

Agenda Delegated Committee--September 6, 2007

California State Board of Education (SBE) meeting agenda.

AGENDA September 6, 2007

State Board Members

Kenneth Noonan, President
Ruth Bloom, Vice President

James Aschwanden
Alan Bersin
Yvonne Chan
Don Fisher
Ruth Green
David Lopez
Ted Mitchell
Johnathan Williams
Monica Liu – Student Member

Secretary & Executive Officer

Hon. Jack O'Connell

Executive Director

Roger Magyar

Schedule of Meeting	Location
Thursday, September 6, 2007 3:00 p.m. Pacific Time + STATE BOARD OF EDUCATION DELEGATED COMMITTEE Public Session	California Department of Education 1430 N Street, Suite 5111 John B. Mockler Conference Room Sacramento, California

Pursuant to *Government Code* section 11123(b) the meeting will be held by teleconference at the following teleconference locations that are accessible to the public:

14271 Story Road, Presidential Suite
San Jose, CA 95127

San Diego International Airport
Commuter Terminal, 3rd Floor
3225 N. Harbor Dr.
San Diego, CA 92101

920 Garden Street, Suite C
Santa Barbara , CA 93101

Please see the detailed agenda for more information about the items to be considered and acted upon. The public is welcome.

ALL TIMES ARE APPROXIMATE AND ARE PROVIDED FOR CONVENIENCE ONLY
ALL ITEMS MAY BE RE-ORDERED TO BE HEARD ON ANY DAY OF THE NOTICED MEETING
THE ORDER OF BUSINESS MAY BE CHANGED WITHOUT NOTICE

Persons wishing to address the State Board of Education on a subject to be considered at this meeting, including any matter that may be designated for public hearing, are asked, but not required, to notify the State Board of Education Office (see telephone/fax numbers below) by noon of the third working day before the scheduled meeting/hearing, stating the subject they wish to address,

the organization they represent (if any), and the nature of their testimony. Time is set aside for individuals so desiring to speak on any topic NOT otherwise on the agenda (please see the detailed agenda for the Public Session). In all cases, the presiding officer reserves the right to impose time limits on presentations as may be necessary to ensure that the agenda is completed.

REASONABLE ACCOMMODATION FOR ANY INDIVIDUAL WITH A DISABILITY

Pursuant to the *Rehabilitation Act of 1973* and the *Americans with Disabilities Act of 1990*, any individual with a disability who requires reasonable accommodation to attend or participate in a meeting or function of the California State Board of Education (SBE), may request assistance by contacting the SBE Office, 1430 N Street, Room 5111, Sacramento, CA, 95814; telephone, (916) 319-0827; fax, (916) 319-0175.

CALIFORNIA STATE BOARD OF EDUCATION

DELEGATED COMMITTEE

OF THE STATE BOARD OF EDUCATION

AGENDA

Public Session

September 6, 2007

Thursday, September 6, 2007 – 3:00 p.m. Pacific Time ±

California Department of Education
1430 N Street, Suite 5111
John B. Mockler Conference Room
Sacramento, California
14271 Story Road, Presidential Suite
San Jose, CA 95127

San Diego International Airport
Commuter Terminal, 3rd Floor
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920 Garden Street, Suite C
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Call to Order

Salute to the Flag

AGENDA ITEMS

Item 1

Subject: PUBLIC COMMENT.

Public comment is invited on any matter **not** included on the printed agenda. Depending on the number of individuals wishing to address the State Board, the presiding officer may establish specific time limits on presentations.

Type of Action: Information

[Item 2](#) (DOC; 73KB; 3pp.)

[Item 2 - Board Staff Recommendation](#) (DOC; 57KB; 3pp.)

Subject: U.S. Department of Education Peer Review of Standards and Assessment: Results of Peer Review

Type of Action: Action, Information

- [Item 2 Attachment 2](#) (PDF; 263KB; 1p.)
- [Item 2 Attachment 3](#) (DOC; 140KB; 33pp.)

ADJOURNMENT OF MEETING

For more information concerning this agenda, please contact the State Board of Education at 1430 N Street, Room 5111, Sacramento, CA, 95814; telephone 916-319-0827; fax 916-319-0175. To be added to the speaker's list, please fax or mail your written request to the above-referenced address/fax number. This agenda is posted on the [State Board of Education's Web site](http://www.cde.ca.gov/be/ag/) [http://www.cde.ca.gov/be/ag/].

Questions: State Board of Education | 916-319-0827

Last Reviewed: Wednesday, August 03, 2011

California Department of Education
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CALIFORNIA STATE BOARD OF EDUCATION

SEPTEMBER 6, 2007 AGENDA

SUBJECT	
No Child Left Behind Act of 2001: Approve the Revision to California's Response to the U.S. Department of Education's Peer Review Of Standards and Assessment	<input checked="" type="checkbox"/> Action <input checked="" type="checkbox"/> Information <input type="checkbox"/> Public Hearing

RECOMMENDATION

The California Department of Education (CDE) recommends that the State Board of Education (SBE) subcommittee members approve the attached summary level descriptors as the performance level descriptors (PLDs) for the CSTs and the CAHSEE to be submitted in response to the June 29, 2007 request from the United States Department of Education (ED).

SUMMARY OF PREVIOUS STATE BOARD OF EDUCATION DISCUSSION AND ACTION

In July 2007, CDE submitted a SBE item including a June 29, 2007, letter from the ED that indicated they still had outstanding concerns with California's standards and assessment system. While California had previously been assigned a status of "approval pending," the most recent review did not provide California a peer review status. The letter documented outstanding concerns in several areas. Area 2.0, Academic Achievement Standards, is the subject of this current item. The ED found that the PLDs that had been submitted in May 2007 failed to meet the necessary requirements that are detailed below:

2.0 Academic Achievement Standards Findings:

1. Performance level descriptors (PLDs) that differentiate among three levels of proficiency for science in grades 5, 8, and 10.
2. Documentation of the involvement of diverse stakeholders in the development process for the PLDs in English/language arts, mathematics, and science.
3. PLDs in English/language arts, mathematics, and science that include a description of the competencies for grade-level academic achievement standards or grade-level expectations required at each grade or, in the case of science, each grade span.

SUMMARY OF PREVIOUS (Cont.)

In response to the ED's letter dated June 29, 2007, the SBE created a sub-committee comprised of four SBE members and directed this committee to work with Office of the Secretary of Education staff and CDE staff to lead in the submission of the remainder of evidence to be submitted for peer review.

SUMMARY OF KEY ISSUES

The ED is using a peer review process to determine whether states have met No Child Left Behind (NCLB) standards and assessment requirements. According to the ED, additional evidence is necessary for California to meet statutory and regulatory requirements.

The CDE, with the approval of the SBE, contracted with Human Resources Research Organization (HumRRO) to develop PLDs for the California Standards Tests (CSTs) and the California High School Exit Examination (CAHSEE). CDE believes the PLDs has developed through the HumRRO contract would satisfy all outstanding issues regarding academic achievement standards. Provided below is a description with regard to how the proposed PLDs address each of the requirements as delineated by ED.

- Performance level descriptors (PLDs) that differentiate among three levels of proficiency for science in grades 5, 8, and 10.

Response: The attached descriptors provide a narrative statement for the skills and knowledge that students demonstrate at each of the performance levels for the NCLB grade-level science exams...advanced, proficient, basic, and below basic. The narrative statements are based on actual performance of students, so the differentiation is observable.

- Documentation of the involvement of diverse stakeholders in the development process for the PLDs in English/language arts, mathematics, and science.

Response: Stakeholders had an opportunity to attend a pre-meeting at which HumRRO presented the plan for the development of the PLDs. The pre-meeting provided stakeholders with a chance to provide feedback on the PLD development process prior to the process beginning. The attached descriptors resulted from the involvement of educators throughout California. To achieve the greatest degree of involvement from diverse stakeholders, CDE sent letters to each California school district requesting nominations for teachers and other curriculum experts to participate in the panels. CDE and SBE staff reviewed nominations and HumRRO selected samples of the remaining nominees for each subject. Insofar as possible, panelists were selected to represent the geographic and demographic distribution of teachers in the target subjects, although experience in the target subject was more important than exact demographic

SUMMARY OF KEY ISSUES (Cont.)

representation. Years of teaching experience in the target subject for the panelists selected ranged from a minimum of 3 up to 32, with a median of 16.4

- PLDs in English/language arts, mathematics, and science that include a description of the competencies for grade-level academic achievement standards or grade-level expectations required at each grade or, in the case of science, each grade span.

Response: The attached descriptors provide a narrative statement for the skills and knowledge that students demonstrate at each of the performance levels for the NCLB grade-level or end-of-course exams. The narrative statements are based on actual performance of students, so the differentiation is observable.

While the PLDs are a requirement for a fully approved system under NCLB, the exemplars that are currently being developed through the contract with Educational Testing Service will be a necessary and critical component of the ongoing communication to the field, parents, students and community about the assessment system. These exemplars, along with the content standards and descriptions of the competencies expected at each level of performance, help to operationalize the different levels of performance that students may achieve on statewide assessments, as we continue to place primary emphasis on all students achieving proficiency.

FISCAL ANALYSIS (AS APPROPRIATE)

All costs associated with the development of PLDs are included in the contract the CDE awarded to HumRRO for the California Standards and Assessment System Independent Evaluation.

ATTACHMENT(S)

Attachment 1: June 29, 2007, letter from the U.S. Department of Education (3 Pages)

Attachment 2: July 13, 2007, letter to the U.S. Department of Education (1 Page)

Attachment 3: Proposed Performance Level Descriptors (33 Pages)

Attachment 4: Sample – Using Exemplars to Communicate Grade 4 Mathematics Standards Test Results (10 Pages)

CALIFORNIA STATE BOARD OF EDUCATION

1430 N Street, Suite 5111
Sacramento, CA 95814
Phone: (916) 319-0827
Fax: (916) 319-0175



STAFF MEMORANDUM

TO: STATE BOARD OF EDUCATION SUBCOMMITTEE MEMBERS

FROM: SBE STAFF

DATE: SEPTEMBER 4, 2007

RE: Compliance with No Child Left Behind, Title I statewide assessment program peer review requirements

Question(s) Before the Subcommittee

The questions before the subcommittee involve determining California's approach to compliance with Title I of NCLB's requirements relating to statewide pupil assessment, and the related and on-going question of how the Board intends communicate to the public about the statewide assessment program.

The State Board of Education is the State Educational Agency for purposes of No Child Left Behind implementation and is the body primarily responsible for statewide assessment policy under the STAR (Standardized Testing and Reporting) program. At the Board's July 2007 regularly scheduled board meeting, Board President Ken Noonan appointed a subcommittee of Board members to develop an approach to satisfy NCLB's Title I requirements for a comprehensive statewide assessment system. This subcommittee was formed in response to Board member concerns about the recent decision letter received from the federal government on June 30, 2007. Because certain of the compliance requirements directly relate to the manner in which the Board elects to communicate to the public and stakeholders about the STAR program, the STAR program communication approach should also be considered.

Issue Description

At the Board's July 2007 meeting, Board President Noonan convened a subcommittee of the Board to develop an approach, in conjunction with the CDE and the Office of the Secretary for Education, to meet the federal requirements for a statewide assessment system. This subcommittee was created following receipt of a decision letter from the ED on June 29, 2007, describing areas in which California remained less than fully

compliant with the federal requirements, including performance level descriptors (PLDs).

Historically, the Board has approached the creation of PLDs with caution. The Board and the CDE have held a firm commitment to the notion that performance of *Proficient* or higher, on the state's academic content standards should be the focus of California's public schools. In the past the Board has been reluctant to adopt additional verbiage in the form of PLDs that would risk shifting focus away from that commitment. NCLB requires, however, that each state have a set of PLDs for its assessment system that distinguish among the three performance levels (*Basic, Proficient, and Advanced*) for each NCLB-required grade level, subject area test. Thus, the current Board, as the State Educational Agency (SEA) for California, must provide PLDs to the ED that are in addition to the state's academic content standards.

Concerns have been expressed that the adoption of PLDs may compromise California's academic content standards and statewide assessment system by lowering the expectation, either directly or indirectly, that *Proficiency* or higher is the goal for all of California's public schools. California's standards-based system was designed to create rigorous goals for all California students and high expectations for California educators. *Proficiency* has been California's goal prior to the passing of the NCLB Act of 2001, and that target has been reinforced by NCLB's focus on *Proficiency*. The Board staff recommends that the Board reinforce the Board and CDE's long-standing commitment by developing an exemplar-based communications approach that focuses on *Proficiency* on California's academic content standards for all students.

Recommendation

Board staff recommends that the Board subcommittee take the following actions, separating the compliance requirement and the communications approach into two distinct, but related actions.

I Compliance

The Board should direct Board staff and CDE staff to provide further information to the U.S. Department of Education (ED) to satisfy the requirements under section 1111(b)(1) of Title I of the No Child Left Behind Act of 2001 (NCLB), for a "single statewide system of challenging academic achievement standards applied to all public schools and LEAs" including "descriptions of the content-based competencies associated with each (performance) level."

Such further information provided to the ED by Board and CDE staff should include the following:

1. A comprehensive set of exemplar items at the content strand level (i.e. reporting category level) of detail for the *basic, proficient, and advanced* performance levels for the relevant grade levels in English/Language Arts,

mathematics, and science. To meet the English/Language Arts and mathematics content requirements at the high school level, exemplars should be provided for the California High School Exit Exam (CAHSEE). These exemplar items should be submitted to the Board's Assessment Review Panels (ARPs) for technical review prior to final submission to this subcommittee and the ED.

2. A set of narrative descriptions for each grade level for each of the English/Language Arts, mathematics, and science content areas that differentiate among the *basic*, *proficient*, and *advanced* performance levels. To meet the English/Language Arts and mathematics content requirements at the high school level, descriptions should be provided for the California High School Exit Exam (CAHSEE).
3. A description of the process used, including a description of the stakeholders included, in the selection of the exemplar items and the development of the narrative descriptors.

This information should be developed and submitted to this subcommittee of the full Board for further review and approval as a submission to the ED as soon as possible.

II Communications

The Board should direct the STAR testing contractor to continue to work with Board staff, CDE staff, and the Board's testing liaisons, per the terms of the STAR scope of work, to develop an exemplar-based communication plan for communicating to parents, educators, policy-makers, and taxpayers regarding the STAR testing program. The communication plan should be reviewed by the Board's Assessment Review Panels (ARPs) and submitted to this subcommittee of the full Board as soon as possible for approval and distribution broadly to parents, educators, policy-makers, and taxpayers in the fall 2007.

The Board should direct Board staff, in conjunction with CDE staff and the Office of the Secretary for Education to continue to seek methods to effectively communicate meaningful information to parents, educators, policy-makers, taxpayers and other stakeholders about the STAR assessment system.

SBE Staff Contact Person

Gary Borden

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OFFICE OF THE SECRETARY OF EDUCATION
DAVID LONG, Secretary of Education
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(916) 323-0611

July 13, 2007

Kerri L. Briggs, Assistant Secretary
Office of Elementary and Secondary Education
U.S. Department of Education
400 Maryland Avenue, S.W., Suite 3C147
Washington, DC 20202-6100

Dear Dr. Briggs:

In response to the U.S. Department of Education's standards and assessment peer review letter dated June 29, 2007, California will submit a timeline in response to finding 5.0-Alignment to you next week. In regards to findings 2.0-Academic Achievement Standards and 3.0-Full Assessment System, California will submit additional information following its September State Board of Education meeting.

We are working diligently to address the findings noted in the June 29, 2007 correspondence. If you have any questions regarding this subject, please contact Gavin Payne, Chief Deputy Superintendent, California Department of Education, at (916) 319-0794 or Roger Magyar, Executive Director, State Board of Education, at (916) 319-0699.

Sincerely,



JACK O'CONNELL
State Superintendent of Public Instruction



KENNETH NOONAN, President
State Board of Education



DAVID LONG, Secretary of Education
Office of the Secretary of Education

JO/KN/DL:bp

Proposed Performance Level Descriptors

Descriptions for Grade 2 English-language Arts (ELA) Performance Levels

Advanced

Students in grade two at the **advanced** level read with full understanding a variety of grade-appropriate texts. They understand complex written directions, infer main ideas, understand characterization, and synthesize information from a chart with information in a text. Advanced second grade students also possess a variety of foundational English language skills, including determining the meaning of multiple-meaning words, dividing words into syllables, spelling, and use of complete sentences. Advanced students also understand the concept of topic sentences and the use of details to develop ideas.

Proficient

Students in grade two at the **proficient** level read with understanding a variety of grade-appropriate texts. They determine main ideas, cause and effect relationships, and purpose in informational texts, and they understand basic aspects of characterization in literary texts. Proficient students demonstrate a good grasp of many foundational English language skills: they recognize the meaning of compound words, understand basic letter-sound correspondences, know common suffixes, and determine the meaning of frequently occurring multiple-meaning words. Proficient second grade students know common punctuation and capitalization rules and can identify incomplete sentences. They also understand the main focus of a paragraph and can add appropriate details to develop ideas.

Basic

Students in grade two at the **basic** level read grade-appropriate texts with some understanding and recognize explicit information, including main ideas and cause and effect, within texts. They recall relevant details explicitly stated in informational text and can identify the setting of a literary text. Students at the basic level show evidence of emerging skills in the English language: they know some common letter-sound correspondences, rhymes, prefixes, abbreviations, and rules for spelling, punctuation, and capitalization. They also may understand the purpose of common reference tools such as atlases and dictionaries.

Below Basic

Students in grade two at the **below basic** level may read grade-appropriate texts with some understanding and recognize explicit information, including recalling details or main events. They demonstrate an understanding of simple English language skills, including recognizing common abbreviations, forming regular plurals, and using apostrophes in contractions.

Descriptions for Grade 3 ELA Performance Levels

Advanced

Students in grade three at the **advanced** level can read and fully understand grade-appropriate informational and literary texts. They can also analyze aspects of the text as a whole, such as identifying the genre of the text and making logical predictions based on information within the text. They use text clues to infer the traits of fictional characters. Advanced students have an excellent grasp of foundational English language skills, including knowledge of vocabulary, punctuation, subject-verb agreement, and sentence structure.

Proficient

Students in grade three at the **proficient** level read and understand grade-appropriate informational and literary texts. They respond accurately to questions based on literal information in the text; they use text features to locate information; they understand the main events of the plot, and they use text clues to determine character traits. Proficient students also have a good grasp of foundational English language skills, including knowledge of word families, grade-level vocabulary, and common suffixes. They also understand the fundamentals of punctuation and sentence and paragraph structure.

Basic

Students in grade three at the **basic** level understand explicit aspects of grade-appropriate informational and literary text. They comprehend written directions and use details from the text to answer literal questions. They can identify the main problem and its solution in basic narrative texts and differentiate between reality and fantasy. Students at the basic level show evidence of emerging language skills: they know simple suffixes, understand many homophones, identify complete sentences, identify compound words, and know a variety of spelling and capitalization rules.

Below Basic

Students in grade three at the **below basic** level understand simple grade-appropriate literary and informational texts. They follow explicit written directions, recognize sequential steps, identify explicitly stated main events in a plot, and identify character traits based on clear text clues. They demonstrate a limited set of English language skills. The English language skills of students at this level include identifying rhymes, recognizing some antonyms, using context clues to determine the meaning of common words, using verb tenses correctly, and using simple spelling and capitalization rules.

Descriptions for Grade 4 ELA Performance Levels

Advanced

Students in grade four at the **advanced** level demonstrate excellent comprehension of implicit and explicit features of grade-appropriate texts. They synthesize information within and across texts, infer the author's purpose in informational text, and distinguish cause and effect. Advanced students also possess a wide variety of English language skills, including using context to determine shades of meaning, understanding figurative language, identifying topic sentences, improving text by adding appropriate details, and using correct punctuation in less common situations.

Proficient

Students in grade four at the **proficient** level demonstrate a good understanding of implicit and explicit features of grade-appropriate texts. They follow written instructions, compare information within and across texts, identify the main events of a plot, and understand character. Proficient students also demonstrate knowledge of synonyms and multiple-meaning words, audience and purpose for writing, use of details to develop ideas, and a variety of spelling, punctuation, and capitalization rules.

Basic

Students in grade four at the **basic** level demonstrate understanding of explicit features of grade-appropriate text, such as recalling key details, contrasting information within and across texts, and comparing characters in different texts. Basic students also draw conclusions regarding implicit features of texts: they distinguish between reality and fantasy, and they predict content based on the title. Language skills demonstrated by basic students include using root words, identifying synonyms for words in context, determining the purpose for writing, and using simple written conventions.

Below Basic

Students in grade four at the **below basic** level demonstrate an understanding of some explicitly stated aspects of grade-appropriate texts, including the topic of the text. The English language skills of below basic students include such abilities as identifying the meaning of frequently occurring words in context and recognizing the correct use of apostrophes in contractions.

Descriptions for Grade 5 ELA Performance Levels

Advanced

Students in grade five at the **advanced** level comprehend a wide variety of grade-appropriate literary and informational texts. They demonstrate a full understanding of the essential message of texts, draw accurate inferences, and make connections among related ideas. Advanced students also have excellent English language skills as appropriate to grade five. They demonstrate an understanding of word origins, affixes, precise use of words, and less common grammatical conventions, and they show an understanding of organizational structure in essays.

Proficient

Students in grade five at the **proficient** level demonstrate a good understanding of grade-appropriate literary and informational texts. They grasp key ideas, including main ideas, theme, character traits, elements of plot, and purpose of text features. Proficient students also have grade-appropriate English language skills, including knowledge of synonyms, antonyms, and root words. They demonstrate an understanding of common grammatical conventions, sentence structure, and revisions to sentences for clarity and style.

Basic

Students in grade five at the **basic** level comprehend simple aspects of grade-appropriate literary and informational texts. They demonstrate an understanding of explicit aspects of texts, including the steps in a process and the stated author's purpose. The English language skills of students at this level include identifying synonyms using context, recognizing simple grammatical and punctuation conventions, and identifying appropriate topic and concluding sentences.

Below Basic

Students in grade five at the **below basic** level comprehend simple aspects of grade-appropriate literary and informational texts. They demonstrate an understanding of explicitly stated aspects of texts, such as the major topic or problem. The English language skills of students at this level include determining the meaning of multiple-meaning words from context, and recognizing simple punctuation and spelling conventions.

Descriptions for Grade 6 ELA Performance Levels

Advanced

Students in grade six at the **advanced** level use a variety of critical thinking skills to understand and analyze grade-appropriate literary and informational texts. They draw connections among ideas, analyze the author's support for an idea, evaluate the use of rhetorical and poetic devices, determine the underlying organization of texts, and evaluate the intended effect of information on the reader. Students at the advanced level also demonstrate strong English language skills, including using the context to determine the meaning of unfamiliar words, understanding shades of word meaning, determining kinds of figurative language, and combining sentences effectively.

Proficient

Students in grade six at the **proficient** level demonstrate understanding of the essential message of grade-appropriate literary and informational texts. They identify and connect main ideas to related topics, apply information gained from reading to other contexts, and summarize support for a conclusion. They also demonstrate understanding of key aspects of literary texts, including literary genres and their characteristics, setting, point of view, and theme. Students at the proficient level also possess important English language skills, including using context to determine the meaning of words, identifying the meaning of foreign words used frequently in English, using the concepts of coordination and subordination, identifying appropriate support to develop an idea, and applying common rules of written English conventions.

Basic

Students in grade six at the **basic** level demonstrate understanding of some aspects of grade-appropriate literary and informational texts. They may identify main ideas, identify support for an author's conclusion, determine the difference between fact and opinion or fantasy, identify the speaker, determine genres, and recognize literary devices. Students at the basic level demonstrate English language skills such as using explicit context clues to determine meaning, finding correct transitions between paragraphs, and applying simple rules for punctuation, spelling, and capitalization.

Below Basic

Students in grade six at the **below basic** level demonstrate limited understanding of grade-appropriate literary and informational texts. They may identify explicitly stated main ideas, recognize the difference between fact and opinion or fantasy, identify the speaker, recognize genres, and recognize literary devices. Students at this level demonstrate English language skills such as using explicit context clues to determine the meaning of common words and applying basic punctuation, spelling, and capitalization rules.

Descriptions for Grade 7 ELA Performance Levels

Advanced

Students in grade seven at the **advanced** level use their understanding of literary and informational texts to analyze relationships in the text, synthesize ideas, and draw logical conclusions. Advanced students draw on an excellent foundation of English language skills in both reading and writing: they use context clues to define unfamiliar words, use appropriate sentence structures, make correct connections between paragraphs, and apply complex punctuation rules.

Proficient

Students in grade seven at the **proficient** level demonstrate their understanding of literary and informational texts by identifying organization and purpose, determining the support for an argument, and analyzing such characteristics of literary text as point of view, plot, and theme. Proficient students know and use a variety of English language skills, including using context to determine meaning, identifying details that support an argument, placing modifiers correctly, and using words precisely.

Basic

Students in grade seven at the **basic** level demonstrate a limited understanding of literary and informational texts, but they are able to identify some organizational structures, determine explicitly stated cause and effect, recognize some support for an argument, and identify characteristics of literary text such as the main events of a plot, the identity of the speaker, and genre. Students at this level demonstrate a grasp of simple English language skills, including using explicit context clues to find the meaning of common words, identifying root words, and applying common rules of grammar and punctuation.

Below Basic

Students in grade seven at the **below basic** level demonstrate some understanding of literary and informational texts. They may recognize the organization and purpose of informational materials, identify explicit cause and effect relationships, recognize character traits, and identify events of a plot. Students at this level have limited English language skills, but they may know the meaning of common idioms, identify misspelled words, recognize correct use of simple punctuation, and correctly link ideas within a sentence.

Descriptions for Grade 8 ELA Performance Levels

Advanced

Students in grade eight at the **advanced** level consistently grasp the essential message of literary and informational texts and also analyze features of the text as a whole. They infer main ideas and underlying themes, understand the structure of both informational and literary texts, analyze literary elements, and synthesize ideas within and between texts. Advanced students also possess an excellent command of English language skills: they develop thesis statements, use sophisticated sentence structures, and apply complex rules of written conventions.

Proficient

Students in grade eight at the **proficient** level demonstrate a good understanding of literary and informational texts. They understand the organization and structure of various texts, determine main ideas, summarize information, and understand key literary elements such as characterization, plot, and theme. The English language skills of proficient students include an understanding of word origins, sentence structure, and the relationships among ideas in a written composition.

Basic

Students in grade eight at the **basic** level demonstrate a limited understanding of literary and informational texts: they identify explicitly stated main ideas, recognize appropriate summaries, identify the main events of the plot, and understand aspects of characterization. The English language skills of students at this level include using context to find the meaning of multiple-meaning words, identifying misspelled words, applying basic grammar rules, and identifying support for general statements.

Below Basic

Students in grade eight at the **below basic** level demonstrate little understanding of the essential meaning of literary and informational texts, but they may identify explicitly stated main ideas and the main events of a plot, understand the general organization of a text, and recognize character traits. The English language skills of students at this level may include knowledge of root words and simple grammar rules. Students also may identify an appropriate word choice and link ideas within sentences and between paragraphs.

Descriptions for Grade 10 ELA Performance Levels

Advanced

Students in grade ten at the **advanced** level comprehend explicit and implicit aspects of grade-appropriate text. They read informational and literary text with full understanding, evaluating the structure, the author's intent, the development of time and sequence, and the intended effect of literary devices. Advanced students demonstrate a full command of written English conventions and important writing strategies. They understand figurative language, use parallel structure and active voice, and use thesis statements and conclusions to unify writing.

Proficient

Students in grade ten at the **proficient** level demonstrate a good understanding of explicit and implicit aspects of grade-appropriate text. They understand the organization, structure, and purpose of informational text. When reading literary text, they analyze genre, plot, theme, and characterization. Proficient students have a wide variety of English language skills, including using context to define unfamiliar words, identifying appropriate support for ideas, using active voice, and applying rules for the conventions of standard written English.

Basic

Students in grade ten at the **basic** level demonstrate understanding of explicit aspects of grade-appropriate text. In informational text, they identify the stated purpose and use text features to understand the organization. They may identify the support an author provides for the main argument. In literary text, they identify the structural characteristics of dramatic forms, identify the speaker, and compare the motivations and reactions of characters. Students at this level demonstrate a limited command of English language skills, but they may use context clues to determine the meaning of common words, understand common word derivations, identify appropriate revisions to text, and identify common examples of correct written English.

Below Basic

Students in grade ten at the **below basic** level may demonstrate understanding of explicit aspects of grade-appropriate text, including text structure and purpose, speaker, character traits, and theme. In addition, students at this level can identify the literal and figurative meaning of common words, recognize the precise use of words, select an appropriate topic sentence, and identify examples of correct written English.

Descriptions for Grade 8 History Performance Levels

Advanced

Students in grade eight at the **advanced** level demonstrate an understanding of complex social studies concepts, including cultural and political connections between the past and the present, the impact of geography on human development, and the relationship between past cultures and modern cultures. Advanced students demonstrate thorough knowledge of historical information, including important events and ideas, and the ideas and political concepts used to justify the structures of past societies at various times. Advanced students show analytical skills through their ability to synthesize ideas and information, seeing the connections between events and ideas, and the impact of ideas and beliefs on historical events. They are able to analyze primary sources and show a mastery of period vocabulary.

Proficient

Students in grade eight at the **proficient** level demonstrate an ability to understand social studies concepts, including the influence of the past on the present, human responses to geography, and the relationship between past cultures and modern cultures. Proficient students demonstrate a knowledge of historical information including important events and ideas, as well as descriptive knowledge of the structures of past societies at various times. They recognize connections between the past and present, and the relationships between ideas and past events. Proficient students are able to read and understand primary sources and are able to understand period vocabulary.

Basic

Students in grade eight at the **basic** level are able to recognize the features of cultures in the past and are able to identify geographic relationships and cultural interactions. Basic students demonstrate the ability to recall major events from the past and recognize the effects of past events. They recall key figures from historical eras, and recognize historical comparisons. Basic students are able to recognize names of historic cultures and commonly used period vocabulary.

Below Basic

Students in grade eight at the **below basic** level may recognize features of cultures in the past. They may recall major events from the past. Below basic students may recognize key figures from the past. They may recall commonly used period vocabulary.

Descriptions for Grade 10 History Performance Levels

Advanced

Students in grade ten at the **advanced** level evaluate and analyze broader themes of historical continuity and change. They evaluate the motivations of major figures in history and analyze historical, political, and geographic consequences of decisions. Advanced students describe the significance of world leaders and analyze the causes and consequences of major past events. They evaluate the impact of major political ideas such as democracy and constitutional government, and relate these ideas to their ancient origins.

Proficient

Students in grade ten at the **proficient** level describe and understand historical relationships. They understand the effects of major events and transformations in history. Proficient students understand the significance of decisions made by world leaders and describe the causes and consequences of major past events. They understand the impact of major political ideas such as democracy and constitutional government, and they describe the evolution of these ideas in different contexts.

Basic

Students in grade ten at the **basic** level recognize the outcomes and consequences of historical change. They can recall the names and actions of major figures in history and can recognize major past events. They recognize the ideas and vocabulary of major political ideas such as democracy and they recognize these ideas in different contexts.

Below Basic

Students in grade ten at the **below basic** level rarely recognize the outcomes and consequences of historical change. They sometimes recognize the names of major figures in history and major past events. They sometimes recognize the ideas and vocabulary of major political ideas such as democracy and recall these ideas in different contexts.

Descriptions for Grade 11 History Performance Levels

Advanced

Students in grade eleven at the **advanced** level demonstrate the ability to evaluate the effects of past domestic and foreign policy programs of the United States, and to analyze the intentions of key figures from the past. They assess policy changes and their impact. Advanced students analyze literary and artistic developments in response to economic and cultural change. Advanced students evaluate public attitudes and analyze resulting social changes. They analyze the motivations of key figures from the past and evaluate the effects of policy and ideological points of view.

Proficient

Students in grade eleven at the **proficient** level understand the effects of past domestic and foreign policy programs of the United States and describe the intents of key figures from the past. They describe policy changes and their impact. Proficient students describe literary and artistic developments in response to economic and cultural change. They describe public attitudes and understand resulting social changes. They understand the motivations of key figures from the past and describe their ideological points of view.

Basic

Students in grade eleven at the **basic** level recognize the effects of economic and political change, and recall key figures from the past. They recognize themes in literary and artistic developments. Basic students recall public attitudes and recognize their implications. They recall major issues from the past and recognize differing points of view.

Below Basic

Students in grade eleven at the **below basic** level may recognize patterns of economic and political change. They may recall major themes from the past. Below basic students may recall key figures and recognize major issues from the past.

Descriptions for Grade 2 Mathematics Performance Levels

Advanced

Students in grade two at the **advanced** level have a full understanding of addition and subtraction and use these operations to compute multi-digit problems and solve word problems. Advanced students have a foundational understanding of concepts covered in more depth in third grade, including multiplication, place value, fractions, and variables. They understand the properties of rectangles, the basic principles of linear measurement, differences among angles, and combinations of plane figures. Advanced students demonstrate facility with data represented in charts, tallies, and simple graphs. They also can analyze data sets to determine such aspects as the range, the most frequent value, and the difference between the greatest and the least values.

Proficient

Students in grade two at the **proficient** level can add and subtract multi-digit numbers. They can identify the place value of digits in a whole number up to 1,000, compare whole numbers and use inequality symbols, and identify the value of combinations of bills and coins. Using models, they demonstrate understanding of a whole divided into fractional parts. Their understanding of the basic principles of algebra includes the ability to identify the numbers sentence needed to solve a one-step word problem. Proficient students know foundational principles of measurement and geometry: They understand properties of rectangles, identify polygons by the number of sides, measure length, convert hours to minutes, and identify right angles. They also can convert a tally chart to a picture graph and use data from a chart to solve problems.

Basic

Students in grade two at the **basic** level compute multi-digit addition problems and subtraction problems that do not require regrouping. They compare whole numbers. They use models to demonstrate understanding of fractions as parts of a whole. They understand the concept of number sentences. Students at this level possess a variety of measurement skills, including determining the area of a figure given the size of one square unit, choosing an appropriate tool to measure length, converting hours to minutes, and measuring an object by repeating a nonstandard unit. Students at the basic level have some understanding of the graphical representation of data and can convert a tally chart to a picture graph with a one-to-one correspondence.

Below Basic

Students in grade two at the **below basic** level know basic addition and subtraction facts and can usually compute two-digit problems that do not require regrouping. These students have an emerging sense of fractions and may be able to use models to identify how many fractional parts equal a whole and identify a unit fraction as part of a whole. They may select the correct symbol that will make a simple equation true or compare whole numbers. Their measurement skills include identifying some properties of rectangles, identifying the number of sides of a polygon, measuring length, and reading time to the quarter hour. Students at the below basic level also can interpret data from a picture graph and may identify different representations of the same data, using bar and tally charts.

Descriptions for Grade 3 Mathematics Performance Levels

Advanced

Students in grade three at the **advanced** level have an excellent grasp of addition, subtraction, and multiplication of whole numbers and use these operations to solve multi-step word problems. They have a strong understanding of foundational concepts covered in more depth in grade four, including place value, decimals, fractions, comparison of whole numbers, and the relationship between addition and subtraction. Advanced students have learned fundamental concepts of algebra, including identifying the equation involving a variable to solve a word problem and determining the missing number that will make an inequality true. They understand perimeter, area, and volume as well as the properties of triangles. Students at this level also demonstrate an emerging understanding of basic concepts of probability.

Proficient

Students in grade three at the **proficient** level have a grasp of operational procedures including addition, subtraction, and multiplication of whole numbers and problems involving money. They can perform operations in the context of simple, one-step word problems. They have a strong understanding of whole number place value, can compare and order whole numbers, and can add simple fractions with common denominators. Proficient students demonstrate understanding of simple algebraic concepts, including finding the total cost, given unit cost and the number of items, and identifying the missing value to make an equation true. They understand perimeter and find area by counting unit squares. They have a solid grasp of basic principles of geometry, including the properties of quadrilaterals, classification of polygons, and right angles. Students are developing concepts of probability at this level and can identify and read a variety of data representations showing results from probability experiments.

Basic

Students in grade three at the **basic** level perform the operations of addition and subtraction with increasing facility and have an emerging grasp of multiplication. They can identify place value in a whole number less than 10,000 and compare and order three-digit numbers from greatest to least. The algebraic concepts demonstrated by students at this level include identifying the missing operation to make an equation true, using the commutative property of multiplication to identify a solution, and identifying the equation to solve a one-step word problem. These students also possess a variety of skills in measurement and geometry, including converting length using metric units, determining the area of a figure given the size of one square unit, and choosing an appropriate tool to measure length. Basic students also may identify different representations of the same data in a probability experiment.

Below Basic

Students in grade three at the **below basic** level perform multi-digit addition and subtraction problems and add simple fractions with common denominators. They identify an equivalent expression using the commutative property of multiplication and determine the next number in a linear pattern. Students at this level demonstrate a variety of skills in measurement and geometry, including choosing the appropriate tool to measure time, identifying common three-dimensional objects, calculating the perimeter of a polygon, and estimating relative weight of given objects. Students read tally charts and may possess foundational concepts of probability such as the ability to interpret a data display representing the results of a probability experiment.

Descriptions for Grade 4 Mathematics Performance Levels

Advanced

Students in grade four at the **advanced** level understand operational procedures with whole numbers, simple fractions, and decimals, and they apply their understanding in the context of multi-step word problems. They demonstrate a full understanding of factors and place value. They know and use foundational algebraic concepts such as variables, and they solve equations using multiple steps. They understand how to use algebraic formulas. They also demonstrate a strong knowledge of two- and three-dimensional shapes and their attributes. Advanced students correctly interpret models and displays to determine outcomes and combinations.

Proficient

Students in grade four at the **proficient** level have a strong grasp of operational procedures with whole numbers. Students know equivalent notations for decimals and fractions. They can perform operations in the context of word problems. They solve simple algebraic equations and can set up a correct equation from a written description. They determine measurements such as area and perimeter and understand the units required for each. They identify basic attributes of lines and two-dimensional figures and understand the concept of congruence. Proficient students interpret two-variable data from a variety of displays to solve multi-step problems, and they identify possible outcomes of simple combinations.

Basic

Students in grade four at the **basic** level demonstrate some understanding of fractions and decimals, including ordering and comparing mixed numbers, unit fractions, and decimals. They know some of the foundational principles for solving algebraic equations. They understand attributes of quadrilaterals, recognize parallel and perpendicular lines, and find area by counting grid squares. They understand and can identify acute, obtuse, and right angles. Students who are at the basic level can also identify different representations of the same data and may identify the most likely outcome in a probability experiment.

Below Basic

Students in grade four at the **below basic** level compute multi-digit addition problems with regrouping, identify the fractional part of a figure, and identify the missing factor given the other factor. In a familiar context, they may identify that equal amounts added to equal amounts remain equal. Students at this level understand foundational geometric concepts, including visualizing how a two-dimensional pattern can create a pyramid and identifying congruency. Also, they

may identify different representations of the same data and identify the outcome that occurs most often in a data set.

Descriptions for Grade 5 Mathematics Performance Levels

Advanced

Students in grade five at the **advanced** level possess the ability to perform competently operations with whole numbers, fractions, and decimals. They understand key concepts that include finding equivalent fractions and decimals, factoring, rounding, and representing numbers on the number line. Students at this level also have mastered foundational principles of algebra: They can evaluate an expression with one variable, write an expression from a verbal description and write an equation from a function table. Their skills in measurement and geometry include the ability to use the sum of interior angles of polygons and compute perimeter, area, and volume. Advanced students also have a good understanding of statistical graphs.

Proficient

Students in grade five at the **proficient** level have developed a solid number sense as appropriate for grade five. They perform long division with multi-digit divisors, represent numbers on a number line, identify common fraction equivalents for decimals, add and subtract mixed numbers with unlike denominators of 20 or less, and identify the prime factors of numbers through 50. Proficient students also understand important algebraic concepts such as evaluating simple expressions and interpreting line graphs. Their skills in measurement and geometry include computing the perimeter and area of regular polygons, computing the volume of rectangular solids, and identifying angles and lines. Students at this level also can interpret the meaning of points plotted on a simple graph and identify the median of a data set

Basic

Students in grade five at the **basic** level perform operations with whole numbers and identify whole numbers on a number line with positive and negative values. They identify the fraction equivalents for simple decimals and add and subtract mixed numbers with unlike denominators of 20 or less when one denominator is a divisor of the other. They can evaluate simple algebraic expressions with one variable, write a simple expression from a verbal description, and interpret line graphs. They also can identify parallel and perpendicular lines.

Below Basic

Students in grade five at the **below basic** level have a limited facility with the four operations with whole numbers, but they identify numbers on a number line with positive values, may identify the fractional equivalent for a decimal, and may add and subtract mixed numbers with unlike denominators of 20 or less when one denominator is a divisor of the other. Students at this level may evaluate simple algebraic expressions with one variable when expressed arithmetically. They

may compute the perimeter of a regular polygon, identify parallel lines, and identify a point on a graph.

Descriptions for Grade 6 Mathematics Performance Levels

Advanced

Students in grade six at the **advanced** level understand integers and solve word problems that use integers. They solve problems involving ratios, proportions, rate, and order of operations. They understand the underlying principles of algebra and its relationship to geometry. They solve simple linear equations, find the missing angle in situations involving multiple angles, know area and volume formulas, and understand types of triangles. Advanced students solve simple probability problems and understand the ways that probability may be represented. They understand measures of central tendency and can determine how mean and median are affected by changes in the data set.

Proficient

Students in grade six at the **proficient** level have a good understanding of the concepts that underlie grade six mathematics, including integers, percentages, and proportions. They solve problems involving the addition of negative and positive integers, compare and order integers using visual representation, calculate percentages, and set up proportions from concrete situations. Their skills in algebra and geometry include solving one-step equations, writing expressions from word problems, solving problems involving rate, solving for the missing angle in a triangle or a supplementary angle, and identifying types of triangles. Proficient students also understand the basic concepts of probability and measures of central tendency.

Basic

Students in grade six at the **basic** level have mastered some of the basic concepts that underlie the mathematics they will encounter in grade seven. Students at this level compare and order integers with explicit visual representation and can represent integers on a number line. They find the greatest common divisor, solve proportions with 1 in either the numerator or denominator, write simple expressions from word problems, and solve one-step equations using addition or subtraction. They have a limited understanding of triangles but may identify types of triangles and solve for the missing angle. Their skills in data analysis include representing probabilities, creating an organized list, and determining how to conduct a representative survey.

Below Basic

Students in grade six at the **below basic** level may solve proportions in which 1 appears in the numerator or denominator, solve a one-step equation involving addition or subtraction, evaluate a one-step equation using substitution, calculate the volume of a triangular prism, identify common types of triangles, represent

probability as a ratio, percent, or decimal, and understand the concepts of mean and median.

Descriptions for Grade 7 Mathematics Performance Levels

Advanced

Students in grade seven at the **advanced** level have a strong understanding of rational numbers, including scientific notation, exponents, and percents. These students have a strong understanding of the basic elements of pre-algebra, including algebraic expressions and variables. They are fully capable in solving problems in a wide variety of contexts. They have a strong understanding of geometric concepts, including the Pythagorean theorem. The advanced student is able to read and interpret data representations.

Proficient

Students in grade seven at the **proficient** level have a solid understanding of rational numbers, including operations, percents, and absolute value. These students have an understanding of the introductory concepts of functions. They are able to use formulas to solve problems in geometry and are able to solve problems using a variety of measurement systems. Proficient students understand common terms and concepts involving measures of central tendency of data sets, including median, minimum, maximum, and scatter plots.

Basic

Students in grade seven at the **basic** level have a limited understanding of rational numbers, but can convert from one form to another. These students have some understanding of how to apply number sense skills to real-world problems. They have a beginning understanding of graphs and their features. Also, they have some understanding of geometric properties, including the volume of a rectangular prism. Basic students have some understanding of statistics and data analysis, including the median of a data set.

Below Basic

Students in grade seven at the **below basic** level have a minimal understanding of rational numbers. These students understand the basic foundations of exponents. In addition, they have a limited understanding of how to translate between verbal and algebraic expressions. Below basic students have a minimal understanding of some aspects of geometry, such as the concept of congruence. In addition, these students understand only the most basic concepts of statistics, such as the median.

Descriptions for Grade 10 Mathematics Performance Levels

Advanced

Students in grade ten at the **advanced** level have a strong understanding of the properties of real numbers. These students are able to manipulate expressions involving exponents. They have a solid understanding of the fundamental concepts of Algebra, including solving and graphing linear equations. These students are able to solve multi-step problems involving rate and mixture. The advanced student has a strong understanding of the basic concepts of geometry, including the Pythagorean theorem, and uses these concepts in solving problems. They are able to determine the area of figures, with and without a coordinate grid. These students have a solid understanding of data analysis, including how best to represent data in a given situation.

Proficient

Students in grade ten at the **proficient** level are able to manipulate rational numbers and fractions to solve real-world problems and are adept at using scientific notation. Proficient students are able to use their knowledge of algebra to simplify complex expressions including performing operations with polynomials. These students can enumerate possible outcomes to estimate probabilities and understand measures of central tendency, including mean, median, and mode of data sets.

Basic

Students in grade ten at the **basic** level can perform simple numeric operations such as converting percentage increases and adding fractions. These students have some understanding of logical reasoning, including the ability to determine irrelevant information in a problem. They have some understanding of the graphs of linear functions and can interpret specific parts of the graph and use this information to solve problems. The basic student has some understanding of measurement principles, including unit conversion. These students have a limited understanding of data analysis and probability, including interpreting a graph and identifying possible outcomes of a dependent event.

Below Basic

Students in grade ten at the **below basic** level understand elementary properties of numbers, such as absolute values, and can perform basic arithmetic operations to solve problems. They can interpret a simple graph and solve one-step linear equations. These students have a minimal understanding of essential geometric concepts such as perimeters and have some understanding of graphical representations of data, including scatter plots.

Descriptions for General Mathematics Performance Levels

Advanced

Students at the **advanced** level have a strong understanding of number sense, including operations involving whole numbers, decimals, and fractions. These students have a solid understanding of the concepts of pre-algebra, including the concept of a variable. They have a solid understanding of the basic elements of geometry, including the Pythagorean theorem. The advanced student has a strong understanding of data representation, including interpretation of a scatter plot. In addition, these students have a solid understanding of probability, such as finding the probability of an independent event.

Proficient

Students at the **proficient** level have a solid understanding of whole number operations, including exponents and square roots. These students are able to perform some operations with decimals and fractions, including converting fractions to decimals. They have some understanding of equations, including graphs of linear functions and solving real-world problems such as those involving rate and distance. The proficient student understands the general concepts of geometry, including scale drawing and coordinate geometry. These students have a solid understanding of the measures of central tendency, such as computing the median.

Basic

Students at the **basic** level have a limited understanding of number sense. They are able to perform simple operations with fractions. These students have some understanding of solving equations and algebraic expressions. They have limited understanding of key geometry concepts, such as volume. The basic student has some understanding of statistics, such as the median of an ordered data set.

Below Basic

Students at the **below basic** level have a minimal understanding of the basic operations involving fractions and decimals. These students have a limited understanding of problem solving, including real-world applications involving decimal amounts of money. They have a minimal understanding of pre-algebra concepts, such as variables. The below basic student has minimal understanding of geometry. These students have some understanding of the concepts of probability, including the probability of an event occurring or not occurring.

Descriptions for Algebra I Performance Levels

Advanced

Algebra I students at the **advanced** level have a strong understanding of number properties and logical reasoning. They understand equations, including absolute value equations, roots, and systems of linear equations. They are able to manipulate rational expressions. In addition, they fully understand the concept of functions. These students are adept at all aspects of graphing, including linear equations and inequalities. They have a strong understanding of polynomials, including factoring. Also, these students have an understanding of quadratic equations, including graphing and solving.

Proficient

Algebra I students at the **proficient** level have a solid understanding of rational numbers and their properties. They understand algebraic expressions. These students have a solid understanding of polynomials, including simplifying and factoring. Proficient students understand graphing, including intercepts and point-slope equations. These students are adept at solving problems involving context.

Basic

Algebra I students at the **basic** level have a limited understanding of the basic concepts of Algebra I. They have some understanding of algebraic expressions, including monomials. These students understand basic properties of real numbers, such as exponents and the distributive property. The basic student has a limited understanding of graphs of functions (linear and quadratic). These students can solve some problems, including one-step equations and word problems.

Below Basic

Algebra I students at the **below basic** level have a minimal understanding of the concept of variable and other foundational topics of Algebra I. These students have difficulty manipulating algebraic expressions. They have little understanding of functions and their graphs. They have some understanding of number properties.

Descriptions for Geometry Performance Levels

Advanced

Geometry students at the **advanced** level have a strong understanding of logic and reasoning. These students are able to apply these skills to geometric proofs, including congruent triangles. They fully understand the concepts of perimeter and volume and properties of geometric figures. The advanced student has a strong understanding of angle relationships and geometric constructions. These students have a strong understanding of trigonometry and the identities of trigonometric functions.

Proficient

Geometry students at the **proficient** level have a solid understanding of the structure of a proof. These students are able to solve problems involving common two- and three-dimensional figures. They have a solid understanding of properties of right triangles, including the Pythagorean theorem. Proficient students understand basic geometric constructions and can solve basic problems involving trigonometry.

Basic

Geometry students at the **basic** level have a limited understanding of geometric proofs. These students have some understanding of the properties of geometric shapes, including parallelograms. They have a limited understanding of area, perimeter, and volume. The basic student is able to solve simple problems involving simple figures. These students have some understanding of angle relationships, including angles created by parallel lines and a transversal. They have a limited understanding of the properties of quadrilaterals and circles.

Below Basic

Geometry students at the **below basic** level have a minimal understanding of the fundamental concepts of geometry. These students have a minimal understanding of the properties of basic two- and three-dimensional figures. They have a limited understanding of relationships between sides and angles, including the Pythagorean theorem. The below basic student has little to no understanding of trigonometric functions. These students have minimal understanding of geometric constructions.

Descriptions for Algebra II Performance Levels

Advanced

Algebra II students at the **advanced** level have a strong understanding of rational expressions. These students are able to manipulate polynomials, including long division. They are effective problem solvers and have a strong understanding of how to solve quadratic equations in a variety of situations. These students understand the fundamental concepts of conic sections and their equations. Advanced students have a strong understanding of logarithmic functions, including the properties of logarithms. They have a strong understanding of probability and statistics, including conditional probability.

Proficient

Algebra II students at the **proficient** level have a solid understanding of polynomials, including factoring. These students are able to solve systems of equations and inequalities, including those with three variables. They have a solid understanding of exponents and exponential functions, including exponential growth and decay. Proficient students understand the concept of series, including arithmetic and geometric.

Basic

Algebra II students at the **basic** level have a limited understanding of algebraic expressions, including simplifying monomials and polynomials. These students have some understanding of the introductory concepts of quadratic equations, including the graph of a parabola. They have a limited understanding of exponential and logarithmic functions. The basic student is able to solve simple problems involving functions and polynomials.

Below Basic

Algebra II students at the **below basic** level have a minimal understanding of the basic concepts of Algebra II, including solving equations. These students have some understanding of polynomials and algebraic expressions. They have minimal understanding of logarithms and some understanding of complex numbers, including the ability to identify a complex number. They have minimal understanding of exponential functions.

Descriptions for Integrated Mathematics I Performance Levels

Advanced

Integrated Math I students at the **advanced** level have a strong understanding of number properties. These students understand the steps involved in problem solving. They have a solid understanding of polynomials, including simplifying rational expressions. These students understand the fundamental components of a graph's linear functions, including the point-slope formula. Advanced students have a solid understanding of higher-level algebra skills, including the quadratic formula. They understand how to solve problems involving geometric shapes, including how changes in dimension affect the surface area and volume of a figure.

Proficient

Integrated Math I students at the **proficient** level have a solid understanding of real-world applications of algebra, including solving linear equations and inequalities. These students have some understanding of functions and rational expressions, including factoring. They have some understanding of the graphs of linear equations and inequalities. The proficient student can apply common formulas to solve problems, including the quadratic formula. These students understand the general concepts of geometry, including volume and surface area.

Basic

Integrated Math I students at the **basic** level have a limited understanding of number sense. These students understand the concept of a variable, including simplifying algebraic expressions. They have some understanding of rational expressions. The basic student has a beginning understanding of linear equations, including the x - and y -intercepts of a linear function. They have some understanding of polynomials, including combining like terms. These students have a limited understanding of geometric shapes, including the classification of polygons.

Below Basic

Integrated Math I students at the **below basic** level have a minimal understanding of the properties of real numbers. These students are able to simplify problems involving exponents. They have a minimal understanding of rational expressions. These students have a beginning understanding of the relationship between linear equations and their graphs, including whether or not a point lies on the graph of an equation. The below basic student has little understanding of the higher-level concepts of Algebra I, including factoring polynomials. These students have a limited understanding of two-dimensional shapes in geometry, including the area of triangles and rectangles.

Descriptions for Integrated Mathematics II Performance Levels

Advanced

Integrated Math II students at the **advanced** level are able to solve real-world problems involving quadratic equations. They understand the properties of polygons, including quadrilaterals, and are able to apply that knowledge to solve problems. The advanced student has a good understanding of logic and is able to prove basic theorems of geometry. These students have a strong understanding of the concept of congruence. They understand the standard trigonometric functions and are able to solve problems such as finding the missing side of a triangle. Advanced students also understand the concept of probability, including the probability of an independent event.

Proficient

Integrated Math II students at the **proficient** level have some understanding of algebra concepts, including real-world rate problems. These students have a good understanding of the relationships between angles in geometric figures, including parallel lines and transversals. They are able to perform basic geometric constructions. The proficient student has some understanding of the concept of a geometric proof, including the recognition of necessary theorems and proofs by contradiction. These students have a limited understanding of the concepts of trigonometry, including the definition of the three basic trigonometric functions. They also have a limited understanding of probability, including permutations and combinations.

Basic

Integrated Math II students at the **basic** level have a limited understanding of quadratic functions, including the concept of x-intercepts of a function. These students have some understanding of the various types of angles found in geometry, including complementary and supplementary. They have a limited understanding of the concept of congruence and coordinate geometry, including translations, reflections, and rotations. The basic student has a minimal understanding of probability, including the probability of an independent event.

Below Basic

Integrated Math II students at the **below basic** level have a minimal understanding of quadratic equations, including the domain and range of a function. These students have a limited understanding of the key concepts of geometry, including the recognition of types of angles and congruent figures. The below basic student has a minimal understanding of coordinate geometry. In addition, these students have a limited understanding of statistics and probability, including simple probability.

Descriptions for Integrated Mathematics III Performance Levels

Advanced

Integrated Math III students at the **advanced** level have a strong understanding of the properties of circles, including inscribed and circumscribed polygons. These students have a solid understanding of the key concepts of algebra, including simplifying polynomials as well as factoring. They have a strong understanding of the basic elements of exponents and logarithms. The advanced student has a solid understanding of functions, including quadratic equations and complex numbers. These students understand measures of statistics, including variance and standard deviation.

Proficient

Integrated Math III students at the **proficient** level have a solid understanding of some aspects of geometry, including chords, secants, and tangents of a circle. These students have a solid understanding of solving equations and inequalities, including absolute value. They have some understanding of the properties of logarithms and exponents. The proficient student understands how to graph functions, including parabolas, and knows how to determine the roots of the function based on the graph. These students have some understanding of series and sequences, including finding the sum of arithmetic and geometric series.

Basic

Integrated Math III students at the **basic** level have a limited understanding of geometry, including circles, secants, and chords. These students have some understanding of rational expressions, including polynomials. They have a limited understanding of exponents, including the evaluation of expressions. These students have a minimal understanding of the translation of the graph of a quadratic equation. The basic student has some understanding of the theorems in Algebra II, such as the binomial theorem, and how to apply them to solve problems. These students have limited understanding of arithmetic and geometric series, including the common ratio or difference.

Below Basic

Integrated Math III students at the **below basic** level have little understanding of the properties of the relationships between circles and segments, including chords. These students have minimal understanding of the basic concepts of Algebra II, including simplifying polynomials. They have little understanding of exponents and logarithms. The below basic student has a limited understanding of quadratic functions. These students may be able to identify the graph of a quadratic equation. They have little understanding of statistics and probability.

Descriptions for Grade 5 Science Performance Levels

Advanced

Students in grade five at the **advanced** level are able to use science knowledge to make prediction about life, earth, and physical science phenomena. Advanced students have an understanding of principles of the water and rock cycle and are able to describe outcomes based on changes to the respective cycles. They are able to make predictions about organisms' characteristics based on environment. Advanced students understand the role of body systems and the interrelatedness of each. Advanced students grasp how properties of materials affect how they conduct electricity and react with other substances. Advanced students demonstrate movements of celestial bodies and describe how each movement affects other bodies. They are able to take scientific information and plan follow-up studies to broaden understanding.

Proficient

Students in grade five at the **proficient** level demonstrate a good understanding of Earth, space, and living systems. They are able to conduct investigations based on questions and report data. Proficient students are able to describe the importance of the body's systems. They are able to compare properties of substances. They are able to describe which traits are beneficial to organisms and how those traits aid in survival. Proficient students know that planets and other bodies have predictable patterns. They are able to control variables when conducting investigations. They are able to describe the components of the water cycle.

Basic

Students in grade five at the **basic** level show an understanding of Earth, space, and living systems. They are able to conduct investigations using instructions. Basic students are able to identify the functions of the body's systems. They are able to describe properties of substances and some traits that are beneficial to organisms. They are able to identify components of the water cycle and can identify planets and other extraterrestrial bodies. They are able to make and record observations

Below Basic

Students in grade five at the **below basic** level are able to identify Earth and the Sun. They are able to identify water and rock cycle diagrams. Below basic students can use a magnet to identify the magnetic properties of different substances.

Descriptions for Grade 8 Science Performance Levels

Advanced

Students in grade eight at the **advanced** level comprehend principles of density, forces, motion, and the structure of matter. They understand and can explain why different units of measurements are appropriate in different cases. Advanced students are able to define what a chemical change is and describe the defining characteristics of acids and bases. They are able to explain the placement on a periodic table of elements. They can complete a data table using existing information.

Proficient

Students in grade eight at the **proficient** level demonstrate a good understanding of density, forces, motion, and the structure of matter. They can select proper units of measurement. Proficient students can use data to define relationships between variables and identify solutions as acids, bases, or neutrals. They are able to identify groups on the periodic table and describe the general characteristics of these groups. Proficient students can draw relationships from graphs and data tables.

Basic

Students in grade eight at the **basic** level are able to identify the basic concepts of density, force, motion, and structure of matter. They are able to recognize the need for different units of measurement according to the size of what is being measured. They are able to describe a substance as being a solid, liquid, or gas. Basic students are able to identify subatomic particles on a diagram.

Below Basic

Students in grade eight at the **below basic** level can identify properties of substances. They know that atoms have protons, neutrons, and electrons. They are able to sort objects from least dense to most dense. They are able to identify phase changes and properties of substances.

Descriptions for Grade 10 Science Performance Levels

Advanced

Students in grade ten at the **advanced** level are able to construct graphs and tables from data and design investigations to answer scientific questions. They can predict population changes due to changes in environment and in other populations. They are able to describe how body systems affect the functioning of other body systems. The advanced student understands properties of alleles, genotypes, and phenotypes.

Proficient

Students in grade ten at the **proficient** level demonstrate a good understanding of graphs and tables, investigative variables and controls, and data interpretation. The proficient student understands population dynamics and how they change with environmental changes. They grasp the process of photosynthesis. The proficient student understands the function and importance of body systems. They understand the nature of alleles and genetic expression in physical traits. Proficient students understand the differences between mitosis and meiosis and the products of each.

Basic

Students in grade ten at the **basic** level are able to use tables and graphs to answer questions. They can identify variables from a scientific investigation and understand its purpose. Basic students know the major body systems. They know that genes are carried on alleles and that these alleles are transferred to offspring through sexual reproduction.

Below Basic

Students in grade ten at the **below basic** level can differentiate between tables and graphs. They know the body systems and can identify scientific investigations. They know that traits are carried to offspring through sexual reproduction.