute angle, using trigonometric ratios and the Pythagorean Theorem. • identifies the hypothesis and conclusion of a statement and rewrites it in “if. . . then” form. • identifies the valid statement from a series of arguments about the same topic.
Level 3	Students at this level demonstrate on grade level success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 3: • identifies up to two missing statements and/or reasons of a two-column, flow-chart, or informal proof about lines and angles or uses algebraic equations to solve mathematical problems involving postulates, relationships, and theorems of lines and angles.

Achievement Level	Achievement Level Descriptions
Level 3	- identifies up to two missing statements and/or reasons of a two-column, flow-chart, or informal proof for proving congruence or similarity using Side-Side-Side, Side-Angle-Side, Angle-Side-Angle, Angle-Angle-Side, Angle-Angle, and Hypotenuse-Leg. - identifies up to two missing statements and/or reasons of a two-column, flow-chart, or informal proof about triangles or uses algebraic equations to solve mathematical problems involving postulates, relationships, and theorems of triangles. - identifies up to two missing statements and/or reasons of a two-column, flow-chart, or informal proof when all steps are provided about parallelograms or uses algebraic equations to solve mathematical problems involving postulates, relationships, and theorems of parallelograms. - identifies up to two missing statements and/or reasons of a two-column, flow-chart, or informal proof when all steps are provided about trapezoids or uses algebraic equations to solve mathematical problems involving postulates, relationships, and theorems of trapezoids. - solves mathematical problems involving congruence or similarity in two-dimensional figures. - given a pre-image and image, identifies the correct transformation, either a translation, rotation, or reflection, and represents the transformation algebraically using coordinates. - identifies a transformation that does or does not preserve distance. - identifies the correct transformations, using words or coordinates, to describe a sequence of up to three transformations that maps a given figure onto itself or another congruent figure, wherein the transformations include translations, rotations, and reflections. - given a geometric figure and two transformations, draws the transformed figure on a coordinate plane, where the transformations include translations, rotations by a multiple of 90°, or reflections about a horizontal or vertical line or axis. - determines whether the corresponding sides and angles are congruent between two transformed figures. - applies an appropriate dilation to map one figure onto another to justify that the two figures are similar. - determines the weighted average of two points on a line. - given a mathematical context, uses coordinate geometry to classify triangles or quadrilaterals using definitions, properties, and theorems. - uses coordinate geometry to solve mathematical problems involving lines, triangles, and quadrilaterals, including partitioning lines in even ratios. - uses coordinate geometry to solve mathematical and real-world problems involving perimeter or area of polygons that does not require the use of the distance formula more than two times. - identifies the shapes of two-dimensional cross-sections of right cylinders and right prisms - identifies a three-dimensional object generated by rotation of a square or rectangle about an axis parallel to one of its sides or a right triangle about an axis parallel to one of its legs. - determines how dilations affect the area of two-dimensional figures and the surface area of three-dimensional figures.

Achievement Level	Achievement Level Descriptions
Level 3	• solves mathematical or real-world problems involving the area of quadrilateral or triangles including finding missing dimensions or calculating population density. • solves mathematical or real-world problems involving the volume of three-dimensional figures limited to right cylinders, right pyramids, right prisms, and right cones. • solves mathematical or real-world problems involving the surface area of three-dimensional figures limited to right prisms, right cylinders, right pyramids, and right cones. • identifies one or two missing steps for completing the construction of a copied segment or angle. • identifies one or two missing steps for completing the construction of a bisector of a segment or an angle, including the perpendicular bisector of a segment. • completes a construction of an inscribed circle of a triangle. • solves mathematical problems that include algebraic expressions involving the length of a secant or chord in a given circle. • solves mathematical problems that include algebraic expressions involving the measures of arcs and related angles, limited to central angles and inscribed angles. • solves mathematical problems involving triangles or squares inscribed in a circle. • solves mathematical problems involving the arc length and area of a sector of a circle. • given a mathematical or real-world context, derives and creates the equation of a circle using key features without completing the square. • graphs and solves mathematical problems that are modeled with an equation of a circle given in standard form and identifies the center and radius. • determines trigonometric ratios for acute angles in right triangles given a triangle with all side measures. • solves mathematical problems involving the measures of missing angles and/or missing sides of a right triangle using trigonometric ratios. • identifies the converse and inverse of a given conditional statement and/or rewrites a bi-conditional statement as two conditional statements. • identifies a counterexample to disprove statements in an argument for a particular theorem.
Level 4	Students at this level demonstrate a proficient level of success with the challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 4: • completes a proof about lines and angles or solves mathematical or real-world problems involving postulates, relationships, and theorems of lines and angles. • completes a proof about congruence or similarity using Side-Side-Side, Side-Angle-Side, Angle-Side-Angle, Angle-Angle-Side, Angle-Angle, and Hypotenuse-Leg. • completes a proof about triangles or solves mathematical or real-world problems involving postulates, relationships, and theorems of triangles.

Achievement Level	Achievement Level Descriptions
Level 4	• completes a proof about parallelograms or solves mathematical or real-world problems involving postulates, relationships, and theorems of parallelograms. • completes a proof about trapezoids or solves mathematical or real-world problems involving postulates, relationships, and theorems of trapezoids. • solves mathematical or real-world problems involving congruence or similarity in two-dimensional figures. • given a pre-image and image, describes the transformation and represents the transformation algebraically using coordinates. • identifies all transformations that do or do not preserve distance and angle measure. • identifies a sequence of transformations that will map a given figure onto itself or onto another congruent or similar figure. • given a geometric figure and a sequence of transformations, draws the transformed figure on a coordinate plane. • applies rigid transformations to map one figure onto another to justify that the two figures are congruent. • applies appropriate transformations to map one figure onto another to justify that the two figures are similar. • determines the weighted average of two or more points on a line. • given a mathematical or real-world context, uses coordinate geometry to classify or justify circles, triangles, or quadrilateral using definitions, properties, and theorems. • uses coordinate geometry to solve mathematical or real-world geometric problems involving lines, circles, triangles, and quadrilaterals. • uses coordinate geometry to solve mathematical or real-world problems on the coordinate plane involving perimeter or area of polygons. • identifies the shapes of two-dimensional cross-sections of three-dimensional figures. • identifies three-dimensional objects generated by rotations of two-dimensional figures. • determines how dilations affect the area of two-dimensional figures and the surface area or volume of three-dimensional figures. • solves mathematical or real-world problems involving the area of two-dimensional figures, including calculating population density. • solves mathematical or real-world problems involving the volume of three-dimensional figures limited to cylinders, pyramids, prisms, cones, and spheres, including finding missing dimensions. • solves mathematical or real-world problems involving the surface area of three-dimensional figures limited to cylinders, pyramids, prisms, cones, and spheres, including finding missing dimensions. • completes a construction of a copied segment or angle. • completes a construction of a bisector of a segment or an angle, including the perpendicular bisector of a segment. • completes a construction of an inscribed and circumscribed circle of a triangle. • solves mathematical or real-world problems involving the length of a secant, tangent, segment, or chord in a given circle. • solves mathematical or real-world problems involving the measures of arcs and related angles.

Achievement Level	Achievement Level Descriptions
Level 4	• solves mathematical problems involving triangles or quadrilaterals inscribed in a circle. • solves mathematical or real-world problems involving the arc length and area of a sector of a circle, including illustrating the proportional relationship between the arc length of an intercepted angle and the radius. • given a mathematical or real-world context, derives and creates the equation of a circle using key features. • graphs and solves mathematical or real-world problems that are modeled with an equation of a circle; determines and interprets key features in terms of the context. • defines trigonometric ratios for acute angles in a right triangle given a triangle with two side measures; identifies trigonometric ratios of triangles that are similar to a given triangle. • solves mathematical or real-world problems involving right triangles using trigonometric ratios and the Pythagorean Theorem. • identifies and accurately interprets “if. . . then,” “if and only if,” “all” and “not” statements, and finds the converse, inverse, and contrapositive of a statement. • judges the validity of arguments and gives counterexamples to disprove statements.
Level 5	Students at this level demonstrate exemplary success with the most challenging content of the <i>B.E.S.T. Standards</i>. A student performing at Level 5: • analyzes a proof about lines and angles to determine a potential error. • analyzes a proof about congruence or similarity using Side-Side-Side, Side-Angle-Side, Angle-Side-Angle, Angle-Angle-Side, Angle-Angle, and Hypotenuse-Leg to determine a potential error. • analyzes a proof about triangles to determine a potential error. • analyzes a proof about parallelograms to determine a potential error. • analyzes a proof about trapezoids to determine a potential error. • solves mathematical and real-world problems involving congruence or similarity in two-dimensional figures, including problems that lead to solving quadratic equations. • given a pre-image and image, describes the transformation, including a reflection about a line written in slope intercept form wherein the slope is not equal to zero or undefined, and represents the transformation algebraically using coordinates. • identifies a sequence of transformations, including a reflection about a line written in slope intercept form, that will map a given figure onto itself or onto another congruent or similar figure. • given a geometric figure and a sequence of transformations, including a reflection about a line written in slope intercept form, draws the transformed figure on a coordinate plane. • given the location of one endpoint with its weight and the location of the weighted average, determines the location of the other endpoint. • analyzes errors of a classification and/or justification for circles, triangles, or quadrilateral based on definitions, properties, and theorems.

Achievement Level	Achievement Level Descriptions
Level 5	• uses coordinate geometry to solve mathematical and real-world geometric problems involving medians and centroids in triangles. • uses coordinate geometry to solve mathematical and real-world problems involving perimeter or area of composite figures of irregular polygons. • identifies the shapes of two-dimensional cross-sections that are not parallel or perpendicular to the base of three-dimensional figures. • identifies three-dimensional objects generated by rotations of two-dimensional figures that have multiple shapes or curved edges. • provides reasoning on how dilations affect the area of two-dimensional figures and the surface area or volume of three-dimensional figures; finds missing dimensions when given two three-dimensional figures and their surface area or volume. • solves real-world problems involving the area of two-dimensional figures, including finding the missing dimensions in population density scenarios. • analyzes errors in steps solved for mathematical or real-world problems involving the volume of three-dimensional figures. • analyzes errors in steps solved for mathematical or real-world problems involving the surface area of three-dimensional figures. • corrects errors within the steps of a construction of a copied segment or angle or uses a sequence of the construction(s) to create a new figure. • corrects errors within the steps of a construction of a bisector of a segment or an angle, including the perpendicular bisector of a segment; uses the construction to justify properties of the resulting quadrilateral formed in the construction. • uses the construction to justify the properties of the incenter or circumcenter. • solves mathematical or real-world problems that require the use of quadratic equations involving the length of a secant, tangent, segment, or chord in a given circle. • creates equations in terms of a defined variable representing the relationship between the measures of arcs and their related angles. • creates expressions or equations representing relationships involving triangles or quadrilaterals inscribed in a circle. • creates expressions or equations representing relationships involving the arc length and area of a sector of a circle. • given a mathematical or real-world problem that is modeled with an equation of a circle, analyzes errors in a graph or steps solved. • defines trigonometric ratios for acute angles in right triangles and justifies using the coordinate plane to make connections to the unit circle. • analyzes relationships between the sine and cosine of the acute angles in right triangles. • identifies and accurately interprets “if. . . then,” “if and only if,” “all” and “not” statements, and finds the converse, inverse, and contrapositive of a statement and connects to proofs. • improves an argument using valid examples.

Change Log

Location	Change	Date
90	Removed: adds, subtracts, multiplies, and divides numerical radicals limited to multiple arithmetic operations.	3/1/2024
11	Deleted the word “informational.”	3/1/2024
37	Replaced duplicate L2 V.1.2 ALD with L2 V.1.3 ALD.	3/4/2024
24	Replaced “structures” with “sections” in Level 5 bullet 5.	3/4/2024
Throughout document	Updated Achievement Level labels and policy descriptions to match those adopted at Standard Setting in July 2023.	3/6/2024