	Coverage	Standards	Notes
3. Create journals, notes, stories, reports, and letters using appropriate formats and multimedia technologies to communicate to an audience for a specific purpose.	Full	COM 4.1.1-4.1.9 LIT 4.10.2 COM 5.2.1-5.2.10 COM 5.6.1-5.6.4 COM 6.2.1-6.2.7	
4. Focus revision on creating simple and/or complex sentences for clarity and impact and on developing a lead, characters, or mood.	Partial	COM 5.2.8 COM 5.5.3	The teacher will supplement the curriculum to include the concept of developing a lead, characters, or mood.
5-8 Benchmarks III-A: Use language, literature, and media to understand various social and cultural perspectives			
1. Explain why similar character types are found in multiple cultures.	None		The teacher will supplement the curriculum to include the concept of character types found in multiple cultures.
2. Identify social/cultural values and beliefs reflected in literature and media.	None		The teacher will supplement the curriculum to include the concept of social/cultural values and beliefs that are reflected in literature and media.
3. Identify archetypal patterns and symbols depicted through literature and media of various cultures.	Full	LIT 4.2.1-4.2.7	
5-8 Benchmarks III-B: Identify ideas and make connections among literary works			
1. Identify main conflict in a plot and describe how it is resolved.	Full	LIT 5.1.1-5.1.3	
2. Contrast the actions and motives of characters in literary works.	Full	LIT 5.3.3 LIT 5.6.4 LIT 5.8.2	
3. Explain the importance of a character's actions to the plot and theme of a literary work.	Full	LIT 4.9.1 LIT 5.1.5 LIT 5.8.3	

Literature and Media Content Standard III: Students will use literature and media to develop an understanding of people, societies, and the self.

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New Mexico Grade 6 Reading/Language Arts Standards
Compared to K^{12} Grade 6 English

Strand	Benchmarks and Performance Standards	Coverage	K^{12} grade, unit, lesson	Comments
	5-8 Benchmark I-A: Listen to, read, react to, and interpret information			
	1. Narrate a fictional or autobiographical account.	Full	COM 6.2.1- 6.2.6	
	2. Relate details, main ideas, setting, action, and main character(s).	Full	COM 6.8.1- 6.8.5	
	3. Explore expressive materials that are read, heard, or viewed.	Full	COM 6.4.1- 6.4.6 COM 6.6.1- 6.6.2 COM 6.7.1- 6.7.3	
	4. Identify and interpret figurative language in an oral selection.	Full	LIT 6.2.2 LIT 6.12.1- 6.12.7	
	5. Interact appropriately in group settings.	None		Teachers will supplement the curriculum to include interacting appropriately in group settings.
	6. Reflect on learning experiences by describing personal learning growth and change in perspective.	Full	COM 6.2.1- 6.2.6	
	7. Interpret how personal circumstances and background shape interaction with text.	Full	LIT 6.3.1- 6.3.5 LIT 6.6.1- 6.6.6	
	5-8 Benchmark I-B: Gather and use information for research and other purposes			
	1. Interpret and synthesize information from a variety of sources by: · reviewing the characteristics of informational works · restating and summarizing information · determining the importance of information · making connections to related topics and information · monitoring comprehension · drawing inferences · generating questions	Full	COM 6.3.1- 6.3.5 COM 6.4.1- 6.4.9 COM 6.5.1- 6.5.17 LIT 6.3.1- 6.3.5 LIT 6.4.1- 6.4.11 LIT 6.6.1- 6.6.6 LIT 6.10.1- 6.10.10	
	2. Use multiple sources of print and non-print information in developing informational materials such as brochures, newsletters, and advertisements by: · exploring a variety of sources that provide information (e.g., books, newspapers, Internet, electronic databases, CD-ROMs) · distinguishing between primary and secondary sources	Partial	COM 6.6.1- 6.6.5 COM 6.7.1- 6.7.6	Teachers will supplement the curriculum to include using multiple sources of print and non-print information in developing informational materials such as brochures, newsletters, and advertisements by distinguishing between primary and secondary sources.
	3. Organize information gathered for a research topic into major components based on appropriate criteria.	Full	COM 6.5.1- 6.5.17	
	5-8 Benchmark I-C: Apply critical thinking skills to analyze information			
Reading and Listening for Comprehension Content Standard I: Students will apply strategies and skills to comprehend	1. Use critical thinking skills and create criteria to evaluate text and multimedia by: · determining purpose through exploring bias, apparent messages, emotional factors, or persuasive techniques · identifying and exploring the underlying assumptions of the author	Full	COM 6.4.1- 6.4.9 COM 6.7.1- 6.7.6	
	2. Recognize the point of view of the author by considering alternative points of view or reasons by remaining fair-minded and open to other interpretations.	Full	COM 6.2.1- 6.2.6 COM 6.4.1- 6.4.9 COM 6.6.1- 6.6.5 COM 6.7.1- 6.7.6	

Benchmark / Performance Standard	Coverage	Citations	Notes
comprehend information that is read, heard, and viewed.			
3. Develop and apply appropriate criteria to evaluate the quality of communication by: · using knowledge of language structure and literary or media techniques · drawing conclusions based on evidence, reasons, or relevant information · considering the implications, consequences, or impact of those conclusions	Partial	COM 6.2.1 - 6.2.6 COM 6.4.1 - 6.4.9 COM 6.6.1 - 6.6.5 COM 6.7.1 - 6.7.6	Teachers will supplement the curriculum to include developing and applying appropriate criteria to evaluate the quality of communication by using knowledge of language structure and literary or media techniques drawing conclusions based on evidence, reasons, or relevant information considering the implications, consequences, or impact of those conclusions.
5-8 Benchmark I-D: Demonstrate competence in the skills and strategies of the reading process			
1. Increase fluency, comprehension, and insight through meaningful and comprehensive reading instruction by: · using effective reading strategies to match type of text · reading self-selected literature and other materials of individual interest · reading selections and other materials assigned · discussing selections in teacher-student discussions and small groups · taking an active role in whole-class seminars · discussing and analyzing the effects on texts of literary devices, such as figurative language, dialogue and flashback · interpreting text by explaining elements such as plot, theme, point of view, characterization, mood, and style · investigating examples of distortion and stereotype · recognizing underlying messages in order to identify recurring themes	Partial	Embedded throughout, for example: LIT 6.1.1 - 6.1.9 LIT 6.2.1 - 6.2.4 LIT 6.3.1 - 6.3.6	Teachers will supplement the curriculum to include increasing fluency, comprehension, and insight through meaningful and comprehensive reading instruction by discussing selections in teacher-student discussions and small groups and taking an active role in whole-class seminars.
2. Generate questions to be answered while reading and reflect on what has been learned after reading.	Full	Embedded throughout, for example: LIT 6.1.1 - 6.1.9 LIT 6.2.1 - 6.2.4 LIT 6.3.1 - 6.3.6	
3. Use specific strategies to clear up confusing parts of a text (e.g., re-read the text, consult another source, ask for help).	Full	Embedded throughout, for example: LIT 6.1.1 - 6.1.9 LIT 6.2.1 - 6.2.4 LIT 6.3.1 - 6.3.6	
4. Follow oral and written directions for a procedure.	Full	COM 6.6.1 - 6.6.5	
5. Use knowledge of punctuation to assist in comprehension.	Full	GUM 6.15.1 - 6.15.5 GUM 6.16.1 - 6.16.5 GUM 6.17.1 - 6.17.10	
5-8 Benchmark II-A: Use speaking as an interpersonal communication tool			
1. Assume a variety of roles in group discussions (e.g., active listener, discussion leader, facilitator, reporter/synthesizer).	None		Teachers will supplement the curriculum to include assuming a variety of roles in group discussions (e.g., active listener, discussion leader, facilitator, reporter/synthesizer).
2. Clarify, illustrate, and expand upon topics in discussions.	None		Teachers will supplement the curriculum to include clarifying, illustrating, and expanding upon topics in discussions.
3. Use oral clues to indicate levels of certainty (e.g., "what if," "very likely," "I'm unsure of").	None		Teachers will supplement the curriculum to include using oral clues to indicate levels of certainty (e.g., "what if," "very likely," "I'm unsure of").
5-8 Benchmarks II-B: Apply grammatical and language conventions to communicate			

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	1. Use simple, compound, complex, and compound-complex sentences.	Full	GUM 6.1.1- 6.1.3 GUM 6.7.1- 6.7.5
	2. Use effective coordination and subordination of ideas to express complete thoughts.	Full	Embedded throughout, for example: COM 6.1.1- 6.1.5 COM 6.2.1- 6.2.6 COM 6.3.1- 6.3.5
	3. Identify and properly use indefinite pronouns and present perfect, past perfect, and future perfect verb tenses to convey appropriate meaning.	Full	GUM 6.2.1- 6.2.5 GUM 6.3.1- 6.3.8 GUM 6.8.1- 6.8.6 GUM 6.9.1- 6.9.9
	4. Use verbs that agree with compound subjects.	Full	GUM 6.3.1- 6.3.8 GUM 6.9.1- 6.9.9
Writing and Speaking for Expression Content	5. Punctuate using commas that link two clauses with a conjunction in compound sentences.	Full	GUM 6.5.2 GUM 6.7.2 GUM 6.15.2- 6.15.3
Standard II: Students will communicate effectively through speaking and writing.	6. Correctly spell frequently misspelled words (e.g., there, their, they're).	Full	Embedded throughout, for example: COM 6.1.1- 6.1.5 COM 6.2.1- 6.2.6 COM 6.3.1- 6.3.5
	7. Demonstrate an awareness of language conventions and usage during oral presentations.	Full	COM 6.7.1- 6.7.6
	8. Identify and correct errors in everyday speech.	Full	Embedded throughout, for example: LIT 6.1.1- 6.1.9 LIT 6.2.1- 6.2.4 LIT 6.3.1- 6.3.6
	9. Support opinions expressed with detailed evidence and with visual or media displays that use appropriate technologies.	Full	COM 6.4.1- 6.4.9 COM 6.7.1- 6.7.6
5-8 Benchmarks II-C: Demonstrate competence in the skills and strategies of the writing process			
	1. Compose a variety of writings that express individual perspectives drawn from personal or related experience by: · drafting, revising, editing, and proofreading own written work · using direct feedback from peers to revise content · writing for public and private audiences	Full	Embedded throughout, for example: COM 6.1.1- 6.1.5 COM 6.2.1- 6.2.6 COM 6.3.1- 6.3.5
	2. Demonstrate competence in writing essays that present problems and solutions (e.g., identifies and defines the problem, describes a solution clearly and convincingly, presents logical and well-supported reasons).	Full	COM 6.4.1- 6.4.9
	3. Produce writings that incorporate a definite voice of the author appropriate to the writing purpose.	Full	Embedded throughout, for example: COM 6.1.1- 6.1.5 COM 6.2.1- 6.2.6 COM 6.3.1- 6.3.5
	4. Use electronic media to effectively communicate with others.	Full	Embedded throughout, for example: COM 6.1.1- 6.1.5 COM 6.2.1- 6.2.6 COM 6.3.1- 6.3.5
5-8 Benchmarks III-A: Use language, literature, and media to understand various social and cultural perspectives			

Literature and Media Content Standard III: Students will use literature and media to develop an understanding of people, societies, and the self.			
1. Describe how characters' actions reflect their cultures.	Full	LIT 6.1.1- 6.1.8 LIT 6.2.1 LIT 6.7.1- 6.7.13 LIT 6.15.1- 6.15.7	
2. Respond to historically or culturally significant works of literature to develop an awareness of perspective(s).	Full	LIT 6.1.1- 6.1.8 LIT 6.2.1 LIT 6.7.1- 6.7.13 LIT 6.15.1- 6.15.7	
3. Examine connections between cultures worldwide and American society as depicted through literature and media.	Partial	LIT 6.1.1- 6.1.8 LIT 6.2.1 LIT 6.7.1- 6.7.13 LIT 6.15.1- 6.15.7	Teachers will supplement the curriculum to include examining connections between cultures worldwide and American society as depicted through literature and media.
5-8 Benchmarks III-B: Identify ideas and make connections among literary works			
1. Describe the author's use of various techniques (e.g., appeal of characters, logic and credibility of plots and setting, use of figurative language, emotional impact) to influence readers' perspectives.	Partial	COM 6.4.1- 6.4.9 LIT 6.2.2 LIT 6.2.7 LIT 6.12.1- 6.12.7	Teachers will supplement the curriculum to include describing the author's use of various techniques (e.g., appeal of characters, logic and credibility of plots and setting, emotional impact) to influence readers' perspectives.
2. Identify the various themes in literary works.	Full	Embedded throughout, for example: LIT 6.1.1- 6.1.3 LIT 6.2.1 LIT 6.2.7 LIT 6.4.3	
3. Compare and contrast print and non-print versions of a literary work.	Full	LIT 7.7.6	

New Mexico Grade 7 Reading/Language Arts Standards
Compared to K¹² Grade 7 English

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I-A: Listen to, read, react to, and interpret information			
	1. Narrate an account (e.g., news story, historical episode) that creates a coherent organizing structure appropriate to purpose, audience, and context and that orients and engages the reader.	Full	COM 7.2.1- 7.2.5 COM 7.8.1- 7.8.8	
	2. Respond to informational materials that are read, heard, or viewed by: · summarizing the information · determining the importance of the information · making connections to related topics/information · monitoring comprehension · drawing inferences · generating questions	Full	COM 7.5.1- 7.5.17 COM 7.7.1- 7.7.8 LIT 7.5.3	
	3. Identify the effect of literary devices such as figurative language, diction, dialogue, and description.	Full	COM 7.2.1- 7.2.5 COM 7.8.1- 7.8.8 LIT 7.12.1- 7.12.7	
	5-8 Benchmark I-B: Gather and use information for research and other purposes			
	1. Use a variety of resources to express individual perspectives in response to personal, social, cultural, and historical issues.	Full	LIT 7.13.1- 7.13.9 LIT 6.16.1- 6.16.6	
	2. Interpret and synthesize information by responding to information that is read, heard, or viewed.	Full	COM 7.5.1- 7.5.17 COM 7.7.1- 7.7.8	
	3. Develop informational products and/or presentations that cite multiple print and non-print sources by: · identifying and using appropriate primary and secondary sources · comparing, contrasting, and evaluating information from different sources about the same topic · evaluating information for extraneous details, inconsistencies, relevant facts, and organization	Partial	COM 7.4.1- 7.4.9 COM 7.6.1- 7.6.5	Teachers will supplement the curriculum to include developing informational products and/or presentations that cite multiple print and non-print sources by identifying and using appropriate primary and secondary sources.
	4. Examine critical relationships between and among elements of a research topic.	Full	COM 7.5.1- 7.5.17 COM 7.7.1- 7.7.8	
Reading and Listening for Comprehension Content Standard I: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.	**5-8 Benchmark I-C: Apply critical thinking skills to analyze information**			
	1. Use the problem-solving process to refine understanding by: · analyzing problems and solutions within various texts and situations · utilizing the problem-solving process within various contexts and situations · constructing essays and presentations that respond to a given problem by proposing a solution that includes relevant details	Full	COM 7.8.1- 7.8.8 LIT 7.15.7 LIT 7.17.1- 7.17.2 LIT 7.17.4	
	2. Refine critical thinking skills and develop criteria that evaluate arguments and judgments by: · stating a firm judgment · justifying the judgment with logical, relevant reasons, clear examples, and supporting details · creating an organizing structure appropriate to purpose, audience, and context	Full	COM 7.4.1- 7.4.9 COM 7.6.1- 7.6.5 LIT 7.13.7- 7.13.9	
	3. Determine how the use of literary devices, such as personification, metaphor, simile, and alliteration, convey the author's intent.	Partial	LIT 7.4.3 LIT 7.12.3	Teachers will supplement the curriculum to include determining how the use of literary devices, such as personification and simile convey the author's intent.

Standard	Coverage	LIT/COM/GUM Codes	Notes
4. Interpret universal themes, values, and conflicts in a selection.	Full	LIT 7.1.2, LIT 7.1.4, LIT 7.7.7, LIT 7.13.2, LIT 7.15.3-7.15.9, LIT 7.17.2	
5-8 Benchmark I-D: Demonstrate competence in the skills and strategies of the reading process			
1. Respond to various texts and literary selections using interpretive and evaluative reading processes by: · reading a variety of literary and other texts(e.g., mysteries, novels, science fiction, historical documents, newspapers, skits, lyric poems) · analyzing what specific characteristics of literary works (fiction, nonfiction, drama, and poetry) have on the meaning of the work · analyzing what impact literary elements have on the meaning of the text, such as the influence of setting on the problem and its resolution	Full	Embedded throughout, for example: LIT 7.1.1- 7.1.12 LIT 7.2.1- 7.2.5 LIT 7.4.1- 7.4.7	
2. Understand stories and expository texts from the perspective of the attitudes and values of the time period in which they were written.	Full	LIT 7.16.1- 7.16.6 LIT 7.17.1- 7.17.7	
3. Accurately identify author's purpose and perspective.	Full	LIT 7.12.1- 7.12.7 LIT 7.13.1- 7.13.9 LIT 7.16.1	
4. Use knowledge of context and vocabulary to understand informational text.	Full	Embedded throughout, for example: LIT 7.1.1- 7.1.12 LIT 7.2.1- 7.2.5 LIT 7.4.1- 7.4.7	
5-8 Benchmark II-A: Use speaking as an interpersonal communication tool			
1. Choose precise and engaging language, well suited to the topic and audience.	Full	COM 7.2.1- 7.2.5 COM 7.4.1- 7.4.9	
2. Use figurative language and a variety of speech patterns.	Partial	LIT 7.12.1- 7.12.7	Teachers will supplement the curriculum to include using figurative language and a variety of speech patterns.
3. Choose between standard and non-standard English dialects as appropriate for the topic, purpose, and audience.	Full	LIT 8.6.1- 8.6.9	
4. Interact in group discussions by: · offering personal opinions confidently without dominating · giving valid reasons that support opinions · soliciting and considering others' opinions	None		Teachers will supplement the curriculum to include interacting in group discussions by offering personal opinions confidently without dominating, giving valid reasons that support opinions, soliciting and considering others' opinions.
5. Express individual perspective in response to personal, social, cultural, and historical issues.	Full	LIT 7.13.1- 7.13.9 LIT 6.16.1- 6.16.6	
5-8 Benchmarks II-B: Apply grammatical and language conventions to communicate			
1. Place modifiers properly and use the active voice.	Full	GUM 7.3.1 GUM 7.4.4 GUM 7.5.4 GUM 7.11.1- 7.11.2	
2. Identify and use infinitives and participles and make clear references between pronouns and antecedents.	Full	GUM 7.4.1- 7.4.8 GUM 7.8.4- 7.8.5	
3. Identify all parts of speech and types and structure of sentences.	Full	GUM 7.1.1- 7.1.6	

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Writing and Speaking for Expression Content Standard II: Students will communicate effectively through speaking and writing.

Standard	Coverage	Codes	Notes
4. Punctuate by correctly using hyphens, dashes, brackets, and semicolons.	Full	GUM 7.15.1- 7.15.8	
5. Spell derivatives correctly by applying the spellings of bases and affixes.	Full	Embedded throughout, for example: COM 7.1.1- 7.1.5, COM 7.2.1- 7.2.5, COM 7.3.1- 7.3.5	
6. Use a variety of sentences correctly by punctuating them properly and avoiding fragments and run-ons.	Full	GUM 7.6.1- 7.6.4	
7. Apply the parts of speech to clarify language usage.	Full	GUM 7.1.1- 7.1.6	
8. Choose language that is precise, engaging, and well suited to the topic and audience in a variety of oral presentations.	Full	COM 7.7.1- 7.7.8	
9. Use figurative language and varying speech patterns to convey meaning.	Full	LIT 7.12.1- 7.12.7	
10. Analyze the effect on the viewer of images, text, and sound in electronic journalism.	None		Teachers will supplement the curriculum to include analyzing the effect on the viewer of images, text, and sound in electronic journalism.
11. Provide constructive feedback to a speaker concerning a speech's content, delivery, and overall impact.	None		Teachers will supplement the curriculum to include providing constructive feedback to a speaker concerning a speech's content, delivery, and overall impact.
12. Proofread, listen to, and monitor self to correct errors.	Full	COM 7.7.5- 7.7.8	
5-8 Benchmarks II-C: Demonstrate competence in the skills and strategies of the writing process			
1. Express individual perspectives in written response to personal, social, cultural, and historical issues.	Full	COM 7.2.1- 7.2.5, COM 7.6.1- 7.6.5, LIT 7.9.1- 7.9.8, LIT 7.11.14- 7.11.17, LIT 7.13.7- 7.13.9	
2. Differentiate shades of meaning and multiple meanings of words.	None		Teachers will supplement the curriculum to include differentiating shades of meaning and multiple meanings of words.
3. Produce research reports and technical writings that communicate information effectively to a specific audience.	Full	COM 7.5.1- 7.5.17, COM 7.7.1- 7.7.8	
4. Compose a variety of writings that develop sentence fluency to communicate ideas and information clearly using a variety of multimedia technologies.	Full	Embedded throughout, for example: COM 7.1.1- 7.1.5, COM 7.2.1- 7.2.5, COM 7.3.1- 7.3.5	
5-8 Benchmarks III-A: Use language, literature, and media to understand various social and cultural perspectives			
1. Identify and analyze recurring themes (e.g., value of bravery, loyalty, friendship) across works from a variety of cultures.	Full	LIT 7.1.2, LIT 7.1.4, LIT 7.7.7, LIT 7.13.2, LIT 7.15.3- 7.15.9, LIT 7.17.2	

		Coverage	Standards	Notes
Literature and Media Content Standard III: **Students will use literature and media to develop an understanding of**	2. Analyze themes and central ideas in literature and media in relation to personal issues and experiences.	Full	LIT 7.1.2 LIT 7.1.4 LIT 7.7.7 LIT 7.13.2 LIT 7.15.3- 7.15.9 LIT 7.17.2	
	3. Analyze a range of responses to literary works and determine the extent to which the literary characteristics of a society/culture shaped those responses.	None		Teachers will supplement the curriculum to include analyzing a range of responses to literary works and determine the extent to which the literary characteristics of a society/culture shaped those responses.
5-8 Benchmarks III-B: Identify ideas and make connections among literary works				
people, societies, and the self.	1. Identify examples of distortion and stereotype in literary works.	None		Teachers will supplement the curriculum to include identifying examples of distortion and stereotype in literary works.
	2. Identify recurring themes in literary works.	Full	LIT 7.1.2 LIT 7.1.4 LIT 7.7.7 LIT 7.13.2 LIT 7.15.3- 7.15.9 LIT 7.17.2	
	3. Critique the credibility of characterization and the degree to which a plot is contrived or realistic.	Full	COM 7.8.1- 7.8.4 LIT 7.1.1- 7.1.3 LIT 7.5.1 LIT 7.7.4- 7.7.5	

New Mexico Grade 8 Reading/Language Arts Standards
Compared to K¹² Grade 8 English - Literary Analysis and Composition

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I-A: Listen to, read, react to, and interpret information			
	1. Narrate a personal account that: · establishes a point of view and sharpens focus · uses remembered feelings · selects details that best illuminate the topic · connects events to self and society	Full	COM 8.1.1- 8.1.7	
	2. Interact in group activities and/or seminars to: · share personal reactions to questions raised · give reasons and cite examples from texts to support opinions · clarify, illustrate, or expand on a response · ask classmates for similar expansion	None		Teachers will supplement the curriculum to include interacting in group activities and/or seminars to share personal reactions to questions raised, give reasons and cite examples from texts to support opinions, clarify, illustrate, or expand on a response and ask classmates for similar expansion.
	3. Compare, contrast, and evaluate for details, main ideas, themes, actions, and main character from oral selections.	Full	COM 8.7.1- 8.7.5 LIT 8.4.4 LIT 8.5.5 LIT 8.6.5 LIT 8.7.2 LIT 8.15.5	
	5-8 Benchmark I-B: Gather and use information for research and other purposes			
	1. Use information for specific tasks by: · analyzing and evaluating information to extend ideas · analyzing and evaluating themes and central ideas in relation to personal and societal issues · creating a research product in both written and presentation form	Partial	COM 8.3.1- 8.3.8 COM 8.5.1- 8.5.11 COM 8.7.1- 8.7.5	Teachers will supplement the curriculum to include using information for specific tasks by creating a research product in presentation form.
	2. Use images, videos, and visual representations as informational research tools.	None		Teachers will supplement the curriculum to include using images, videos, and visual representations as informational research tools.
	5-8 Benchmark I-C: Apply critical thinking skills to analyze information			
Reading and Listening for Comprehension Content Standard I: Students will	1. Create a research product in both written and presentation form by: · determining purpose, audience, and context · choosing a relevant topic · selecting a presentation format (e.g., video, essay, interactive technology) · evaluating information for extraneous detail, inconsistencies, relevant facts, and organization · researching and organizing information to achieve purpose using notes and memory aides to structure information · supporting ideas with examples, definitions, analogies, and direct references to primary and secondary sources · citing sources used · employing graphics, charts, diagrams, and graphs to enhance communication	Full	COM 8.5.1- 8.5.11	

apply strategies and skills to comprehend information that is read, heard, and viewed.		
2. Analyze the inferences and conclusions from fictional and non-fictional contexts, events, characters, settings, and themes.	Full	Embedded throughout, for example: LIT 8.1.1 - 8.1.6 LIT 8.2.1 - 8.2.7 LIT 8.3.1 - 8.3.10
5-8 Benchmark I-D: Demonstrate competence in the skills and strategies of the reading process		
1. Analyze the purpose of the author or creator and the impact of that purpose by evaluating biases, messages, and underlying assumptions of a variety of texts and media.	Full	COM 8.1.3 COM 8.5.6 COM 8.7.1 - 8.7.5 LIT 8.3.1 - 8.3.10 LIT 8.4.1 - 8.4.9 LIT 8.5.1 - 8.5.5 LIT 8.6.1 - 8.6.9 LIT 8.12.1 - 8.12.9 LIT 8.14.1 - 8.14.5
2. Analyze and evaluate themes and central ideas in literary and other texts in relation to personal and societal issues.	Full	COM 8.6.1 - 8.6.6 LIT 8.3.1 - 8.3.4 LIT 8.5.1 - 8.5.4 LIT 8.6.8 LIT 8.14.1
3. Recognize when information presented in a text is new knowledge and describe how it can be used.	Full	Embedded throughout, for example: LIT 8.1.1 - 8.1.6 LIT 8.2.1 - 8.2.7 LIT 8.3.1 - 8.3.10
4. Use the various parts of a text to locate specific information (index, table of contents, glossary)	Full	Embedded throughout, for example: LIT 8.1.1 - 8.1.6 LIT 8.2.1 - 8.2.7 LIT 8.3.1 - 8.3.10
5. Identify the topic sentence in a reading selection.	Full	COM 8.1.3 - 8.1.4 COM 8.2.3 - 8.3.5 COM 8.3.5 - 8.3.6 COM 8.4.5 - 8.4.6 COM 8.5.5 - 8.5.6 COM 8.6.3 - 8.6.4 COM 8.7.2 - 8.7.4 COM 8.8.3 - 8.8.4
6. Independently apply the reading process and strategies to a variety of literary and informational texts and use the defining features and structures of those works to understand main elements, perspective, and style.	Full	Embedded throughout, for example: LIT 8.1.1 - 8.1.6 LIT 8.2.1 - 8.2.7 LIT 8.3.1 - 8.3.10
5-8 Benchmark II-A: Use speaking as an interpersonal communication tool		
1. Present similar content for various purposes and to different audiences showing appropriate changes in delivery.	Full	COM 8.1.1 - 8.1.7 COM 8.3.1 - 8.3.8 COM 8.5.1 - 8.5.11 COM 8.7.1 - 8.7.5 COM 8.8.1 - 8.8.6

Standard	Benchmark	Coverage	References	Notes
Writing and Speaking for Expression Content Standard II: Students will communicate effectively through speaking and writing.	2. Create and present arguments that persuade by: · engaging the audience by establishing a context, creating a persona, and developing interest · developing an idea that makes a clear and informed conclusion · arranging details, reasons, and examples persuasively · anticipating and addressing reader/listener concerns and counter-arguments	Full	COM 8.3.1 - 8.3.8 COM 8.8.1 - 8.8.6	
	3. Identify formal and informal speaking contexts that are reflected in slang, jargon, and different language styles.	None		Teachers will supplement the curriculum to include identifying formal and informal speaking contexts that are reflected in slang, jargon, and different language styles.
5-8 Benchmarks II-B: Apply grammatical and language conventions to communicate				
	1. Use correct and varied sentence types and sentence openings.	Full	Embedded throughout, for example: COM 8.1.1 - 8.1.7 COM 8.2.1 - 8.2.7 COM 8.3.1 - 8.3.8	
	2. Identify and use parallelism to present ideas in a series.	Full	COM 8.8.1 - 8.8.6	
	3. Juxtapose items for emphasis.	None		Teachers will supplement the curriculum to include juxtaposing items for emphasis.
	4. Use subordination, coordination, apposition, and other devices to indicate the relationship between ideas.	Full	Embedded throughout, for example: COM 8.1.1 - 8.1.7 COM 8.2.1 - 8.2.7 COM 8.3.1 - 8.3.8	
	5. Evaluate the use of dialects in standard and non-standard English.	Full	LIT 8.6.1 - 8.6.9	
	6. Prepare an outline based upon a chosen pattern of organization to include an introduction; transitions, previews, summaries; a logically developed body; and an effective conclusion.	Full	COM 8.5.5	
	7. Revise writing for word choice, appropriate organization, consistent point of view, and transitions between paragraphs, passages and ideas.	Full	Embedded throughout, for example: COM 8.1.1 - 8.1.7 COM 8.2.1 - 8.2.7 COM 8.3.1 - 8.3.8	
5-8 Benchmarks II-C: Demonstrate competence in the skills and strategies of the writing process	1. Describe the significance of the subject to the author.	Full	LIT 8.1.1 - 8.1.5	
	2. Demonstrate competence in writing by using specific strategies (e.g., tension, suspense, eliminating extraneous details, inconsistencies).	Full	Embedded throughout, for example: COM 8.1.1 - 8.1.7 COM 8.2.1 - 8.2.7 COM 8.3.1 - 8.3.8	
	3. Create written arguments to persuade by: · establishing context · creating a persona · developing interest · developing a controlling idea that makes a clear and knowledgeable judgment · arranging details, reasons, and examples effectively · anticipating and addressing reader/listener concerns	Full	COM 8.3.1 - 8.3.8 COM 8.8.1 - 8.8.6	
5-8 Benchmarks III-A: Use language, literature, and media to understand various social and cultural perspectives				

		Coverage	Standards
Literature and Media Content Standard III:	1. Demonstrate familiarity with selected: · classic literature · mythology · classic fiction and non-fiction · drama	Full	Embedded throughout, for example: LIT 8.1.1- 8.1.6 LIT 8.2.1- 8.2.7 LIT 8.3.1- 8.3.10
Students will use literature and media to develop an understanding of people, societies, and the self.	2. Use literature and media to reflect on learning experiences by: · evaluating personal perspectives and how they are influenced by society, cultural differences, and historical issues · appraising learning as change in perspective · evaluating personal circumstances and background that shape interaction with literature and media	Full	COM 8.8.1- 8.8.6
	3. Analyze a work of literature showing how it reflects the heritage, traditions, attitudes, and beliefs of its author.	Full	LIT 8.1.1- 8.1.5
5-8 Benchmarks III-B: Identify ideas and make connections among literary works			
	1. Identify conflict, rising action, and resolution of conflict in a literary work.	Full	LIT 8.1.1- 8.1.5 LIT 8.3.1- 8.3.9 LIT 8.6.1- 8.6.9 LIT 8.12.1- 8.12.9
	2. Describe how tone and meaning is conveyed in poetry and expository writing through word choice, figurative language, sentence structure, line length, punctuation, rhythm, repetition, and rhyme.	Full	LIT 8.1.1- 8.1.5 LIT 8.9.1- 8.9.7 LIT 8.14.1- 8.14.5
	3. Identify significant literary devices (e.g., metaphor, symbolism, dialect, irony) to understand the author's meaning and perspective.	Full	LIT 8.3.5 LIT 8.3.7 LIT 8.6.1- 8.6.9 LIT 8.12.3
	4. Identify the defining characteristics of classic literature and themes.	Full	COM 8.6.1- 8.6.6 LIT 8.3.1- 8.3.4 LIT 8.5.1- 8.5.4 LIT 8.6.8 LIT 8.14.1

New Mexico Grade K Math Standards
Compared to K¹² Grade K Social Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	K.N.1.1 Demonstrate an understanding of the place-value structure of the base-ten number system: a. count with understanding and recognize "how many" in sets of objects up to 20 b. read and write whole numbers up to 20 c. compare and order whole numbers up to 20 d. connect numerals to the quantities they represent using various physical models e. use an organized counting method to keep track of quantities while counting (one-to-one correspondence) (e.g., touch object once and only once as counting a set) f. order sets of objects and numbers from least to most or most to least	Full	K.5.1 - K.5.7 K.6.1 - K.6.14 K.15.1 - K.15.8 K.16.1 - K 16.10	
	K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	K.N.2.1 Represent numbers using pictures, objects, or numerals.	Full	K.8.3	
	K.N.2.2 Use concrete objects to solve simple addition and subtraction story problems (e.g., oral not written).	Full	K.17.6	
	K-4 Benchmark N.3: Compute fluently and make reasonable estimates.			
	K.N.3.1 Estimate quantities of objects up to 20.	Full	1.18.1	
	K-4 Benchmark A.1: Understand patterns, relations, and functions.			
	K.A.1.1 Identify the attributes of objects (e.g., the ability to identify attributes is a foundational skill for sorting and classifying).	Full	K.1.6	
	K.A.1.2 Sort, classify, and order objects by size, number, and other properties.	Full	K.1.6 - K.1.7 K.2.2 - K.2.5 K.8.5	
	K.A.1.3 Recognize, reproduce, describe, extend, and create repeating patterns (e.g., color, shape, size, sound, movement, simple numbers).	Full	K.3.5 - K.3.7 K.3.11 - K.3.12	
Strand: ALGEBRA **Standard: Students will understand algebraic concepts and applications.**	**K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.**			
	K.A.2.1 Use concrete, pictorial, and verbal representation to develop an understanding of invented and conventional symbols.	Full	K.7.5 K.10.7 K.12.7	
	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.			
	K.A.3.1 Model situations that involve whole numbers using objects or pictures.	Full	K.7.5 K.10.7 K.12.7	
	K-4 Benchmark A.4: Analyze changes in various contexts.			
	K.A.4.1 Verbally describe changes in various contexts (e.g., plants or animals growing over time).	None		Teachers will supplement the curriculum to include opportunities for students to verbally describe changes in various contexts.
	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.			

Strand / Standard	Description	Coverage	Reference
Strand: GEOMETRY **Standard: Students will understand geometric concepts and applications.**	K.G.1.1 Identify common objects in their environments and describe their geometric features: a. describe, identify, model, and draw common geometric objects (e.g., circle, triangle, square, rectangle, cube, sphere, cone) b. compare familiar plane and solid objects by common attributes (e.g., shape, size, number of corners)	Full	K.9.1 - K.9.9
	K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.		
	K.G.2.1 Follow simple directions to find a specific location in space.	Full	K.1.1 - K.1.5
	K.G.2.2 Use spatial vocabulary (e.g., left, right, above, below) to describe relative position.	Full	K.1.1 - K.1.5
	K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.		
	K.G.3.1 Use manipulatives (e.g., puzzles, tangrams, blocks) to demonstrate rotation (i.e., turns), translations (i.e., slides), and reflection (i.e., flips).	Partial	K.1.8
	K.G.3.2 Investigate the symmetry of two-dimensional shapes (e.g., by folding or cutting paper, using mirrors).	Full	1.14.5
	K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.		
	K.G.4.1 Describe how to get from one location to another (e.g., how to get to the library).	Full	1.21.6
	K.G.4.2 Find and describe geometric shapes in nature or architecture.	Full	K.9.4
Strand: MEASUREMENT **Standard: Students will understand measurement systems and applications.**	**K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and process of measurement.**		
	K.M.1.1 Describe and compare, using appropriate concepts and vocabulary, the measurable properties of length (e.g., shorter, longer, taller), volume (e.g., full, empty), weight (e.g., heavy, light), and time (e.g., before, after, morning, afternoon, days of week).	Full	K.3.3 K.10.1 K.10.3 K.10.4 K.12.1 - K.12.9
	K.M.1.2 Use tools to make predictions (e.g., using a balance scale, predicting how many cups a container will hold and then filling it to check the prediction).	Full	K.10.1
	K.M.1.3 Measure using non-standard units of measurement (e.g., use pencils to measure desk top, use different lengths of rope to measure distance in classroom).	Full	K.10.1
	K.M.1.4 Use digital and analog (face) clocks to tell time to the hour.	Full	K.12.4
	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.		
	K.M.2.1 Explore measuring objects using a repeating non-standard unit of measurement (e.g., paper clips, cubes, etc.).	Full	K.10.1
Strand: DATA ANALYSIS AND PROBABILITY **Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.**	**K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.**		
	K.D.1.1 Collect data about objects and events in the environment to answer simple questions (e.g., brainstorm questions about self and surroundings, collect data, and record the results using objects, pictures, and pictographs).	Full	K.8.8
	K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.		
	K.D.2.1 Describe simple data and pose questions about the data.	Full	K.4.8 K.4.10 K.11.10 K.15.6
	K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		
	K.D.3.1 Make simple predictions.	Full	K.17.1 K.17.3
	K-4 Benchmark D.4: Understand and apply basic concepts of probability.		

Teachers will supplement the curriculum to include using manipulatives to demonstrate reflection.

| K.D.4.1 Answer questions that relate to the possibility of familiar events happening or not. | Full | K.17.1
K.17.3 |

New Mexico Grade 1 Math Standards
Compared to K¹² Grade 1 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	1.N.1.1 Demonstrate an understanding of the place-value structure of the base-ten number system: a. read, write, model, and sequence whole numbers up to 100 (including filling in missing numbers in a sequence) b. count with understanding and recognize "how many" in sets of objects up to 50 c. count orally by 2s to 20 and by 5s and 10s to 100 d. count orally backward from 100 e. compare and order numbers up to 100 f. decompose and recombine numbers using manipulatives (e.g., by breaking numbers apart and recombining) to create and construct equivalent representations for the same number (e.g., 10 = 3 + 7 or 1 + 2 + 7 or 3 + 2 + 5) g. group objects by 10s and 1s to explore place value (e.g., 24 equals two tens and four ones) h. use ordinal numbers (e.g., what position?) and cardinal numbers (e.g., how many?) appropriately i. connect number words and numbers to the quantities they represent	Full	1.9.1 - 1.9.9 1.10.1 - 1.10.4 1.11.1 - 1.11.9	
	K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	1.N.2.1 Use a variety of models to demonstrate an understanding of addition and subtraction of whole numbers.	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	
	1.N.2.2 Solve addition and subtraction problems with one- and two-digit numbers (e.g., 5 + 58 =).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	1.N.2.3 Find the sum of three one-digit numbers to the sum of 15.	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	
	1.N.2.4 Understand and use the inverse relationship between addition and subtraction to solve problems and check solutions (e.g., 8 + 6 = 14 is related to 14 − 6 = 8).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	
	1.N.2.5 Use concrete materials to investigate situations that relate to multiplication and division (e.g., equal groupings of objects, sharing equally).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	

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1.N.2.6 Given simple story problems, explain verbally how to select and use appropriate operations.	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10
K-4 Benchmark N.3: Compute fluently and make reasonable estimates.		
1.N.3.1 Use strategies for whole-number computation, with a focus on addition and subtraction (e.g., counting on or counting back, doubles, sums that make 10, direct modeling with pictures or objects, numerical reasoning based on number combinations and relationships).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10
1.N.3.2 Demonstrate a variety of methods to compute (e.g., objects, mental computation, paper and pencil, and estimation).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10
1.N.3.3 Perform addition and subtraction with whole number combinations.	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10
1.N.3.4 Use and explain estimation strategies to determine the reasonableness of answers involving addition and subtraction.	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10
K-4 Benchmark A.1: Understand patterns, relations, and functions.		
1.A.1.1 Recognize, reproduce, describe, extend, and create repeating patterns (e.g., color, shape, size, sound, movement, simple numbers) and translate from one representation to another (e.g., red, red, blue, blue to step, step, clap, clap).	Full	1.3.7 1.4.6 1.6.1 1.8.1 1.10.1
1.A.1.2 Skip-count on a hundreds chart (e.g., by 2s up to 20 and 5s and 10s up to 100) to identify, describe, and predict number patterns.	Full	1.10.1
1.A.1.3 Identify number patterns on the hundreds chart.	Full	1.10.1
K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
1.A.2.1 Write number sentences that use concrete objects, pictorial, and verbal representations to express mathematical situations using invented and conventional symbols (e.g., +, -, =).	Full	1.3.2 1.4.2 1.11.3 1.23.1 - 1.23.3
1.A.2.2 Demonstrate and describe the concept of equal (e.g., using objects, balance scales).	Full	1.3.2 1.4.2 1.11.3 1.23.1 - 1.23.3
1.A.2.3 Solve open number sentences that have variables representing numbers up to 10 (e.g., 10 = __ + 2).	Full	1.3.2 1.4.2 1.11.3 1.23.1 - 1.23.3
K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		

Strand: ALGEBRA
Standard: Students will understand algebraic concepts and applications.

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1.A.3.1 Represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions to 20 (e.g., 3 + 5 = 8, 2 + 6 = 8).	Full		
1.A.3.2 Describe situations that involve addition and subtraction of whole numbers including objects, pictures, and symbols (e.g., Robert has four apples, Maria has five more).	Full	Embedded throughout, for example: 1.6.1 - 1.6.7 1.7.1 - 1.7.8 1.22.1 - 1.22.10	
K-4 Benchmark A.4: Analyze changes in various contexts.			
1.A.4.1 Describe qualitative change (e.g., a student growing taller, trees getting bigger, ice melting).	None	1.23.1	Teachers will supplement the curriculum to include describing qualitative change.
K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.			
1.G.1.1 Identify common geometric figures and classify them by common attributes: a. recognize, name, build, and draw both polygonal (up to six sides) and curved shapes b. sort two- and three-dimensional shapes into categories based on common attributes c. use the attributes of shapes to analyze and identify examples and non-examples of geometric shapes d. participate in discussions comparing, identifying, and analyzing attributes to develop the vocabulary needed to describe two- and three-dimensional geometric shapes and their attributes (e.g., sides, corners, edges, faces)	Partial	1.14.1 - 1.14.7 1.15.1 - 1.15.5	Teachers will supplement the curriculum to include opportunities for students to recognize and name polygonal shapes with five and six sides. Teachers will supplement the curriculum to include opportunities for students to participate in discussions comparing, identifying, and analyzing attributes to develop the vocabulary needed to describe three-dimensional geometric shapes and their attributes (e.g., edges and faces).
K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.			
1.G.2.1 Participate in group and individual activities based on the concepts of space and location: a. describe direction, location, space, and shape (e.g., left, right, over, under, near, far, between) b. visualize, describe, and record directions for navigating from one location to another to develop the vocabulary needed to describe direction, distance, location, and representation c. use materials to create representations of the surrounding environment (e.g., three-dimensional models, maps of the classroom) d. develop estimates and measure distances using nonstandard measurements	Partial	K.1.1 - K.1.4 1.10.2 - 1.10.3	Teachers will supplement the curriculum, by teaching synchronous sessions, to include opportunities for students to work in groups participating in activities based on the concepts of space and location.
K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.			
1.G.3.1 Predict the results of changing a shape's position or orientation by using rotation (i.e., turns), reflection (i.e., flips), and translations (i.e., slides) .	Full	1.14.5 2.12.7	
1.G.3.2 Create simple symmetrical shapes and pictures.	Full	1.14.5	
1.G.3.3 Recognize and describe the symmetric characteristics of designs (e.g., geometric designs made with pattern blocks).	Full	1.14.5	
K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.			
1.G.4.1 Use combinations of shapes to make a new shape to demonstrate relationships between shapes (e.g., a hexagon can be made from six triangles).	Full	2.12.3	
1.G.4.2 Create three-dimensional shapes based on two-dimensional representations.	Full	1.15.2	

Strand: GEOMETRY
Standard: Students will understand geometric concepts and applications.

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	1.G.4.3 Participate in activities to develop mental visualization and spatial memory (e.g., "quick image" activities that require students to recall or reproduce a configuration of dots on a card or to determine the number of dots without counting).	Partial	2.12.3	Teachers will supplement the curriculum to include opportunities for students to participate in activities to develop spatial memory (e.g., "quick image" activities that require students to recall or reproduce a configuration of dots on a card or to determine the number of dots without counting).
	1.G.4.4 Describe how to get from one location to another by visualizing the landmarks along the route.	Full	1.21.6	
	1.G.4.5 Identify structures from different views or match views of the same structure portrayed from different perspectives.	Full	2.12.3	
Strand: MEASUREMENT Standard: Students will understand measurement systems and applications.	**K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and process of measurement.**			
	1.M.1.1 Develop an understanding of measurable properties (e.g., length, volume, weight, area, and time) using appropriate concepts and vocabulary: a. length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) b. weight by measuring, estimating, and weighing (e.g., heavy [-ier], light [-er]) c. volume by measuring, estimating, and weighing (e.g., full, empty) d. area by measuring and estimating (e.g., perimeter, rectangles, squares) e. time by estimating (e.g., minutes, hours, days, weeks)	Full	1.13.5 1.20.1 - 1.20.6 1.21.1 - 1.21.2	
	1.M.1.2 Use digital and analog (face) clocks to tell time to the half hour.	Full	1.13.1 1.13.2	
	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.			
	1.M.2.1 Measure with multiple copies of units the same size (e.g., paper clips).	Full	1.20.1	
	1.M.2.2 Use repetition of a single unit to measure something larger than the unit (e.g., a yardstick/meterstick to measure a room).	Full	1.20.1	
	K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.			
	1.D.1.1 Collect, organize, represent, and compare data by category on graphs and charts to answer simple questions: a. answer questions about "how" data can be gathered b. gather data by interviewing, surveying, and making observations c. organize data into appropriate categories by sorting based on shared properties d. participate in discussions about selecting an appropriate way to display the data e. represent data using objects, pictures, tables, and simple bar graphs	Partial	1.15.4	Teachers will supplement the curriculum to include opportunities for students to to answer questions about "how" data can be gathered, gather data by interviewing and surveying, participate in discussions about selecting an appropriate way to display the data, and represent data using tables.
Strand: DATA ANALYSIS AND PROBABILITY Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.	**K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.**			
	1.D.2.1 Analyze simple data: a. interpret what the graph or other representation shows b. determine whether or not the data gathered helps answer the specific question that was posed c. compare parts of the data (e.g., "How many students have lost none, one, two, or three teeth?") to make statements about the data as a whole (e.g., "Most students in the class have lost only two teeth")	Full	1.15.4	
	K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.			

	None		Teachers will supplement the curriculum to include opportunities for students to make conclusions based on data.
1.D.3.1 Make conclusions based on data (e.g., whether or not other groups would reach similar conclusions based on the same data).			
K-4 Benchmark D.4: Understand and apply basic concepts of probability.			
1.D.4.1 Discuss the likelihood of events (based on student experiences or from books) using terminology such as "more likely", "less likely", "possible", or "certain".	Full	1.17.3	
1.D.4.2 Observe, explore, and discuss whether some events occur more often than others (e.g., tossing two die and recording the sum after each toss to explore whether or not certain sums occur more frequently than others).	Full	1.17.3	

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New Mexico Grade 2 Math Standards
Compared to K^{12} Grade 2 Math

Strand	Benchmarks and Performance Standards	Coverage	K^{12} grade, unit, lesson	Comments
	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	2.N.1.1 Understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000 and develop flexible ways of thinking about numbers: a. use multiple models to explore place value and the base-ten number system b. represent whole numbers and use them in flexible ways including decomposing and recombining numbers and see their relationships (e.g., 3 is one less than 4, one more than 2, two less than 5) c. identify whether a set of objects has an odd or even number of elements d. compare and order numbers using a variety of terms (e.g., tens, less than, odd numbers) e. apply strategies for computation utilizing an understanding of place value (e.g., 48 + 25 would be 40 + 20 is 60, 8 + 5 is 13, 60 + 13 is 73)	Full	2.3.1 - 2.3.6 2.4.1 - 2.4.9 2.16.1 - 2.16.9 2.17.1 - 2.17.6	
	2.N.1.2 Apply counting skills and number sense through meaningful activities: a. count and recognize "how many" in sets of objects up to 1,000 b. count forward and backward from given numbers to 1,000 c. connect number words and numerals to the quantities they represent using physical models and other representations (e.g., 23 can be twenty-three 1s, one 10 and thirteen 1s, or two 10s and three 1s) d. model how many parts make a whole using equal fractional parts (e.g., ½, ⅓, ¼, and 1/6 as equal parts of a whole)	Full	2.4.1 2.13.1 - 2.13.5 2.16.1 - 2.16.9 2.17.1 - 2.17.6 2.20.4	
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	**K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.**			
	2.N.2.1 Find the sum of two whole numbers up to three digits long (e.g., 235 + 476 = ____; 564 – 273 = ____).	Full	2.16.4 2.16.8	
	2.N.2.2 Find the difference of two whole numbers up to three digits long.	Full	2.20.3 2.20.5	
	2.N.2.3 Understand and use the inverse relationships between addition and subtraction to solve problems and check solutions (28 + 31 = 59; therefore, 59 - 31 = 28).	Full	2.1.8	
	2.N.2.4 Identify and describe situations that require multiplication and division and develop strategies to solve problems for repeated joining of groups and partitioning into equal subgroups or shares (e.g., repeated addition and subtraction, counting by multiples, equal sharing).	Full	2.18.1 - 2.18.7 2.19.1 - 2.19.7	
	K-4 Benchmark N.3: Compute fluently and make reasonable estimates.			
	2.N.3.1 Use and explain strategies for addition and subtraction of multi-digit whole numbers.	Full	2.16.4 2.16.8 2.20.3 2.20.5	
	2.N.3.2 Model and solve problems representing adding and subtracting amounts of money using dollars and coins.	Full	2.21.4 2.21.5	
	2.N.3.3 Use addition combinations (addends through 10) and related subtraction combinations, and develop strategies for computing based on number sense (e.g., 25 + 37: Take 3 from the 25 and use it to turn 37 into 40; then add 40 and 22 to get 62).	Full	2.1.8 2.9.9	

Strand / Standard	Description	Level	References
	2.N.3.4 Select and use a variety of appropriate strategies methods to compute (e.g., objects, mental computation, estimation, paper and pencil).	Full	Embedded throughout, for example: 2.6.1 - 2.6.7 2.18.1 - 2.18.7 2.22.1 - 2.22.11
	2.N.3.5 Skip-count by 2, 5, and 10 to develop multiplicative reasoning and notational representations (e.g., 5, 10, 15, 20; 4 x 5 = 20; four groups of 5 equals 20).	Full	2.4.1 2.4.2
	K-4 Benchmark A.1: Understand patterns, relations, and functions.		
	2.A.1.1 Recognize, reproduce, describe, extend, and create repeating and growing patterns, and translate from one representation to another.	Full	2.13.9
	2.A.1.2 Skip-count using calculators or a hundreds chart to identify, describe, predict, and make generalizations about number patterns to differentiate rote counting versus the meaning of the numbers.	Full	2.4.1 2.4.2
	2.A.1.3 Construct and solve open sentences that have variables (e.g., 10 = + 7).	Full	2.22.4
	2.A.1.4 Relate everyday problem situations to number sentences involving addition and subtraction (e.g., 25 students are going to the store. Five students can ride in a car. How many cars will be needed?).	Full	Embedded throughout, for example: 2.2.7 - 2.2.8 2.4.7 - 2.4.8 2.6.5 - 2.6.6
	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
Strand: ALGEBRA **Standard: Students will understand algebraic concepts and applications.**	2.A.2.1 Use mathematical language to describe a variety of representations and mathematical ideas and situations.	Full	Embedded throughout, for example: 2.3.1 - 2.3.6 2.4.1 - 2.4.9 2.5.1 - 2.5.9
	2.A.2.2 Explain the concept of equal (e.g., quantities on both sides of equation are the same) by using objects or giving examples.	Full	2.22.3
	2.A.2.3 Construct and solve open number sentences that have variables representing numbers up to 20 (e.g., 20 = + 6).	Full	2.22.4
	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		
	2.A.3.1 Model situations of addition and subtraction of whole numbers using objects, pictures, and symbols.	Full	2.22.1
	2.A.3.2 Solve problems related to trading (e.g., coin trading, measurement trading).	Full	2.7.3
	2.A.3.3 Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.	Full	2.4.3 2.4.8 2.6.6 2.17.5 2.19.6 2.22.1 - 2.22.3
	K-4 Benchmark A.4: Analyze changes in various contexts.		
	2.A.4.1 Describe quantitative change (e.g., a student growing two inches in one year, water heating up to boil).	None	Teachers will supplement the curriculum to include describing quantitative change.
	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.		

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Strand: GEOMETRY Standard: Students will understand geometric concepts and applications.

Standard / Benchmark	Coverage	Reference
2.G.1.1 Identify and describe the attributes of common figures in a plane and common objects in space: a. sort, describe, and analyze plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, pyramid, cube, rectangular prism) based on various attributes (e.g., faces, edges, and corners) b. put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle) c. explore lines of symmetry in two-dimensional shapes	Full	2.12.1 - 2.12.8
K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.		
2.G.2.1 Find and name locations with simple relationships like "near to" and apply ideas about relative position.	Full	2.15.9
2.G.2.2 Describe, name, and interpret direction in navigating space and apply ideas about direction and distance.	Full	2.15.9
2.G.2.3 Use maps to locate points and navigate through mazes or maps.	Full	2.15.9
2.G.2.4 Visualize, justify, and create paths using landmarks, space, shapes, and descriptive language.	Full	2.15.9
2.G.2.5 Make and draw rectangular arrays of squares.	Full	2.13.1
K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.		
2.G.3.1 Use systematic thinking to solve geometric puzzles (e.g., pentominoes).	None	Teachers will supplement the curriculum to include using systematic thinking to solve geometric puzzles.
2.G.3.2 Use materials to investigate rotational and line symmetry and create shapes that have symmetry.	Full	2.12.6 2.12.7
K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.		
2.G.4.1 Demonstrate relationships of different attributes with concrete materials (e.g., change one characteristic of a shape while preserving others such as increasing number of sides while perimeter stays the same).	None	Teachers will supplement the curriculum to include opportunities for students to demonstrate relationships of different attributes with concrete materials.
2.G.4.2 Select and use visualization skills to create mental images of geometric shapes.	Full	2.12.3
2.G.4.3 Describe geometric shapes and structures from different perspectives.	Full	2.12.3
2.G.4.4 Relate geometric ideas to numbers (e.g., seeing rows in array as a model of repeated addition).	Full	2.18.5 2.19.1
2.G.4.5 Recognize geometric shapes and structures in the environment and specify their location.	Full	2.12.1

Strand: MEASUREMENT Standard: Students will understand measurement systems and applications.

Standard / Benchmark	Coverage	Reference
K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and process of measurement.		
2.M.1.1 Identify a unit of measure (e.g., nearest inch) and repeat that unit comparing it to the item being measured.	Full	2.14.1
2.M.1.2 Use direct comparison to compare and order objects according to length, mass, and area.	Full	2.14.1 - 2.14.6 2.15.1 - 2.15.7
2.M.1.3 Measure and compare common objects using standard and non-standard units of length.	Full	Grade 2 Math textbook page 293 2.14.1 - 2.14.6 2.15.1 - 2.15.8
2.M.1.4 Find and represent the value of a collection of coins and dollars up to $5.00, using appropriate notation.	Full	2.7.1 - 2.2.7
2.M.1.5 Identify and use time intervals (e.g., hours, days, weeks, months).	Full	2.8.1 - 2.8.5
2.M.1.6 Select and use appropriate measurement tools (e.g., ruler, yardstick, meter stick)	Full	2.15.8
2.M.1.7 Tell time to the nearest quarter hour.	Full	2.8.2
K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.		

Strand / Standard	Benchmark / Standard	Coverage	Correlation
	2.M.2.1 Develop common referents to make comparisons and estimates of length, volume, weight, area, and time.	Full	2.8.1 2.14.2 2.14.5 2.15.4 - 2.15.6
	2.M.2.2 Develop an understanding that different measuring tools will yield different numerical measurements of the same object (e.g., ruler, yardstick, meterstick, paper clip).	Full	2.15.8
	2.M.2.3 Estimate measurements and develop precision in measuring objects.	Full	2.8.1 2.14.2 2.14.5 2.15.4 - 2.15.6
K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.			
	2.D.1.1 Collect numerical data systematically.	Full	3.8.1
	2.D.1.2 Represent data by using concrete objects, pictures, tables, numbers, tallies, and graphs (e.g., pictographs).	Full	2.4.3 2.4.8
	2.D.1.3 Pose questions about students' selves and their surroundings and gather data by interviewing, surveying, and making observations to answer the questions posed.	Full	3.8.1
	2.D.1.4 Identify patterns and explain the relationships of the units in the pattern (e.g., the number of ears on one dog, two dogs, etc., or linear numerical patterns).	Full	2.4.2
K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.			
Strand: DATA ANALYSIS AND PROBABILITY Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.	2.D.2.1 Describe and interpret data by drawing conclusions and making conjectures based on the data collected.	Full	2.4.3 2.4.8 2.13.8
	2.D.2.2 Display data in a variety of formats.	Full	2.4.3 2.4.8 2.13.8
K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.			
	2.D.3.1 Discuss events related to students' experiences as "likely" or "unlikely" and "possible" or "certain".	Full	2.13.8
	2.D.3.2 Recognize appropriate conclusions generated from the data collected.	Full	2.4.3 2.4.8 2.13.8
	2.D.3.3 Recognize inappropriate descriptions of the data set.	None	Teachers will supplement the curriculum to include opportunities for students to recognize inappropriate descriptions of the data set.
K-4 Benchmark D.4: Understand and apply basic concepts of probability.			
	2.D.4.1 Investigate concepts of chance (e.g., outcomes of a simple experiment).	Full	2.13.7
	2.D.4.2 Investigate whether outcomes of a simple event are equally likely to occur.	Full	2.13.8

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New Mexico Grade 3 Math Standards
Compared to K¹² Grade 3 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	3.N.1.1 Exhibit an understanding of the place-value structure of the base-ten number system by: a. reading, modeling, writing, and interpreting whole numbers up to 10,000 b. comparing and ordering numbers up to 1,000 c. recognizing the position of a given number in the base-ten number system and its relationship to benchmark numbers such as 10, 50, 100, 500	Full	3.1.1 - 3.1.8 3.2.1 - 3.2.7	
	3.N.1.2 Use whole numbers by using a variety of contexts and models (e.g., exploring the size of 1,000 by skip-counting to 1,000 using hundred charts or strips 10 or 100 centimeters long).	Full	3.1.3	
	3.N.1.3 Identify some representations for some numbers and generate them by decomposing and recombining numbers (e.g., 853 = 8 x 100 + 5 x 10 + 3; 85 x 10 + 3 = 853; 853 = 900 – 50 + 3).	Full	3.1.1 3.4.3	
	3.N.1.4 Identify the relationship among commonly encountered factors and multiples (e.g., factor pairs of 12 are 1 x 12, 2 x 6, 3 x 4; multiples of 12 are 12, 24, 36).	Full	3.11.1 - 3.11.3 3.17.7	
	3.N.1.5 Use visual models and other strategies to recognize and generate equivalents of commonly used fractions and mixed numbers (e.g., halves, thirds, fourths, sixths, eighths, and tenths).	Full	3.15.1 - 3.15.11	
	3.N.1.6 Demonstrate an understanding of fractions as parts of unit wholes, parts of a collection or set, and as locations on a number line.	Full	3.15.1 - 3.15.11	
	3.N.1.7 Use common fractions for measuring and money (e.g., using fractions and decimals as representations of the same concept, such as half of a dollar = 50 cents).	Full	3.15.1 - 3.15.11 3.16.1 - 3.16.8	
	K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	3.N.2.1 Use a variety of models to show an understanding of multiplication and division of whole numbers (e.g., charts, arrays, diagrams, and physical models [i.e., modeling multiplication with a variety of pictures, diagrams, and concrete tools to help students learn what the factors and products represent in various contexts]).	Full	3.6.1 - 3.6.13 3.7.1 - 3.7.11 3.13.1 - 3.13.10 3.14.1 - 3.14.9	
	3.N.2.2 Find the sum or difference of two whole numbers between 0 and 10,000.	Full	3.3.1 - 3.3.9 3.4.1 - 3.4.8 3.5.1 - 3.5.13	
	3.N.2.3 Solve simple multiplication and division problems (e.g., 135 ÷ 5 =).	Full	3.11.1 - 3.11.16	
	3.N.2.4 Identify how the number of groups and the number of items in each group equals a product.	Full	3.6.1	
	3.N.2.5 Demonstrate the effects of multiplying and dividing on whole numbers (e.g., to find the total number of legs on 12 cats, 4 represents the number of each [cat] unit, so 12 x 4 = 48 [leg] units).	Full	3.11.13	
	3.N.2.6 Identify and use relationship between multiplication and division (e.g., division is the inverse of multiplication) to solve problems.	Full	3.11.11 - 3.11.13	
	3.N.2.7 Select and use operations (e.g., addition, multiplication, subtraction, division) to solve problems.	Full	3.5.11 3.17.6	
	K-4 Benchmark N.3: Compute fluently and make reasonable estimates.			

3.N.3.1 Choose computational methods based on understanding the base-ten number system, properties of multiplication and division, and number relationships.	Full	3.5.11 3.17.6
3.N.3.2 Use strategies (e.g., 6 x 8 is double 3 x 8) to become fluent with the multiplication pairs up to 10 x 10.	Full	3.6.5 3.13.2 3.13.5
3.N.3.3 Compute with basic number combinations (e.g., multiplication pairs up to 10 x 10 and their division counterparts).	Full	3.11.1 - 3.11.16
3.N.3.4 Demonstrate reasonable estimation strategies for measurement, computation, and problem solving.	Full	3.3.3 - 3.3.5 3.4.1 3.5.12 3.9.3 3.13.5 3.14.1 3.14.3
K-4 Benchmark A.1: Understand patterns, relations, and functions.		
3.A.1.1 Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	Full	4.19.1 - 4.19.6
3.A.1.2 Solve problems involving numeric equations.	Full	4.19.1 - 4.19.6
3.A.1.3 Select appropriate operational and relational symbols to make an expression true (e.g., "If 4 ☐ 3 = 12, what operational symbol goes in the box?").	Full	3.17.6
3.A.1.4 Use models of feet and inches to express simple unit conversions in symbolic form (e.g., 36 inches = ☐ feet x 12) that develop conceptual understanding versus procedural skills.	Full	3.9.6
3.A.1.5 Recognize and use the commutative property of multiplication (e.g., if 5 x 7 = 35, then what is 7 x 5?).	Full	3.6.9
3.A.1.6 Create, describe, and extend numeric and geometric patterns including multiplication patterns.	Full	3.1.3 3.4.3 3.11.11 3.16.6
3.A.1.7 Represent simple functional relationships: a. solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit) b. extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s, by multiplying the number of horses by 4, or through the use of tables)	Full	3.11.13 4.19.3
K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
3.A.2.1 Determine the value of variables in missing part problems (e.g., 139 + ☐ = 189).	Full	4.19.1
3.A.2.2 Recognize and use the commutative and associative properties of addition and multiplication (e.g., "If 5 x 7 = 35, then what is 7 x 5? And if 5 x 7 x 3 = 105, then what is 7 x 3 x 5?").	Full	4.2.1 4.6.1
3.A.2.3 Explore the ways that commutative, distributive, identity, and zero properties are useful in computing with numbers.	Full	4.2.1 4.6.1
K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		
3.A.3.1 Model problem situations with objects and use representations such as pictures, graphs, tables, and equations to draw conclusions.	Full	3.13.3 3.15.9 3.16.3

Strand: ALGEBRA
Standard: Students will understand algebraic concepts and applications.

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Strand: GEOMETRY
Standard: Students will understand geometric concepts and applications.

	Coverage	Reference
3.A.3.2 Solve problems involving proportional relationships including unit pricing (e.g., four apples cost 80 cents; therefore, one apple costs 20 cents).	Full	4.1.6
3.A.3.3 Describe relationships of quantities in the form of mathematical expressions, equations, or inequalities.	Full	4.19.1 - 4.19.6
3.A.3.4 Select appropriate operational and relational symbols to make an expression true (e.g., " If 4 ☐ 3 = 12, what operational symbol goes in the box?").	Full	3.17.6
K-4 Benchmark A.4: Analyze changes in various contexts.		
3.A.4.1 Demonstrate how change in one variable can relate to a change in a second variable (e.g., input-output machines, data tables).	Full	4.19.3
K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.		
3.G.1.1 Describe and compare the attributes of plane and solid geometric figures to show relationships and solve problems: a. identify, describe, and classify polygons (e.g., pentagons, hexagons, and octagons) b. identify lines of symmetry in two-dimensional shapes c. explore attributes of quadrilaterals (e.g., parallel and perpendicular sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square) d. identify right angles e. identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder)	Full	3.12.1 - 3.12.14 4.17.1 - 4.17.11
K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.		
3.G.2.1 Describe location and movement using common language and geometric vocabulary (e.g., directions from classroom to gym).	Full	3.9.3 3.9.8
3.G.2.2 Use ordered pairs to graph, locate specific points, create paths, and measure distances within a coordinate grid system.	Full	3.12.5
3.G.2.3 Use a two-dimensional grid system (e.g., a map) to locate positions representing actual places.	Full	3.9.3 3.9.8
K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.		
3.G.3.1 Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.	Full	3.12.7
3.G.3.2 Identify and describe the line of symmetry in two- and three-dimensional shapes.	Partial	3.12.6 Teachers will supplement the curriculum to include opportunities for students to identify and describe the line of symmetry in three-dimensional shapes.
K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.		
3.G.4.1 Visualize, build, and draw geometric objects.	Full	3.12.1 - 3.12.14
3.G.4.2 Create and describe mental images of objects, patterns, and paths.	Full	3.9.3 3.9.8 3.12.1 - 3.12.14
3.G.4.3 Recognize geometric shapes and structures (e.g., in the environment).	Full	3.12.2 - 3.12.4
3.G.4.4 Use geometric models to solve problems in other areas of mathematics (e.g., using arrays as models of multiplication or area).	Full	3.12.1 - 3.12.14
3.G.4.5 Identify and build three-dimensional objects from two-dimensional representations of that object.	Full	4.18.4 - 4.18.6

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	3.G.4.6 Investigate two-dimensional representations of three-dimensional shapes.	Full	4.18.4 - 4.18.6
	3.G.4.7 Explore geometric ideas and relationships as they apply to other disciplines and to problems that arise in the classroom or in everyday life.	Full	3.12.9 - 3.12.13
	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and process of measurement.		
	3.M.1.1 Demonstrate understanding of the need for measuring with standard units and become familiar with standard units in the U.S. customary system.	Full	3.9.1 - 3.9.14
	3.M.1.2 Choose and use the appropriate units and measurement tools to quantify the properties of objects (e.g., length [ruler], width [ruler], or mass [balance scale]).	Full	3.9.1 - 3.9.14
Strand: MEASUREMENT **Standard: Students will understand measurement systems and applications.**	3.M.1.3 Identify time to the nearest minute (elapsed time) and relate time to everyday events.	Full	3.10.2
	3.M.1.4 Identify and use time intervals (e.g., hours, days, weeks, months, years).	Full	3.10.4
	3.M.1.5 Identify properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each property.	Full	3.9.11
	3.M.1.6 Demonstrate understanding that measurements are approximations, investigate differences in units and their effect on precision, and consider the degree of accuracy for different situations.	Full	3.9.1 - 3.9.14
	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.		
	3.M.2.1 Find the area of rectangles using appropriate tools (e.g., grid paper, tiles).	Full	3.12.10
	3.M.2.2 Estimate measurements.	Full	3.9.1 - 3.9.14
	3.M.2.3 Use appropriate standard units and tools to estimate, measure, and solve problems (e.g., length, area, weight).	Full	3.9.11
	3.M.2.4 Recognize a 90-degree angle and use it as a strategy to estimate the size of other angles.	Full	3.12.3
	K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.		
	3.D.1.1 Collect and organize data using observations, measurements, surveys, or experiments.	Full	3.8.1
	3.D.1.2 Represent data using tables and graphs (e.g., line plots, bar graphs, and line graphs).	Full	4.12.1 - 4.12.5
Strand: DATA ANALYSIS AND PROBABILITY **Standard: Students will understand how to formulate questions, and analyze data, and determine probabilities.**	3.D.1.3 Conduct simple experiments by determining the number of possible outcomes and make simple predictions: a. identify whether events are certain, likely, unlikely, or impossible b. record the outcomes for a simple event and keep track of repetitions c. summarize and record the results in a clear and organized way d. use the results to predict future events	Full	3.8.5 3.8.6
	K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.		
	3.D.2.1 Apply and explain the uses of sampling techniques (e.g., observations, polls, tally marks) for gathering data.	Full	3.8.1
	K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		
	3.D.3.1 Analyze data displayed in a variety of formats to make reasonable inferences and predictions, answer questions, and make decisions.	Full	4.12.1 - 4.12.5
	K-4 Benchmark D.4: Understand and apply basic concepts of probability.		
	3.D.4.1 Discuss the degree of likelihood of events and use terminology such as "certain," "likely," "unlikely".	Full	2.13.8
	3.D.4.2 Predict the outcomes of simple experiments (e.g., coin tossing) and test the predictions using concrete objects (e.g., coins, counters, number cubes, spinners).	Full	3.8.5

| 3.D.4.3 Record the probability of a specific outcome for a simple probability situation (e.g., probability is three out of seven for choosing a black ball; 3/7). | Full | 3.8.5 | |

New Mexico Grade 4 Math Standards
Compared to K¹² Grade 4 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	4.N.1.1 Exhibit an understanding of the place-value structure of the base-ten number system by reading, modeling, writing, and interpreting whole numbers up to 100,000; compare and order the numbers: a. recognize equivalent representations for the same number and generate them by decomposing and combining numbers (e.g., 853 = 8 x 100 + 5 x 10 + 3; 853 = 85 x 10 + 3; 853 = 900 – 50 + 3) b. identify the numbers less than 0 by extending the number line and using negative numbers through familiar applications (e.g., temperature, money)	Full	4.1.1 - 4.1.10	
	4.N.1.2 Identify fractions as parts of unit wholes, as parts of groups, and as locations on number lines: a. use visual models and other strategies to compare and order commonly used fractions b. use models to show how whole numbers and decimals (to the hundredths place) relate to simple fractions (e.g., ½, 5/10, 0.5) c. identify different interpretations of fractions: division of whole numbers by whole numbers equivalence parts of a whole or parts of a set ratio ordering of fractions	Full	4.13.1 - 4.13.10 4.14.3 4.15.1 - 4.15.2 5.11.1	
	4.N.1.3 Add and subtract fractions with common and uncommon denominators using a variety of strategies (e.g., manipulatives, numbers, pictures): a. recognize and generate equivalent decimal forms of commonly used fractions (e.g., halves, quarters, tenths, fifths) b. identify the numbers less than 0 by extending the number line and using negative numbers through familiar applications (e.g., temperature, money)	Full	4.14.1 - 4.14.2 4.14.7 - 4.14.8 4.11.9 4.15.1 4.19.5	
	4.N.1.4 Recognize classes of numbers (e.g., odd, even, factors, multiples, square numbers) and apply these concepts in problem-solving situations.	Full	4.20.1 - 4.20.5	
	K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	4.N.2.1 Demonstrate an understanding of and the ability to use: a. standard algorithms for the addition and subtraction of multi-digit numbers b. standard algorithms for multiplying a multi-digit number by a two-digit number and for dividing a multi-digit number by a one-digit number.	Full	4.3.3 4.3.7 4.6.15 4.8.12	
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	4.N.2.2 Select and use appropriate operations (addition, subtraction, multiplication, and division) to solve problems.	Full	4.5.1 4.16.3	
	4.N.2.3 Extend the uses of whole numbers to the addition and subtraction of simple decimals (positive numbers to two places).	Full	4.15.7 - 4.15.8	
	4.N.2.5 Demonstrate the concept of distributivity of multiplication over addition and subtraction (e.g., 7 x 28 is equivalent to (7 x 20) + (7 x 8) or (7 x 30) - (7 x 2)).	Full	5.1.5	
	K-4 Benchmark N.3: Compute fluently and make reasonable estimates.			
	4.N.3.1 Demonstrate multiplication combinations through 12 x 12 and related division facts, and use them to solve problems mentally and compute related problems (e.g., 4 x 5 is related to 40 x 50, 400 x 5, and 40 x 500).	Full	4.6.4	

Standard	Coverage	References
4.N.3.2 Add, subtract, and multiply up to two double-digits accurately and efficiently.	Full	4.3.3 4.3.7 4.6.15 4.8.12
4.N.3.3 Use a variety of strategies (e.g., rounding and regrouping) to estimate the results of whole number computations and judge the reasonableness of the answers.	Full	Embedded throughout, for example: 4.2.5 4.3.1 4.4.1 4.6.6
4.N.3.4 Use strategies to estimate computations involving fractions and decimals.	Full	4.13.2 4.14.4 4.15.9
K-4 Benchmark A.1: Understand patterns, relations, and functions.		
4.A.1.1 Represent and analyze patterns and simple functions using words, tables, and graphs.	Full	4.1.5 4.6.11 4.8.3 4.9.1 4.19.3
4.A.1.2 Create and describe numeric and geometric patterns including multiplication and division patterns.	Full	4.6.11 4.8.3 4.8.6 4.9.1 4.13.3 4.17.9 Grade 4 Math textbook page 350
4.A.1.3 Express mathematical relationships using equations.	Full	4.6.1
4.A.1.4 Use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences: a. use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding of the concept of a variable) b. interpret and evaluate mathematical expressions using parentheses c. use and interpret formulas (e.g., Area = Length x Width or A = L x W) to answer questions about quantities and their relationships	Full	4.2.1 4.6.1 4.19.1 - 4.19.6
K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
4.A.2.1 Identify symbols and letters that represent the concept of a variable as an unknown quantity.	Full	4.19.1 - 4.19.6
4.A.2.2 Explore the uses of properties (commutative, distributive, associative) in the computation of whole numbers.	Full	4.2.1 4.6.1 5.1.5
4.A.2.3 Express mathematical relationships using equations.	Full	4.6.1
4.A.2.4 Determine the value of variables in simple equations (e.g., 80 x 15 = 40 x).	Full	4.19.1 - 4.19.6
4.A.2.5 Develop simple formulas in exploring quantities and their relationships (e.g., A = L x W).	Full	4.18.1 4.18.3 4.18.7
K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		
4.A.3.1 Solve problems involving proportional relationships (including unit pricing and map interpretations; e.g., one inch = five miles; therefore, five inches = miles).	Full	5.11.2 5.11.3 5.11.8

Strand: ALGEBRA
Standard: Students will understand algebraic concepts and applications.

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Description	Coverage	Reference
4.A.3.2 Model problem situations and use graphs, tables, pictures, and equations to draw conclusions (e.g., different patterns of change).	Full	4.20.5
4.A.3.3 Use and interpret formulas (e.g., Area = Length x Width or A = L x W) to answer questions about quantities and their relationships.	Full	4.18.1 4.18.3 4.18.7
K-4 Benchmark A.4: Analyze changes in various contexts.		
4.A.4.1 Identify and describe situations with constant or varying rates of change and compare them.	Full	4.19.3
4.A.4.2 Determine how a change in one variable relates to a change in a second variable (e.g., data tables, input-output machines).	Full	4.19.3
4.A.4.3 Find and analyze patterns using data tables (e.g., T tables).	None	Teachers will supplement the curriculum to include opportunities for students to find and analyze patterns using data tables.
4.A.4.4 Demonstrate and describe varying rates of change in relation to real-world situations (e.g., plant growth, students' heights).	Full	5.16.3
K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.		
4.G.1.1 Identify, compare, and analyze attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes: a. build, draw, create, and describe geometric objects b. identify lines that are parallel or perpendicular c. identify and compare congruent and similar figures	Full	4.17.1 - 4.17.11
4.G.1.2 Classify two- and three-dimensional shapes according to their properties and develop definitions of classes like triangles and pyramids: a. visualize, describe, and make models of geometric solids in terms of the number of faces, edges, and vertices b. interpret two-dimensional representations of three-dimensional objects	Full	4.17.1 - 4.17.11
4.G.1.3 Make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.	None	Teachers will supplement the curriculum to include opportunities for students to make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.
K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.		
4.G.2.1 Describe location and movement using common language and geometric vocabulary.	Full	4.17.10
4.G.2.2 Use ordered pairs to graph, locate, identify points, and describe paths in the first quadrant of the coordinate plane.	Full	4.17.10
4.G.2.3 Use a variety of methods for measuring distances between locations on a grid.	Full	4.17.10
K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.		
4.G.3.1 Create and describe rotational designs using language of transformational symmetry.	Full	5.12.12
4.G.3.2 Describe a motion or set of motions that will show that two shapes are congruent.	Full	5.12.4 5.12.12
K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.		
4.G.4.1 Develop and use mental images of geometric shapes to solve problems (e.g., represent three-dimensional shapes in two dimensions).	Full	4.18.5
4.G.4.2 Use geometric models such as number lines, arrays, and computer simulations to investigate number relationships (e.g., patterns).	Full	4.18.6 4.18.7

Strand: GEOMETRY Standard: Students will understand geometric concepts and applications.

Strand/Standard	Description	Coverage	Standards	Notes
	4.G.4.3 Explore relationships involving perimeter and area: a. measure area of rectangular shapes and use appropriate units b. recognize that area can have the same perimeter but different areas and vice versa c. use models and formulas to solve problems involving perimeter and area of rectangles and squares (e.g., arrays)	Full	4.18.1 - 4.18.8	
	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and process of measurement.			
	4.M.1.1 Select the appropriate type of unit for measuring perimeter and size of an angle.	Full	4.11.1 - 4.11.11 4.17.2	
	4.M.1.2 Understand the need for measuring with standard units and become familiar with the standard units in customary and metric system.	Full	4.11.1 - 4.11.11	
	4.M.1.3 Identify the inverse relationship between the size of the units and the number of units.	None		Teachers will supplement the curriculum to include opportunities for students to identify the inverse relationship between the size of the units and the number of units.
Strand: MEASUREMENT Standard: Students will understand measurement systems and applications.	4.M.1.4 Develop formulas to determine the surface areas of rectangular solids.	None		Teachers will supplement the curriculum to include opportunities for students to develop formulas to determine the surface areas of rectangular solids.
	4.M.1.5 Develop, understand, and use formulas to find the area of rectangles and related triangles and parallelograms.	Full	4.18.1 - 4.18.3	
	4.M.1.6 Carry out simple conversions within a system of measurement (e.g., hours to minutes, meters to centimeters).	Full	4.11.2 - 4.11.11	
	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.			
	4.M.2.1 Estimate perimeters, areas of rectangles, triangles, and irregular shapes.	Full	4.18.1 - 4.18.3	
	4.M.2.2 Find the area of rectangles, related triangles, and parallelograms.	Full	4.18.1 - 4.18.3	
	4.M.2.3 Estimate, measure, and solve problems involving length, area, mass, time, and temperature using appropriate standard units and tools.	Full	4.11.2 - 4.11.11	
	4.M.2.4 Identify common measurements of turns (e.g., 360 degrees in one turn, 90 degrees in a quarter-turn).	Full	4.17.9	
	4.M.2.5 Compute elapsed time and make and interpret schedules.	Full	4.11.10	
	4.M.2.6 Use tools to measure angles (e.g., protractor, compass).	Full	4.17.2 5.12.1 5.12.9	
	K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.			
	4.D.1.1 Organize, represent, and interpret numerical and categorical data and clearly communicate findings: a. choose and construct representations that are appropriate for the data set b. recognize the differences in representing categorical and numerical data	Full	4.12.1 - 4.12.5 5.7.4 - 5.7.10	
	4.D.1.2 Design investigations and represent data using tables and graphs (e.g., line plots, bar graphs, line graphs).	Full	4.12.1 - 4.12.5 5.7.4 - 5.7.10	
	K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.			
Strand: DATA ANALYSIS AND	4.D.2.1 Compare and describe related data sets.	Full	4.12.1 - 4.12.5 5.7.4 - 5.7.10	
	4.D.2.2 Use the concepts of median, mode, maximum, minimum, and range and draw conclusions about a data set.	Full	5.7.4 - 5.7.7	

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PROBABILITY Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.		Full	
	4.D.2.3 Use data analysis to make reasonable inferences/predictions and to develop convincing arguments from data described in a variety of formats (e.g. bar graphs, Venn diagrams, charts, tables, line graphs, and pictographs).	Full	5.7.8 - 5.7.11
	K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		
	4.D.3.1 Propose and justify conclusions and predictions based on data.	Full	5.7.8 - 5.7.11
	4.D.3.2 Develop convincing arguments from data displayed in a variety of formats.	Full	5.7.8 - 5.7.11
	K-4 Benchmark D.4: Understand and apply basic concepts of probability.		
	4.D.4.1 Describe events as "likely," "unlikely," or "impossible" and quantify simple probability situations: a. represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams) b. express outcomes of experimental probability situations verbally and numerically (e.g., three out of four, ¾)	Full	4.12.8
	4.D.4.2 List all the possible combinations of objects from three sets (e.g., spinners, number of outfits from three different shirts, two skirts, and two hats).	Full	4.12.6

New Mexico Grade 5 Math Standards
Compared to K12 Grade 5 Math

Strand	Benchmarks and Performance Standards	Coverage	K12 grade, unit, lesson	Comments
	5-8 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	5.N.1.1 Compare and order using concrete or illustrated models: a. whole numbers (to millions) b. common fractions (halves, thirds, fourths, eighths) c. decimals (thousandths)	Full	5.3.10 5.6.7 5.8.1 5.8.2 5.8.6	
	5.N.1.2 Demonstrate understanding of the magnitude of the value of numbers from thousandths to millions, including common fractions.	Full	5.1.1 5.3.10 5.6.7 5.8.1 5.8.2 5.8.6	
	5.N.1.3 Represent place value using concrete or illustrated models up to one billion (1,000,000,000).	Full	5.1.1	
	5.N.1.4 Interpret percents as part of a hundred (i.e., find decimal and percent equivalents for common fractions, explain how they represent the same value, and compute a given percent of a whole number).	Full	5.11.4 - 5.11.10	
	5.N.1.5 Identify and represent on a number line decimals, fractions, and mixed numbers.	Full	5.3.10 5.8.1	
	5.N.1.6 Identify prime and composite numbers to 50.	Full	5.3.1 5.3.2	
	5-8 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	5.N.2.1 Explain and perform whole number division and express remainders as a whole number or a fractional part as appropriate to the context of real-life problems.	Full	5.2.8 PAA.6.3	
	5.N.2.2 Add and subtract decimals.	Full	5.8.3 5.8.5 5.8.6 5.8.8	
	5.N.2.3 Add and subtract fractions and mixed numbers without regrouping and express answers in simplest form.	Full	5.4.4	
	5.N.2.4 Find the factors and multiples of whole numbers.	Full	5.3.2 5.3.7	
	5.N.2.5 Use arithmetic operations and inverse relationships to represent and solve real-world problems.	Full	Embedded throughout, for example: 5.7.11 5.8.9 5.10.1	
Strand: NUMBER AND OPERATIONS **Standard: Students will understand numerical concepts and mathematical operations.**	5.N.2.6 Identify and represent on a number line decimals, fractions, and mixed numbers.	Full	5.3.10 5.8.1	
	5.N.2.7 Demonstrate proficiency with division, including one- and two-digit divisors.	Full	5.2.1 5.2.2 5.2.5	
	5.N.2.8 Solve simple problems involving the addition and subtraction of fractions and mixed numbers.	Full	5.4.1 - 5.4.11	
	5.N.2.9 Represent and use fractions and decimals in equivalent forms.	Full	5.3.4 5.8.1 5.8.6	
	5-8 Benchmark N.3: Compute fluently and make reasonable estimates.			

Standard	Coverage	Reference	Notes
5.N.3.1 Add, subtract, multiply, and divide whole numbers.	Full	Embedded throughout, for example: 4.3.9, 4.9.9, 4.6.10	
5.N.3.2 Add and subtract decimals.	Full	5.8.3, 5.8.5, 5.8.6, 5.8.8	
5.N.3.3 Use estimation strategies to verify the reasonableness of calculated results.	Full	5.4.12, 5.8.4, 5.8.7, 5.9.2, 5.9.10, 5.14.6, 5.14.12, 5.15.1	
5.N.3.4 Explain how the estimation strategy impacts the result.	Full	5.4.12, 5.8.4, 5.8.7, 5.9.2, 5.9.10, 5.14.6, 5.14.12, 5.15.1	
5.N.3.5 Relate the basic arithmetic operations to one another (e.g., multiplication and division are inverse operations).	Full	5.10.1	
5.N.3.6 Simplify numerical expressions using order of operations.	Full	5.2.7	
5.N.3.7 Recognize and explain the differences between exact and approximate values.	Full	5.4.12, 5.8.4, 5.8.7, 5.9.2, 5.9.10, 5.14.6, 5.14.12, 5.15.1	
5-8 Benchmark A.1: Understand patterns, relations, and functions.			
5.A.1.1 Identify and graph ordered pairs in the first quadrant of the coordinate plane.	Full	5.16.7	
5.A.1.2 Describe, represent, and analyze patterns and relationships.	Full	5.16.3	
5.A.1.3 Identify, describe, and continue patterns presented in a variety of formats (e.g., numeric, visual, oral, written, kinesthetic, pictorial).	Partial	Grade 5 Math textbook pages 124, 125, and 321 5.16.3	Teachers will supplement the curriculum to include opportunities for students to identify, describe, and continue patterns presented in oral and kinesthetic formats.
5.A.1.4 Generate a pattern using a written description.	None		Teachers will supplement the curriculum to include opportunities for students to generate a pattern using a written description.
5-8 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.			
5.A.2.1 Compute the value of the expression for specific numerical values of the variable.	Full	5.16.1, 5.16.2	
5.A.2.2 Use a letter to represent an unknown number.	Full	4.19.1	
5.A.2.3 Understand the differences between the symbols for "less than", "less than or equal to", "greater than", and "greater than or equal to".	Full	PAA.11.12 - PAA.11.13	
5-8 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.			

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Strand / Standard	Benchmark / Description		References
Strand: ALGEBRA **Standard: Students will understand algebraic concepts and applications.**	5.A.3.1 Use mathematical models to represent and explain mathematical concepts and procedures.	Full	5.7.6 5.7.8 5.8.1 5.12.3 5.12.12 5.15.5 5.15.6
	5.A.3.2 Understand and use mathematical models such as: a. the number line to model the relationship between rational numbers and rational number operations b. pictorial representation of addition and subtraction of rational numbers with regrouping c. manipulatives or pictures to model computational procedures d. graphs, tables, and charts to describe data e. diagrams or pictures to model problem situations	Full	5.7.6 5.7.8 5.8.1 5.12.3 5.12.12 5.15.5 5.15.6
	5.A.3.3 Demonstrate how a situation can be represented in more than one way.	Full	5.7.6 5.7.8 5.8.1 5.12.3 5.12.12 5.15.5 5.15.6
5-8 Benchmark A.4: Analyze changes in various contexts.			
	5.A.4.1 Recognize and create patterns of change from everyday life using numerical or pictorial representations.	Full	Grade 5 Math textbook pages 124, 125, and 321 5.16.3
	5.A.4.2 Generalize patterns of change and recognize the same general patterns presented in different representations.	Full	Grade 5 Math textbook pages 124, 125, and 321 5.16.3
5-8 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.			
Strand: GEOMETRY **Standard: Students will understand geometric concepts and applications.**	5.G.1.1 Identify, describe, and classify two-dimensional shapes and three-dimensional figures by their properties.	Full	5.12.3 5.12.6 5.14.9
	5.G.1.2 Recognize and describe properties of regular polygons having up to ten sides.	Full	5.12.3
	5.G.1.3 Identify faces, edges, and bases on three-dimensional objects.	Full	5.14.9
5-8 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.			
	5.G.2.1 Recognize perpendicular and parallel lines.	Full	4.17.3 5.12.2
5-8 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.			
	5.G.3.1 Identify line of symmetry in simple geometric figures.	Full	5.12.11
5-8 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.			
	5.G.4.1 Understand and compute the perimeter of regular polygons.	Full	5.12.7 - 5.12.8
	5.G.4.2 Identify and explain circumference, radius, and diameter.	Full	5.12.9 - 5.12.10
5-8 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.			
	5.M.1.1 Understand properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each using both U.S. customary and metric systems.	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15
	5.M.1.2 Select and use appropriate units and tools to measure according to the degree of accuracy required in a particular problem-solving situation.	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15

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Strand		Full/Partial	Codes
Strand: MEASUREMENT **Standard: Students will understand measurement systems and applications.**	5.M.1.3 Solve problems involving linear measurement, weight, and capacity (e.g., measuring to the nearest sixteenth of an inch or nearest millimeter; using ounces, milliliters, or pounds and kilograms) to the appropriate degree of accuracy.	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15
	5.M.1.3 Solve problems involving linear measurement, weight, and capacity (e.g., measuring to the nearest sixteenth of an inch or nearest millimeter; using ounces, milliliters, or pounds and kilograms) to the appropriate degree of accuracy.	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15
	5.M.1.4 Perform one-step conversions within a system of measurement (e.g., inches to feet, centimeters to meters).	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15
	5-8 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.		
	5.M.2.1 Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.	Full	5.13.1 - 5.13.10 5.14.1 - 5.14.8
	5.M.2.2 Select and use strategies to estimate measurements including length, distance, capacity, and time.	Full	5.13.1 - 5.13.10 5.14.1 - 5.14.8
	5.M.2.3 Apply strategies and use tools for estimating and measuring the perimeter of regular and irregular shapes.	Full	5.12.7 - 5.12.8
	5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.		
	5.D.1.1 Construct, read, analyze, and interpret tables, charts, graphs, and data plots.	Full	5.7.8 - 5.7.11
	5.D.1.2 Construct, interpret, and analyze data from graphical representations and draw simple conclusions using bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.	Full	5.7.8 - 5.7.11
	5.D.1.3 Display, analyze, compare, and interpret different data sets, including data sets of different sizes.	Full	5.7.8 - 5.7.11
	5.D.1.4 Organize and display single-variable data in appropriate graphs and representations.	Full	5.7.8 - 5.7.11
	5.D.1.5 Organize, read, and display numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including correct titles, labels, and intervals or categories including: a. frequency tables b. stem and leaf plots c. bar, line, and circle graphs d. Venn diagrams e. pictorial displays f. charts and tables	Full	Grade 5 Math textbook pages 258-259 5.7.5 - 5.7.11 5.11.6 - 5.11.7 PAA.12.5
	5.D.1.6 Formulate questions and identify data to be collected to correctly answer a question.	Full	5.7.5
	5-8 Benchmark D.2: Select and use appropriate statistical methods to analyze data.		
	5.D.2.1 Organize and display single-variable data in appropriate graphs and representations and determine which types of graphs are appropriate for various data sets.	Full	5.7.5
Strand: DATA ANALYSIS AND PROBABILITY **Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.**	5.D.2.2 Use fractions and percentages to compare data sets of different sizes.	Full	5.7.10 - 5.7.11
	5.D.2.3 Correctly rank the values of a numerical data set containing simple fractions and decimals, identify maximum and minimum data values, and calculate the range for a data set.	Partial	PAA.12.3	Teachers will supplement the curriculum to include opportunities for students to correctly rank the values of a numerical data set containing simple fractions, identify maximum and minimum data values, and calculate the range for a data set.
	5-8 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		

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Standard	Coverage	Reference
5.D.3.1 Make and justify valid inferences, predictions, and arguments based on statistical analysis.	Full	5.7.5 - 5.7.11
5.D.3.2 Compare a given prediction with the results of an investigation.	Full	5.7.5 - 5.7.11
5.D.3.3 Use counting strategies to determine all the possible outcomes of a particular familiar event.	Full	5.7.1 - 5.7.3
5.D.3.4 Find all possible outcome sets involving four or more sets of objects.	None	Teachers will supplement the curriculum to include opportunities for students to find all possible outcome sets involving four or more sets of objects.
5.D.3.5 Evaluate the reasonableness of inferences that are based on data in the context of the original solution.	Full	5.7.5 - 5.7.11
5.D.3.6 Identify the method used to make an inference and/or a prediction on a given data set and solve similar problems.	Full	5.7.5 - 5.7.11
5.D.3.7 Determine the accuracy of a prediction or an inference based on the accuracy of the data in a given data set.	Full	5.7.5 - 5.7.11
5.D.3.8 List all possible outcomes of simple events.	Full	5.7.1 - 5.7.3
5-8 Benchmark D.4: Understand and apply basic concepts of probability.		
5.D.4.1 Determine probabilities through experiments and/or simulations and compare the results with mathematical expressions.	Full	5.7.1 - 5.7.11
5.D.4.2 Make predictions from the results of student-generated experiments of single events.	Full	5.7.1 - 5.7.11
5.D.4.3 Identify simple experiments where the probabilities of all outcomes are equal.	Full	5.7.1 - 5.7.11
5.D.4.4 Describe and predict the results of a probability experiment.	Full	5.7.1 - 5.7.11
5.D.4.5 Use fractions to describe the results of an experiment.	Full	5.7.10 - 5.7.11
5.D.4.6 Use probability to generalize from a simple pattern or set of examples and justify why the generalization is reasonable.	Full	5.7.1 - 5.7.11

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New Mexico Grade 6 Math Standards
Compared to K¹² Grade 6 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	6.N.1.1 Compare and order rational numbers.	Full	5.3.10	
	6.N.1.2 Use equivalent representations for rational numbers (e.g., integers, decimals, fractions, percents, ratios, numbers with whole-number exponents).	Full	PAB.2.1 PAB.2.6 PAB.3.1 - PAB.3.11 PAB.4.1 - PAB.4.10 PAB.7.1	
	6.N.1.3 Use appropriate representations of positive rational numbers in the context of real-life applications.	Full	PAB.4.3 PAB.4.5 PAB.4.8 PAB.4.9 Pre-Algebra B textbook page 141	
	6.N.1.4 Identify greatest common factor and least common multiples for a set of whole numbers.	Full	PAA.5.6 PAA.5.7	
	6.N.1.5 Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	Full	5.3.10 5.8.1 PAA.11.1 PAA.11.2	
	5-8 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	6.N.2.1 Calculate multiplication and division problems using contextual situations.	Full	PAA.1.8	
	6.N.2.2 Factor a whole number into a product of its primes.	Full	PAA.5.5	
	6.N.2.3 Demonstrate the relationship and equivalency among ratios and percents.	Full	PAA.7.10 PAA.7.11 PAA.9.1 PAA.9.2	
	6.N.2.4 Use proportions to solve problems.	Full	PAA.7.12 PAA.7.13	
Strand: NUMBER AND OPERATIONS Standard: Students will understand numerical concepts and mathematical operations.	6.N.2.5 Explain and perform: a. whole number division and express remainders as decimals or appropriately in the context of the problem b. addition, subtraction, multiplication, and division with decimals c. addition and subtraction with integers d. addition, subtraction, and multiplication with fractions and mixed numerals	Full	PAA.3.6 - PAA.3.9 PAA.6.7 PAA.7.1 - PAA.7.8 PAA.11.2 - PAA.11.5	
	6.N.2.6 Determine the least common multiple and the greatest common divisor of whole numbers and use them to solve problems with fractions.	Full	PAA.5.6 PAA.5.7 PAA.7.1 - PAA.7.4	
	5-8 Benchmark N.3: Compute fluently and make reasonable estimates.			
	6.N.3.1 Estimate quantities involving rational numbers using various estimations.	Full	PAA.3.10	
	6.N.3.2 Use estimates to check reasonableness of results and make predictions in situations involving rational numbers.	Full	PAA.3.10	
	6.N.3.3 Determine if a problem situation calls for an exact or approximate answer and perform the appropriate computation.	Full	PAA.3.10 Pre-Algebra A textbook page 470	
	6.N.3.4 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	Full	5.3.10 5.8.1 PAA.11.1 PAA.11.2	

			PAA codes
	6.N.3.5 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	Full	PAA.6.7 PAA.9.3
	6.N.3.6 Interpret and use ratios in different contexts.	Full	PAA.7.10 PAA.7.11
	6.N.3.7 Compute and perform multiplication and division of fractions and decimals and apply these procedures to solving problems.	Full	PAA.3.7 - PAA.3.9 PAA.7.5 - PAA.7.8
	5-8 Benchmark A.1: Understand patterns, relations, and functions.		
	6.A.1.1 Solve problems involving proportional relationships.	Full	PAA.7.12 PAA.7.13
	6.A.1.2 Graph ordered pairs in the coordinate plane.	Full	PAA.11.11
	6.A.1.3 Explain and use symbols to represent unknown quantities and variable relationships.	Full	PAA.8.1
	6.A.1.4 Explain and use the relationships among ratios, proportions, and percents.	Full	PAA.7.10 - PAA.7.12 PAA.9.1 - PAA.9.2
	6.A.1.5 Make generalizations based on observed patterns and relationships.	Full	PAA.11.14 PAA.11.15
	5-8 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
	6.A.2.1 Solve problems involving proportional relationships.	Full	PAA.7.12 PAA.7.13
	6.A.2.2 Use letters to represent an unknown in an equation.	Full	PAA.8.1
	6.A.2.3 Solve one-step linear equations and inequalities in one variable with positive whole-number solutions.	Full	PAA.2.6 PAA.2.7
	6.A.2.4 Demonstrate that a variable can represent a single quantity that changes.	Full	PAA.8.1
	6.A.2.5 Demonstrate how changes in one variable affect other variables.	Full	PAA.11.12 PAA.11.13
	5-8 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		
	6.A.3.1 Develop and use mathematical models to represent and justify mathematical relationships found in a variety of situations.	Full	PAA.2.6 PAA.2.7 PAA.5.9 PAA.10.1 PAA.12.1
Strand: ALGEBRA Standard: Students will understand algebraic concepts and applications.	6.A.3.2 Create, explain, and use mathematical models such as: a. Venn diagrams to show the relationships between the characteristics of two or more sets b. equations and inequalities to model numerical relationships c. three-dimensional geometric models d. graphs, tables, and charts to interpret and analyze data	Full	PAA.2.6 PAA.2.7 PAA.5.9 PAA.10.1 PAA.12.1
	5-8 Benchmark A.4: Analyze changes in various contexts.		
	6.A.4.1 Represent and explain changes using one-step equations with one variable.	Full	PAA.2.6 PAA.2.7
	6.A.4.2 Solve problems that involve change using proportional relationships.	Full	PAA.7.12 PAA.7.13
	6.A.4.3 Use ratios to predict changes in proportional situations.	Full	PAA.7.12 PAA.7.13
	6.A.4.4 Use tables and symbols to represent and describe proportional and other relationships involving conversions, sequences, and perimeter.	None	Teachers will supplement the curriculum to include opportunities for students to use tables and symbols to represent and describe proportional and other relationships involving conversions, sequences, and perimeter.

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Strand / Standard	Benchmark / Objective	Coverage	References	Notes
	6.A.4.5 Generate formulas to represent relationships involving changes in perimeter.	None		Teachers will supplement the curriculum to include opportunities for students to generate formulas to represent relationships involving changes in perimeter.
	5-8 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.			
	6.G.1.1 Identify, describe, and classify the properties of, and the relationships between, plane and solid geometric figures: a. measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software) b. understand that the sum of angles of any triangle is 180 degrees and the sum of the angles of any quadrilateral is 360 degrees and use this information to solve problems c. visualize and draw two-dimensional views of three-dimensional objects made from rectangular solids	Full	PAA.4.1 - PAA.4.13 PAA.10.1 - PAA.10.17	
Strand: GEOMETRY **Standard: Students will understand geometric concepts and applications.**	6.G.1.2 Classify angles as right, obtuse, or straight.	Full	5.12.2 PAA.4.3 PAA.4.4	
	6.G.1.3 Describe the properties of geometric figures that include regular polygons, circles, ellipses, cylinders, cones, spheres, and cubes.	Full	5.14.9 PAA.4.7 - PAA.4.9 PAA.10.8 PAA.10.11 PAA.10.12 Pre-Algebra B textbook pages 222-223	
	6.G.1.4 Classify polygons as regular or irregular.	Full	PAA.4.7	
	6.G.1.5 Classify triangles as scalene, isosceles, or equilateral and by angles (i.e., right, acute, and obtuse).	Full	PAA.4.6	
	6.G.1.6 Identify angle, line, segment, and ray and use the symbols for each.	Full	PAA.4.1 - PAA.4.4	
	6.G.1.7 Describe the relationship between radius, diameter, and circumference of a circle.	Full	PAA.4.8 PAA.4.9	
	5-8 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.			
	6.G.2.1 Use coordinate geometry to describe location on a plane.	Full	PAA.11.11	
	6.G.2.2 Recognize skewed lines in space.	Full	PAA.4.1	
	5-8 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.			
	6.G.3.1 Identify line of symmetry with rotation and scaling.	None		Teachers will supplement the curriculum to include opportunities for students to identify line of symmetry with rotation and scaling.
	5-8 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.			
	6.G.4.1 Use appropriate technology, manipulatives, constructions, or drawings to recognize or compare geometric figures.	Full	PAA.4.1 - PAA.4.13	
	5-8 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.			
	6.M.1.1 Perform multi-step conversions of measurement units to equivalent units within a given system (e.g., 36 inches equals 3 feet or 1 yard).	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15	
	6.M.1.2 Estimate measurement in both U.S. customary and metric units.	Full	5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15	

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Strand / Standard	Benchmark / Indicator		Code Reference	Notes
Strand: MEASUREMENT **Standard: Students will understand measurement systems and applications.**	6.M.1.3 Select and use units of appropriate size and type to measure angles (e.g., degrees, radians), perimeter, area, and capacity in both U.S. customary and metric systems.	Full	5.12.1 - 5.12.2 5.13.1 - 5.13.3 5.13.7 - 5.13.9 5.14.1 - 5.14.15	
	6.M.1.4 Use standard units of linear measurement to the nearest sixteenth of an inch; metric measurements to the nearest millimeter.	Partial	5.13.1 PAA.4.2	Teachers will supplement the curriculum to include opportunities for students to use standard units of linear measurement to the nearest sixteenth of an inch.
5-8 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.				
	6.M.2.1 Apply various measurement techniques and tools, units of measure, and degrees of accuracy to find accurate rational number representations for length, liquid, weight, perimeter, temperature, and time.	Full	5.13.1 - 5.13.10 5.14.1 - 5.14.8	
	6.M.2.2 Select and use formulas for perimeters of squares and rectangles.	Full	PAB.6.9	
	6.M.2.3 Select and use strategies to estimate measurements including angle measure and capacity.	Partial	PAA.3.10	Teachers will supplement the curriculum to include opportunities for students to select and use strategies to estimate angle measurements.
	6.M.2.4 Select and justify the selection of measurement tools, units of measure, and degrees of accuracy appropriate to the given situation.	Full	5.13.1 - 5.13.10 5.14.1 - 5.14.8	
5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.				
	6.D.1.1 Use statistical representations to analyze data.	Full	PAA.12.1	
	6.D.1.2 Draw and compare different graphical representations of the same data.	Full	PAA.12.1	
	6.D.1.3 Use mean, median, mode, and range to describe data.	Full	PAA.12.3 PAA.12.4	
	6.D.1.4 Sketch circle graphs to display data.	Full	PAA.12.2	
	6.D.1.5 Solve problems by collecting, organizing, displaying and interpreting data.	Partial	PAA.12.1 - PAA.12.2 PAA.12.9	Teachers will supplement the curriculum to include opportunities for students to solve problems by collecting data.
	6.D.1.6 Compare different samples of a population with the entire population and determine the appropriateness of using a sample.	Full	Pre-Algebra A textbook pages 438-439	
	6.D.1.7 Conduct and explain sampling techniques such as observations, surveys, and random sampling for gathering data.	Partial	Pre-Algebra A textbook pages 438-439	Teachers will supplement the curriculum to include opportunities for students to conduct and explain sampling techniques such as observations and surveys for gathering data.
	6.D.1.8 Determine the median for a rational number data set containing an odd number of data points.	Full	PAA.12.3	
	6.D.1.9 Calculate and explain the median for a whole number data set containing an even number of data points.	Full	PAA.12.3	
	6.D.1.10 Explain advantages and disadvantages of using various display formats for a specific data set.	Full	PAA.12.9	
	6.D.1.11 Formulate and solve problems by collecting, organizing, displaying, and interpreting data.	Partial	PAA.12.1 - PAA.12.2 PAA.12.9	Teachers will supplement the curriculum to include opportunities for students to formulate and solve problems by collecting data.
5-8 Benchmark D.2: Select and use appropriate statistical methods to analyze data.				
	6.D.2.1 Choose an appropriate graphical format to organize and represent data.	Full	PAA.12.1	
	6.D.2.2 Describe the effects of missing or incorrect data.	Full	Pre-Algebra A textbook pages 438-439	

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

Description	Coverage	Code
6.D.2.3 Compute and analyze statistical measurements for data sets: a. understand how additional data added to data sets may affect the computations of central tendency b. understand how the inclusion or exclusion of outliers affects measures of central tendency c. know why a specific measure of central tendency provides the most useful information in a given context	Full	PAA.12.3 PAA.12.4
6.D.2.4 Use data samples of a population and describe the characteristics and limitations of the sample.	Full	PAA.12.15 PAA.12.16
6.D.2.5 Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.	Full	PAA.12.15 PAA.12.16
6.D.2.6 Explain how the way a question is asked in a survey might influence the results obtained.	Full	PAA.12.15 PAA.12.16
6.D.2.7 Identify data that represent sampling errors and explain why the sample and the display might be biased.	Full	PAA.12.15 PAA.12.16
6.D.2.8 Identify claims based on statistical data and, in sample cases, evaluate the validity and usefulness of the claims.	Full	PAA.12.15 PAA.12.16
5-8 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		
6.D.3.1 Identify claims based on statistical data and evaluate the validity of the claim	Full	PAA.12.15 PAA.12.16
6.D.3.2 Conduct observations, surveys, experiments and/or simulations, record the results in charts, tables, or graphs, and use the results to draw conclusions and make predictions.	Full	PAA.12.15 PAA.12.16
6.D.3.3 Find all possible combinations in a given set (e.g., the number of ways a set of books can be arranged on a shelf).	Full	5.7.1 - 5.7.3
6.D.3.4 Compare expected results with actual results in a simple experiment.	None	Teachers will supplement the curriculum to include opportunities for students to compare expected results with actual results in a simple experiment.
6.D.4.1 List all possible outcomes for a compound event composed of two independent events and recognize whether an outcome is certain, impossible, likely, or unlikely.	Full	PAA.12.14
6.D.4.2 Determine and compare experimental (empirical) and mathematical (theoretical) probabilities (e.g., flipping two color counters).	Full	PAA.12.1 - PAA.12.17
6.D.4.3 Determine theoretical and experimental probabilities and use them to make predictions about events.	Full	PAA.12.1 - PAA.12.17
6.D.4.4 Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome.	Full	PAA.12.14
6.D.4.5 Use data to estimate the probability of future events (e.g., batting averages).	Full	PAA.12.11 - PAA.12.15
6.D.4.6 Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1- P is the probability of the event not occurring.	Partial	PAA.12.11 - PAA.12.13 PAB.11.7
6.D.4.7 Describe the difference between independent and dependent events and identify situations involving independent or dependent events.	Full	5.7.3

(Right-margin notes:)

6.D.3.4 None — Teachers will supplement the curriculum to include opportunities for students to compare expected results with actual results in a simple experiment.

6.D.4.6 Partial — Teachers will supplement the curriculum to include opportunities for students to represent probabilities as decimals between 0 and 1 and verify that the probabilities computed are reasonable.

New Mexico Grade 7 Math Standards
Compared to K¹² Grade 7 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	7.N.1.1 Determine the absolute value of rational numbers.	Full	PAB.3.1	
	7.N.1.2 Illustrate the relationships among natural (i.e., counting) numbers, whole numbers, integers, rational and irrational numbers.	Full	PAB.2.1 - PAB.2.10 PAB.3.1 PAB.4.10	
	7.N.1.3 Use properties of the real-number system to explain reasoning and to formulate and solve real-world problems.	Full	PAB.2.8	
	7.N.1.4 Read, write, and compare rational numbers in scientific notation (e.g., positive and negative powers of 10) with approximate numbers using scientific notation.	Full	PAB.3.12	
	7.N.1.5 Simplify numerical expressions using order of operations.	Full	PAB.1.2	
	5-8 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	7.N.2.1 Add, subtract, multiply, and divide rational numbers (e.g., integers, fractions, terminating decimals) and take positive rational numbers to whole-number powers.	Full	PAB.4.1 - PAB.4.12	
	7.N.2.2 Convert terminating decimals into reduced fractions.	Full	PAB.4.1 - PAB.4.12	
	7.N.2.3 Calculate given percentages of quantities and use them to solve problems (e.g., discounts of sales, interest earned, tips, markups, commission, profit, simple interest).	Full	PAB.7.4 - PAB.7.11	
	7.N.2.4 Add and subtract fractions with unlike denominators.	Full	PAB.4.1 - PAB.4.5	
Strand: NUMBER AND OPERATIONS Standard: Students will understand numerical concepts and mathematical operations.	7.N.2.5 Multiply, divide, and simplify rational numbers by using exponent rules.	Full	ALG.5.1 ALG.8.2 ALG.8.3 ALG.10.6	
	7.N.2.6 Understand the meaning of the absolute value of a number: a. interpret the absolute value as the distance of the number from zero on a number line b. determine the absolute value of real numbers	Full	PAB.3.1	
	7.N.2.7 Find square roots of perfect whole-number squares.	Full	PAB.10.1 PAB.10.2	
	7.N.2.8 Simplify and evaluate positive rational numbers raised to positive whole number powers.	Full	PAB.2.1	
	7.N.2.9 Solve addition, subtraction, multiplication, and division problems that use positive and negative integers and combinations of these operations.	Full	PAB.3.1 - PAB.3.14	
	5-8 Benchmark N.3: Compute fluently and make reasonable estimates.			
	7.N.3.1 Use estimation to check reasonableness of results, and use this information to make predictions in situations involving rational numbers, pi, and simple algebraic equations.	Full	PAB.2.3 PAB.9.4	
	7.N.3.2 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	Full	PAB.4.10 PAB.7.4	
	7.N.3.3 Read, write, and compare rational numbers in scientific notation (e.g., positive and negative powers of 10) with approximate numbers using scientific notation.	Full	PAB.3.12	
	7.N.3.4 Calculate the percentage of increases and decreases of a quantity.	Full	PAB.7.7	
	7.N.3.5 Add and subtract fractions with unlike denominators.	Full	PAB.4.5	
	7.N.3.6 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer.	Full	PAB.10.1 PAB.10.2	
	5-8 Benchmark A.1: Understand patterns, relations, and functions.			

Strand: ALGEBRA
Standard: Students will understand algebraic concepts and applications.

7.A.1.1 Identify and continue patterns presented in a variety of formats.	Full	PAA.11.14 PAA.11.15
7.A.1.2 Represent a variety of relationships using tables, graphs, verbal rules, and possible symbolic notation, and recognize the same general pattern presented in different representations.	Full	PAA.11.14 PAA.11.15
7.A.1.3 Simplify numerical expressions by applying properties of rational numbers, and justify the process used.	Full	PAB.4.1 - PAB.4.12
7.A.1.4 Interpret and evaluate expressions involving integer powers and simple roots.	Full	PAB.2.1 PAB.3.11 PAB.10.1 PAB.10.2 PAB.10.12 - PAB.10.14
7.A.1.5 Graph and interpret linear functions.	Full	PAB.8.5 PAB.8.6
7.A.1.6 Solve problems involving rate, average speed, distance, and time.	Full	ALG.5.10 ALG.5.11 ALG.13.8 ALG.13.9
5-8 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.		
7.A.2.1 Write verbal expressions and sentences as algebraic expressions and equations: a. evaluate algebraic expressions b. solve simple linear equations c. graph and interpret results	Full	PAB.1.8 - PAB.1.10 PAB.8.5 PAB.8.6
7.A.2.2 Use variables and appropriate operations to write an expression, an equation, or an inequality that represents a verbal description.	Full	PAB.1.8 - PAB.1.10 PAB.8.5 PAB.8.6
7.A.2.3 Use the order of operations to evaluate algebraic expressions.	Full	PAB.1.2
7.A.2.4 Simplify numerical expressions by applying properties of rational numbers.	Full	PAB.4.1 - PAB.4.12
7.A.2.5 Graph linear functions and identify slope as positive or negative.	Full	PAB.8.10 ALG.11.3
7.A.2.6 Use letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.	Full	PAB.8.1 - PAB.8.17
5-8 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.		
7.A.3.1 Create scale models and use them for dimensional drawings.	Full	PAB.7.3
7.A.3.2 Understand and use the coordinate plane to graph ordered pairs and linear equations.	Full	PAB.8.1 - PAB.8.17
7.A.3.3 Select and use an appropriate model for a particular situation.	Full	PAB.8.1 - PAB.8.17
5-8 Benchmark A.4: Analyze changes in various contexts.		
7.A.4.1 Use variables and appropriate operations to write an expression, an equation, and/or an inequality that represents a verbal description involving change.	Full	PAB.1.8 - PAB.1.10 PAB.8.5 PAB.8.6
7.A.4.2 Interpret and evaluate expressions involving integer powers and simple roots as they relate to change.	Full	PAB.2.1 PAB.3.11 PAB.10.1 PAB.10.2 PAB.10.12 - PAB.10.14
7.A.4.3 Graph and interpret linear functions as they are used to solve problems.	Full	ALG.12.1 - ALG.12.3
7.A.4.4 Solve two-step equations and inequalities with one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results.	Full	PAB.5.5 PAB.5.6 PAB.5.9

Strand / Standard	Benchmark / Indicator	Coverage	Reference	Notes
	5-8 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.			
	7.G.1.1 Classify geometric figures as similar or congruent.	Full	PAB.6.10 PAB.10.6	
	7.G.1.2 Understand the concept of a constant (e.g., pi) and use the formulas for the circumference and area of a circle.	Full	PAB.9.4	
	7.G.1.3 Explain and use the Pythagorean theorem.	Full	PAB.10.3 PAB.10.4	
	7.G.1.4 Determine the radius, diameter, and circumference of a circle and explain their relationship.	Full	PAB.9.4	
	7.G.1.5 Use properties to classify solids including pyramids, cones, prisms, and cylinders.	Full	PAB.9.7 - PAB.9.11	
Strand: GEOMETRY **Standard: Students will understand geometric concepts and applications.**	**5-8 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.**			
	7.G.2.1 Construct and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine the image under translations and reflections.	Partial	PAB.8.1 - PAB.8.2	Teachers will supplement the curriculum to include opportunities for students to determine lengths and areas of simple figures plotted on coordinate graphs.
	5-8 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.			
	7.G.3.1 Determine how perimeter and area are affected by changes of scale.	Full	PAB.7.3	
	5-8 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.			
	7.G.4.1 Compute the perimeter and area of common geometric shapes and use the results to find measures of less common objects.	Full	PAB.6.9 PAB.9.1 - PAB.9.5	
	7.G.4.2 Identify and describe the properties of two-dimensional figures: a. identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms b. use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle c. draw quadrilaterals and triangles from given information	Full	PAB.6.1 - PAB.6.12	
	5-8 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.			
	7.M.1.1 Choose appropriate units of measure and ratios to recognize new equivalences (e.g., 1 square yard equals 9 square feet) to solve problems.	None		Teachers will supplement the curriculum to include opportunities for students to choose appropriate units of measure and ratios to recognize new equivalences to solve problems.
	7.M.1.2 Select and use the appropriate size and type of unit for a given measurement situation.	Full	PAB.9.1 - PAB.9.14	
Strand: MEASUREMENT **Standard: Students will understand measurement systems and applications.**	7.M.1.3 Compare masses, weights, capacities, geometric measures, times, and temperatures within measurement systems.	Partial	PAB.9.1 - PAB.9.14	Teachers will supplement the curriculum to include opportunities for students to compare times and temperatures within measurement systems.
	7.M.1.4 Approximate the relationship between standard and metric measurement systems (e.g., inches and centimeters, pounds and kilograms, quarts and liters).	None		Teachers will supplement the curriculum to include opportunities for students to approximate the relationship between standard and metric measurement systems.
	7.M.1.5 Use measures expressed as rates and measures expressed as products to solve problems, check the units of the solutions, and analyze the reasonableness of the answer.	Full	PAB.7.2	
	5-8 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.			

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Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

Standard / Benchmark	Coverage	Correlation
7.M.2.1 Apply strategies and formulas to find missing angle measurements in triangles and quadrilaterals.	Full	PAB.6.3 / PAB.6.4 / PAB.6.7 / PAB.6.8
7.M.2.2 Select and use formulas to determine the circumference of circles and the area of triangles, parallelograms, trapezoids, and circles.	Full	PAB.6.2 / PAB.9.1 - PAB.9.4 / ALG.18.6
7.M.2.3 Solve problems involving scale factors, ratios, and proportions.	Full	PAB.7.1 - PAB.7.3
5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.		
7.D.1.1 Describe how data representations influences interpretation.	Full	PAB.12.1 - PAB.12.11
7.D.1.2 Select and use appropriate representation for presenting collected data and justify the selection.	Full	PAB.12.1 - PAB.12.11
7.D.1.3 Use measures of central tendency and spread to describe a set of data.	Full	PAB.12.3 / PAB.12.5
7.D.1.4 Choose between median and mode to describe a set of data and justify the choice for a particular situation.	Full	PAB.12.3 / PAB.12.5
7.D.1.5 Determine the quartiles of a data set.	Full	PAB.12.7
7.D.1.6 Identify ordered pairs of data from a graph and interpret the data in terms of the situation depicted by the graph.	Full	PAB.12.9 / ALG.17.1
7.D.1.7 Use various scales and formats to display the same data set.	Full	PAB.12.1 - PAB.12.11
7.D.1.8 Identify and explain the misleading representations of data.	Full	ALG.17.7 / ALG.17.8
7.D.1.9 Collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set.	Full	PAB.12.9 / ALG.17.6
7.D.1.10 Compute the minimum, lower quartile, median, upper quartile, and maximum of a data set.	Full	PAB.12.7
7.D.1.11 Identify and explain the effects of scale and/or interval changes on graphs of whole number data sets.	Full	PAB.12.1 - PAB.12.11
7.D.1.12 Use and explain sampling techniques (e.g., observations, surveys, and random sampling) for gathering data.	Full	PAA.12.15 / PAA.12.16
7.D.1.13 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, and selecting, collecting, and displaying appropriate data to address the problem.	Full	PAB.12.1 - PAB.12.11
5-8 Benchmark D.2: Select and use appropriate statistical methods to analyze data.		
7.D.2.1 Choose and justify appropriate measures of central tendencies (e.g., mean, median, mode, range) to describe given or derived data.	Full	PAB.12.3 / PAB.12.5
7.D.2.2 Know various ways to display data sets (e.g., stem and leaf plot, box and whisker plot, scatter plots) and use these forms to display a single set of data or to compare two sets of data.	Full	PAB.12.1 - PAB.12.11
7.D.2.3 Use the analysis of data to make convincing arguments.	Full	PAB.12.1 / PAB.12.2 / ALG.17.5 / ALG.17.6
7.D.2.4 Use appropriate technology to gather and display data sets and identify the relationships that exist among variables within the data set.	None	Teachers will supplement the curriculum to include opportunities for students to use appropriate technology to gather and display data sets and identify the relationships that exist among variables within the data set.
7.D.2.5 Use data samples of a population and describe the characteristics and limitations of the sample.	Full	PAA.12.15 / PAA.12.16
7.D.2.6 Identify data that represent sampling errors and explain why the sample and the display might be biased.	Full	PAA.12.15 / PAA.12.16

Standard	Level	Codes
7.D.2.7 Identify claims based on statistical data and evaluate the validity of the claims.	Full	PAA.12.15 PAA.12.16
5-8 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.		
7.D.3.1 Formulate and justify mathematical conjectures based on data and a general description of the mathematical question or problem posed.	Full	PAB.12.1 - PAB.12.11
7.D.3.2 Analyze data to make accurate inferences, predictions, and to develop convincing arguments from data displayed in a variety of forms.	Full	PAB.12.1 - PAB.12.11
7.D.3.3 Approximate a line of best fit for a data set in a scatter plot form and make predictions using the simple equation of that line.	Full	ALG.12.1 - ALG.12.3
5-8 Benchmark D.4: Understand and apply basic concepts of probability.		
7.D.4.1 Determine the probability of a compound event composed of two independent events.	Full	PAB.11.8
7.D.4.2 Identify examples of events having the probability of one or zero.	Full	PAB.11.3
7.D.4.3 Describe the probability of events using fractions, decimals, and percents.	Full	PAB.11.3
7.D.4.4 Express probability as a fraction, zero, or one.	Full	PAB.11.3
7.D.4.5 Use probability to generate convincing arguments, draw conclusions, and make decisions in a variety of situations.	Full	PAB.11.3 - PAB.11.12 ALG.17.2 ALG.17.3
7.D.4.6 Make predictions based on theoretical probabilities of compound events.	Full	PAB.11.3 - PAB.11.12 ALG.17.2 ALG.17.3
7.D.4.7 Determine the probability of a simple event or a compound event composed of a simple, independent events.	Full	PAB.11.8

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New Mexico Grade 8 Math Standards
Compared to K¹² Grade 8 Math

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.			
	8.N.1.1 Sort numbers by their properties (e.g., prime, composite, square, square root).	Full	ALG.15.1 - ALG.15.13	
	8.N.1.2 Demonstrate the magnitude of rational numbers (e.g., trillions to millions).	None		Teachers will supplement the curriculum to include opportunities for students to demonstrate the magnitude of rational numbers.
	5-8 Benchmark N.2: Understand the meaning of operations and how they relate to one another.			
	8.N.2.1 Use real number properties (e.g., commutative, associative, distributive) to perform various computational procedures.	Full	ALG.2.1 ALG.6.6	
	8.N.2.2 Perform arithmetic operations and their inverses (e.g., addition/subtraction, multiplication/division, square roots of perfect squares, cube roots of perfect cubes) on real numbers.	Full	ALG.3.5 ALG.3.6	
	8.N.2.3 Find roots of real numbers using calculators.	Full	ALG.15.3	
	5-8 Benchmark N.3: Compute fluently and make reasonable estimates.			
Strand: NUMBER AND OPERATIONS Standard: Students will understand numerical concepts and mathematical operations.	8.N.3.1 Formulate algebraic expressions that include real numbers to describe and solve real-world problems.	Full	Embedded throughout, for example: ALG.4.1 ALG.4.2 ALG.4.4 ALG.4.5	
	8.N.3.2 Use a variety of computational methods to estimate quantities involving real numbers.	Full	ALG.2.1 - ALG.2.13 ALG.9.3 ALG.9.4 ALG.12.8 ALG.12.9	
	8.N.3.3 Differentiate between rational and irrational numbers.	Full	ALG.15.1 - ALG.15.13	
	8.N.3.4 Use real number properties to perform various computational procedures and explain how they were used.	Full	ALG.2.1 - ALG.2.13	
	8.N.3.5 Perform and explain computations with rational numbers, pi, and first-degree algebraic expressions in one variable in a variety of situations.	Full	ALG.15.1 - ALG.15.13	
	8.N.3.6 Select and use appropriate forms of rational numbers to solve real-world problems including those involving proportional relationships.	Full	ALG.9.3 - ALG.9.4 ALG.15.1 - ALG.15.13	
	8.N.3.7 Approximate, mentally and with calculators, the value of irrational numbers as they arise from problem situations.	Full	ALG.15.6	
	8.N.3.8 Express numbers in scientific notation (including negative exponents) in appropriate problem situations using a calculator.	Full	ALG.10.7	
	8.N.3.9 Estimate answers and use formulas to solve application problems involving surface area and volume.	Full	PAB.9.11 PAB.9.12 ALG.18.7	
	5-8 Benchmark A.1: Understand patterns, relations, and functions.			
	8.A.1.1 Move between numerical, tabular, and graphical representations of linear relationships.	Full	ALG.13.1 - ALG.13.13	
	8.A.1.2 Use variables to generalize patterns and information presented in tables, charts, and graphs: a. graph linear functions noting that the vertical change per unit of horizontal change (the slope of the graph) is always the same b. plot the values of quantities whose ratios are always the same, fit a line to the plot, and understand that the slope of the line equals the quantities	Full	ALG.11.1 - ALG.11.9	

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5-8 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.

Strand/Standard	Objective		Reference
	8.A.2.1 Demonstrate the difference between an equation and an expression.	Full	ALG.1.1 ALG.1.4
	8.A.2.2 Solve two-step linear equations and inequalities in one variable with rational solutions.	Full	ALG.13.2 ALG.14.2
	8.A.2.3 Evaluate formulas using substitution.	Full	ALG.1.6 ALG.1.7 ALG.4.1 ALG.13.2 ALG.16.3
	8.A.2.4 Demonstrate understanding of the relationships between ratios, proportions, and percents and solve for a missing term in a proportion.	Full	ALG.9.1 - ALG.9.4
	8.A.2.5 Graph solution sets of linear equations in two variables on the coordinate plane.	Full	ALG.11.1 ALG.11.2
	8.A.2.6 Formulate and solve problems involving simple linear relationships, find percents of a given number, variable situations, and unknown quantities.	Full	ALG.1.1 ALG.1.6 ALG.2.2 ALG.4.1 ALG.10.1 ALG.10.2
	8.A.2.7 Use symbols, variables, expressions, inequalities, equations, and simple systems of equations to represent problem situations that involve variables or unknown quantities.	Full	Embedded throughout, for example: ALG.1.1 ALG.1.6 ALG.2.2 ALG.4.1

5-8 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.

Strand/Standard	Objective		Reference
	8.A.3.1 Generate different representations to model a specific numerical relationship given one representation of data (e.g., a table, a graph, an equation, a verbal description).	Full	PAB.8.1 - PAB.8.17

5-8 Benchmark A.4: Analyze changes in various contexts.

Strand/Standard	Objective		Reference
	8.A.4.1 Use graphs, tables, and algebraic representations to make predictions and solve problems that involve change.	Full	ALG.11.1 - ALG.11.9
	8.A.4.2 Estimate, find, and justify solutions to problems that involve change using tables, graphs, and algebraic expressions.	Full	ALG.11.1 - ALG.11.9
	8.A.4.3 Use appropriate problem-solving strategies (e.g., drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table or graph, working a simpler problem, writing an algebraic expression or working backward) to solve problems that involve change.	Full	Embedded throughout, for example: ALG.1.8 ALG.1.9 ALG.2.8 ALG.7.7
	8.A.4.4 Solve multi-step problems that involve changes in rate, average speed, distance, and time.	Full	ALG.5.10 ALG.5.11 ALG.13.8 ALG.13.9
	8.A.4.5 Analyze problems that involve change by identifying relationships, distinguishing relevant information from irrelevant information, identifying missing information, sequencing, and observing patterns.	Full	Embedded throughout, for example: ALG.7.1 ALG.7.2 ALG.7.3 ALG.7.7
Strand: ALGEBRA Standard: Students will understand algebraic concepts and applications.	8.A.4.6 Generalize a pattern of change using algebra and show the relationship among the equation, graph, and table of values.	Full	ALG.12.1 - ALG.12.10

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Strand / Standard	Benchmark	Coverage	References	Notes
	8.A.4.7 Recognize the same general pattern of change presented in different representations.	Full	ALG.12.1 - ALG.12.10	
	5-8 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.			
	8.G.1.1 Recognize, classify, and discuss properties of all geometric figures including point, line, and plane.	Full	ALG.18.1 - ALG.18.10	
	8.G.1.2 Identify arc, chord, and semicircle and explain their attributes.	Full	PAB.6.2 / ALG.15.7	
	8.G.1.3 Use the Pythagorean theorem and its converse to find the missing side of a right triangle and the lengths of the other line segments.	Full	ALG.18.4	
	5-8 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.			
	8.G.2.1 Represent, formulate, and solve distance and geometry problems using the language and symbols of algebra and the coordinate plane and space (e.g., ordered triplets).	Full	ALG.5.10 ALG.5.11 ALG.13.8 ALG.13.9 ALG.11.1 - ALG.11.9 ALG.18.1 - ALG.18.8	
	5-8 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.			
	8.G.3.1 Describe the symmetry of three-dimensional figures.	Full	ALG.12.4	
Strand: GEOMETRY Standard: Students will understand geometric concepts and applications.	8.G.3.2 Describe and perform single and multiple transformations that include rotation, reflection, translation, and dilation (i.e., shrink or magnify) to two-dimensional figures.	None		Teachers will supplement the curriculum to include opportunities for students to use describe and perform single and multiple transformations that include rotation, reflection, translation, and dilation to two-dimensional figures.
	5-8 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.			
	8.G.4.1 Understand angle relationships formed by parallel lines cut by a transversal.	Full	ALG.18.2	
	8.G.4.2 Recognize and apply properties of corresponding parts of similar and congruent triangles and quadrilaterals.	Full	PAB.6.8 PAB.6.10 ALG.18.5	
	8.G.4.3 Represent and solve problems relating to size, shape, area, and volume using geometric models.	Full	ALG.18.6 ALG.18.7	
	8.G.4.4 Develop and use formulas for area, perimeter, circumference, and volume.	Full	PAB.4.8 PAB.4.9 ALG.18.6 ALG.18.7	
	8.G.4.5 Construct two-dimensional patterns for three-dimensional models (e.g., cylinders, prisms, cones).	None		Teachers will supplement the curriculum to include opportunities for students to construct two-dimensional patterns for three-dimensional models.
	5-8 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.			
	8.M.1.1 Understand the concept of volume and use the appropriate units in common measuring systems (e.g., cubic centimeter, cubic inch, cubic yard) to compute the volume of rectangular solids.	Full	ALG.18.7	
	8.M.1.2 Use changes in measurement units (e.g., square inches, cubic feet) to perform conversions from one-, two-, and three-dimensional shapes.	None		Teachers will supplement the curriculum to include opportunities for students to use changes in measurement units to perform conversions from one-, two-, and three-dimensional shapes.
	5-8 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.			
Strand: MEASUREMENT	8.M.2.1 Use ratios and proportions to measure hard-to-measure objects.	Full	ALG.9.1 - ALG.9.4 ALG.18.8	

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Standard / Strand	Standard	Coverage	Reference	Notes
Standard: Students will understand measurement systems and applications.	8.M.2.2 Use estimation to solve problems.	Full	ALG.9.3	
	8.M.2.3 Use proportional relationships in similar shapes to find missing measurements.	Full	ALG.9.3 ALG.9.4	
	8.M.2.4 Apply strategies to determine the surface area and volume of prisms, pyramids, and cylinders.	Full	PAB.9.9 - PAB.9.12	
	8.M.2.5 Perform conversions with multiple terms between metric and U.S. standard measurement systems.	None		Teachers will supplement the curriculum to include opportunities for students to perform conversions with multiple terms between metric and U.S. standard measurement systems.
	8.M.2.6 Estimate volume in cubic units.	None		Teachers will supplement the curriculum to include opportunities for students to estimate volume in cubic units.
	8.M.2.7 Solve simple problems involving rates and derived measurements for such properties as velocity and density.	None		Teachers will supplement the curriculum to include opportunities for students to solve simple problems involving rates and derived measurements for such properties as velocity and density.
	5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.			
	8.D.1.1 Represent two numerical variables on a plot, describe how the data points are distributed, and identify relationships that exist between the two variables.	Full	ALG.17.6	
	8.D.1.2 Generate, organize, and interpret real numbers in a variety of situations.	Full	ALG.17.1 - ALG.17.10	
	8.D.1.3 Organize, analyze, and display appropriate quantitative and qualitative data to address specific questions including: a. frequency distributions b. plots c. histograms d. bar, line, and pie graphs e. diagram and pictorial displays f. charts and tables	Partial	PAB.12.1 PAB.12.2 ALG.17.5 ALG.17.6	Teachers will supplement the curriculum to include opportunities for students to organize, analyze, and display appropriate quantitative and qualitative data in pie graphs and pictorial displays to address specific questions.
	8.D.1.4 Select the appropriate measure of central tendency to describe a set of data for a particular problem situation.	Full	ALG.17.5	
	8.D.1.5 Simulate an event selecting and using different models.	Full	ALG.17.4 - ALG.17.6	
	8.D.1.6 Develop an appropriate strategy using a variety of data from surveys, samplings, estimations, and inferences to address a specific problem.	Partial	ALG.17.7 ALG.17.8	Teachers will supplement the curriculum to include opportunities for students to develop an appropriate strategy using a variety of data from surveys, estimations, and inferences to address a specific problem.
	5-8 Benchmark D.2: Select and use appropriate statistical methods to analyze data.			
	8.D.2.1 Use changes in scales, intervals, or categories to help support a particular interpretation of data.	Full	ALG.17.1 - ALG.17.10	
	8.D.2.2 Generate, organize, and interpret real number and other data in a variety of situations.	Full	ALG.17.1 - ALG.17.10	
Strand: DATA ANALYSIS AND PROBABILITY	8.D.2.3 Analyze data to make decisions and to develop convincing arguments from data displayed in a variety of formats including: a. plots b. distributions c. graphs d. scatter plots e. diagrams f. pictorial displays g. charts and tables h. Venn diagrams	Partial	PAB.12.1 PAB.12.2 ALG.17.5 ALG.17.6	Teachers will supplement the curriculum to include opportunities for students to analyze data to make decisions and to develop convincing arguments from data displayed in pictorial displays and Venn diagrams.
	8.D.2.4 Interpret and analyze data from graphical representations and draw simple conclusions (e.g., line of best fit).	Full	ALG.12.1 - ALG.12.3 ALG.17.1 - ALG.17.10	
	8.D.2.5 Evaluate and defend the reasonableness of conclusions drawn from data analysis.	Full	ALG.17.7 ALG.17.8	

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Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.		Coverage	References
	8.D.2.6 Use appropriate central tendency and spread as a means for effective decision-making in analyzing data and outliers.	Full	ALG.17.4 ALG.17.5
	8.D.2.7 Identify simple graphic misrepresentations and distortions of sets of data (e.g., unequal interval sizes, omission of parts of axis range, scaling).	Full	ALG.17.7 ALG.17.8
	8.D.2.8 Use appropriate technology to display data as lists, tables, matrices, graphs, and plots and to analyze the relationships of variables in the data displayed.	None	Teachers will supplement the curriculum to include opportunities for students to use appropriate technology to display data as lists, tables, matrices, graphs, and plots and to analyze the relationships of variables in the data displayed.
5-8 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.			
	8.D.3.1 Describe how changes in scale, intervals, or categories influence arguments for a particular interpretation of the data.	Full	ALG.17.1 - ALG.17.10
	8.D.3.2 Describe how reader bias, measurement errors, and display distortion can affect the interpretation of data, predictions, and inferences based on data.	Full	ALG.17.7 ALG.17.8
	8.D.3.3 Conduct simple experiments and/or simulations, record results in charts, tables, or graphs, and use the results to draw conclusions and make predictions.	Full	ALG.17.1 - ALG.17.10
	8.D.3.4 Compare expected results with experimental results and information used in predictions and inferences.	None	Teachers will supplement the curriculum to include opportunities for students to compare expected results with experimental results and information used in predictions and inferences.
5-8 Benchmark D.4: Understand and apply basic concepts of probability.			
	8.D.4.1 Calculate the odds of a desired outcome in a simple experiment.	Full	PAB.11.4
	8.D.4.2 Design and use an appropriate simulation to estimate the probability of a real-world event (e.g., disk toss, cube toss).	Full	ALG.17.2 ALG.17.3
	8.D.4.3 Explain the relationship between probability and odds and calculate the odds of a desired outcome in a simple experiment.	Full	PAB.11.4
	8.D.4.4 Use theoretical or experimental probability to make predictions about real-world events.	Full	PAB.11.3 - PAB.11.12 ALG.17.2 ALG.17.3
	8.D.4.5 Use probability to generate convincing arguments, draw conclusions, and make decisions in a variety of situations.	Full	PAB.11.3 - PAB.11.12 ALG.17.2 ALG.17.3
	8.D.4.6 Understand that the probability of two unrelated events occurring is the sum of the two individual possibilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.	Full	PAB.11.8 PAB.11.9

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New Mexico Grade K Science Standards
Compared to K¹² Grade K Science

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.			
Strand I: Scientific Thinking and Practice Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	1. Use observation and questioning skills in science inquiry (e.g., What happens when something is pushed or pulled?).	Full	Embedded throughout, for example: K.1.1-K.1.7	
	2. Ask and answer questions about surroundings and share findings with classmates.	Full	Embedded throughout, for example: K.1.1-K.1.7	
	3. Record observations and data with pictures, numbers, and/or symbols.	Full	Embedded throughout, for example: K.1.4 K.4.2 K.7.2	
	K-4 Benchmark II: Use scientific thinking and knowledge and communicate findings.			
	1. Communicate observations and answer questions about surroundings.	Full	Embedded throughout, for example: K.3.1 K.7.3 K.12.2	
	K-4 Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.			
	1. Observe and describe the relative sizes and characteristics of objects (e.g., bigger, brighter, louder, smellier).	Full	Embedded throughout, for example: K.1.2 K.7.1 K.7.4	
	K-4 Benchmark I: Recognize that matter has different forms and properties.			
Strand II: Content of Science Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	1. Observe that objects are made of different types of materials (e.g., metal, plastic, cloth, wood).	Full	K.8.1-K.8.3	
	2. Observe that different materials have different properties (e.g., color, odor).	Full	K.8.1-K.8.5	
	K-4 Benchmark II: Know that energy is needed to get things done and that energy has different forms.			
	1. Observe how energy does things (e.g., batteries, the sun, wind, electricity).	Partial	K.3.2 K.3.2	The teacher will supplement the curriculum to include the concept of batteries, wind, and electricity.
	K-4 Benchmark III: Identify forces and describe the motion of objects.			
	1. Observe that things move in many different ways (e.g., straight line, vibration, circular).	Full	K.14.1	
	2. Know that the position and motion of an object (direction or speed) are changed by pushing or pulling it.	Full	K.14.2-K.14.4	
	K-4 Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.			
Strand II: Content of Science Standard II (Life Science): Understand the properties	1. Identify major structures of common living organisms (e.g., stems, leaves, and roots of plants; arms, wings, and legs of animals).	Full	K.2.1-K.2.4 K.4.1 K.5.1 K.5.2	
	2. Observe that differences exist among individual living organisms (e.g., plants, animals) of the same kind.	Full	K.3.1	
	K-4 Benchmark II: Know that living things have similarities and differences and that living things change over time.			

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the properties, structures, and processes of living things and the interdependence of living things and their environments.	1. Observe and describe similarities and differences in the appearance and behavior of living organisms (e.g., plants, animals).	Full	K.3.1 K.3.4 1.4.1-1.4.5	
	2. Observe that living organisms (e.g., plants, animals) closely resemble their parents.	Full	K.4.2 1.4.1-1.4.5	
	K-4 Benchmark III: Know the parts of the human body and their functions.			
environments.	1. Use the senses (e.g., sight, hearing, smell, taste, touch) to observe surroundings, and describe the observations.	Full	K.1.1-K.1.7	
	2. Identify the parts of the human body (e.g., legs, arms, head, hands) and the functions of these parts.	Full	K.2.1-K.2.4	
Strand II: Content of Science	**K-4 Benchmark I: Know the structure of the solar system and the objects in the universe.**			
Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Observe that there are many objects in the night sky and that some are brighter than others.	Full	K.15.1-K.15.3 K.15.5	
	2. Describe the location and movements of objects in the sky (e.g., stars, sun, moon).	Full	K15.1-K.15.3	
	K-4 Benchmark II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.			
	1. Observe that changes in weather occur from day to day and season to season.	Full	K.9.1 K.9.2 K.10.1-K.10.5	
	2. Observe that the sun warms the land and water and they warm the air.	Full	K.9.2	
Strand III: Science and Society	**K-4 Benchmark I: Describe how science influences decisions made by individuals and societies.**			
Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	1. Recognize that germs exist and may cause disease.	None		The teacher will supplement the curriculum to include the concept of germs and disease.
	2. Describe how science helps provide products we use every day (e.g., gasoline for cars; electricity for lights, refrigerators, TVs; gas or electricity for heating, cooking).	Full	K.12.1 K.13-K.13.5	

New Mexico Grade 1 Science Standards
Compared to K¹² Grade 1 Science

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
Strand I: Scientific Thinking and Practice Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	**K-4 Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.**			
	1. Make observations, develop simple questions, and make comparisons of familiar situations (e.g., What does the seed look like when it starts to grow?).	Full	1.1.5	
	2. Describe relationships between objects (e.g., above, next to, below) and predict the results of changing the relationships (e.g., When that block moves, what will happen to the one next to it?).	Full	K.14.1	
	K-4 Benchmark II: Use scientific thinking and knowledge and communicate findings.			
	1. Know that simple investigations do not always turn out as planned.	Full	1.1.5	
	K-4 Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.			
	1. Use numbers and mathematical language (e.g., "addition" instead of "add to," "subtraction" instead of "take away") to describe phenomena.	Full	1.1.1-1.1.4	
Strand II: Content of Science Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	**K-4 Benchmark I: Recognize that matter has different forms and properties.**			
	1. Observe that the three states of matter (i.e., solids, liquids, and gases) have different properties (e.g., water can be liquid, ice, or steam).	Full	1.2.1-1.2.5	
	2. Describe simple properties of matter (e.g., hardness, flexibility, transparency).	Full	1.2.1-1.2.4	
	K-4 Benchmark II: Know that energy is needed to get things done and that energy has different forms.			
	1. Observe and describe how energy produces changes (e.g., heat melts ice, gas makes car go uphill, electricity makes TV work).	Different Level	3.8.1 3.8.2	
	K-4 Benchmark III: Identify forces and describe the motion of objects.			
	1. Describe ways to make things move, what causes them to stop, and what causes a change of speed, or change of direction.	Partial	K.14.1-K.14.4 2.2.12.2.7	The teacher will supplement the curriculum to include the concepts of what causes a change of speed or direction.
	2. Observe that gravity makes things fall to the ground unless something holds them up.	Full	2.2.4	
Strand II: Content of Science Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	**K-4 Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.**			
	1. Know that living organisms (e.g., plants, animals) have needs (e.g., water, air, food, sunlight).	Full	1.6.1	
	2. Know that living organisms (e.g., plants, animals) inhabit various environments and have various external features to help them satisfy their needs (e.g., leaves, legs, claws).	Full	1.8.1 1.7.3-1.7.8 1.4.1-1.4.5 1.5.1-1.5.5 1.9.3	
	3. Describe the differences and similarities among living organisms (e.g., plants, animals).	Full	1.4.1-1.4.5 1.7.1-1.7.8	
	4. Observe that living organisms (e.g., plants, animals) have predictable but varied life cycles.	Full	1.7.1-1.7.8 2.9.1-2.9.8 2.10.1-2.10.9	
	K-4 Benchmark II: Know that living things have similarities and differences and that living things change over time.			
	1. Identify differences between living and nonliving things.	Full	K.3.1	
	2. Recognize the differences between mature and immature plants and animals (e.g., trees/seedlings, dogs/puppies, cats/kittens).	Full	2.9.1-2.9.8 2.10.1-2.10.9	
	K-4 Benchmark III: Know the parts of the human body and their functions.			
	1. Describe simple body functions (e.g., breathing, eating).	Full	1.10.1-1.10.4	
	2. Describe the basic food requirements for humans.	Full	2.6.6	
	3. Describe how some parts of human bodies differ from similar parts of other animals (e.g., hands and feet/paws; ears).	Full	1.4.5	

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Strand II: Content of Science **Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.**	**K-4 Benchmark I: Know the structure of the solar system and the objects in the universe.**			
	1. Observe the changes that occur in the sky as day changes into night and night into day.	Full	K.15.1	
	2. Describe the basic patterns of objects as they move through the sky: • sun appears in the day • moon appears at night but can sometimes be seen during the day • sun and moon appear to move across the sky • moon appears to change shape over the course of a month.	Full	K.15.1 K.15.2 1.6.1 3.10.3	
	3. Recognize that the sun, moon, and stars all appear to move slowly across the sky.	Partial Different Level	3.10.1	The teacher will supplement the curriculum to include the concept of the stars appearing to move slowly across the sky.
	K-4 Benchmark II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.			
	1. Know that simple tools can be used to measure weather conditions (e.g., thermometer, wind sock, hand held anemometer, rain gauge) and that measurements can be recorded from day to day and across seasons.	Full	1.3.1 1.3.3 1.3.4	
	2. Know that there are different climates (e.g., desert, arctic, rainforest).	Full	1.8.2-1.8.7	
Strand III: Science and Society **Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.**	**K-4 Benchmark I: Describe how science influences decisions made by individuals and societies.**			
	1. Know that germs can be transmitted by touching, breathing, and coughing, and that washing hands helps prevent the spread of germs.	Full	1.10.5 2.6.1	
	2. Describe how science has assisted in creating tools (e.g., plows, knives, telephones, cell phones, computers) to make life easier and more efficient.	Full	Embedded throughout, for example: 1.3.3 1.6.5	
	3. Describe how tools and machines can be helpful, harmful, or both (e.g., bicycles, cars, scissors, stoves).	Partial	2.3.5	The teacher will supplement the curriculum to include the concept of how machines are harmful.
	4. Know that men and women of all ethnic and social backgrounds practice science and technology.	Full	Embedded throughout, for example: 1.6.7 1.8.9 1.9.8	

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New Mexico Grade 2 Science Standards
Compared to K¹² Grade 2 Science

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	K-4 Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.			
	1. Conduct simple investigations (e.g., measure the sizes of plants of the same kind that are grown in sunlight and in shade).	Full	Embedded throughout, for example: 2.1.6 2.8.3 2.9.6	
	2. Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers).	Full	Embedded throughout, for example: 2.1.2 2.1.3	
Strand I: Scientific Thinking and Practice	3. Make predictions based on observed patterns as opposed to random guessing.	Full	2.1.5	
Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	4. Follow simple instructions for a scientific investigation.	Full	Embedded throughout, for example: 2.1.6 2.8.3 2.9.6	
	K-4 Benchmark II: Use scientific thinking and knowledge and communicate findings.			
	1. Understand that in doing science it is often helpful to work with a team and share findings.	Full	1.1.5	
	2. Make accurate observations and communicate findings about investigations.	Full	Embedded throughout, for example: 1.1.3 2.4.3 2.7.2	
	K-4 Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.			
	1. Record observations on simple charts or diagrams.	Full	Embedded throughout, for example: 2.2.2 2.4.5 2.7.2	
	2. Measure length, weight, and temperature with appropriate tools and express those measurements in accurate mathematical language.	Full	2.1.1-2.1.7	
	K-4 Benchmark I: Recognize that matter has different forms and properties.			
	1. Observe that properties of substances can change when they are mixed, cooled, or heated (e.g., salt dissolves in water, ice melts).	Full	1.2.3 1.2.8	
Strand II: Content of Science	2. Describe the changes that occur when substances are heated or cooled and change from one state of matter to another (i.e., solid, liquid, and gas).	Full	1.2.1-1.2.5	
	K-4 Benchmark II: Know that energy is needed to get things done and that energy has different forms.			
Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions	1. Describe how heat can be produced (e.g., burning, rubbing, mixing some substances).	Full	3.8.1 3.8.2	
	2. Know that heat moves more rapidly in thermal conductors (e.g., metal pan) than in insulators (e.g., plastic handle).	Full	3.8.3	
	3. Describe the usefulness of some forms of energy (e.g., electricity, sunlight, wind, sound) and how energy (e.g., heat, light,) can affect common objects (e.g., sunlight warms dark objects, heat melts candles).	Full	3.8.1-3.8.5	
	4. Observe that sound is made by vibrating objects and describe it by its pitch and loudness.	Full	2.5.2	

Category	Standard	Level	Code	Notes
between matter and energy.	5. Recognize that moving objects carry energy (kinetic energy).	Full	3.8.1	Kinetic energy is referred to as mechanical energy in this lesson.
	K-4 Benchmark III: Identify forces and describe the motion of objects.			
	1. Describe how the strength of a push or pull affects the change in an object's motion (e.g., how a big or small push affects how high a swing rises).	Full	2.2.1 2.2.2	
	2. Observe that electrically charged materials and magnets attract and repel each other, and observe their effects on other kinds of materials.	Full	2.4.1 2.4.2	
	K-4 Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.			
	1. Observe that diversity exists among individuals within a population.	Different level	K.4.1-K.4.4 K.5.1-K.5.3 K.6.1-K.6.4 1.4.1-1.4.5 3.2.1-3.2.5	Teachers will supplement K12 lessons to include content which covers this standard.
Strand II: Content of Science Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	2. Observe and describe various shapes of fungi.	None		The teacher will supplement the curriculum to include the concept of observing and describing various shapes of fungi.
	3. Know that bacteria and viruses are germs.	Full	1.10.5	
	K-4 Benchmark II: Know that living things have similarities and differences and that living things change over time.			
	1. Explain that stages of the life cycle are different for different animals (e.g., mouse, cat, horse, butterfly, frog).	Full	2.10.1-2.10.9	
	2. Observe that many characteristics of the offspring of living organisms (e.g., plants or animals) are inherited from their parents.	Full	2.10.1	
	3. Observe how the environment influences some characteristics of living things (e.g., amount of sunlight required for plant growth).	Full	1.5.1-1.5.5	
	K-4 Benchmark III: Know the parts of the human body and their functions.			
	1. Identify a variety of human organs (e.g., lungs, heart, stomach, brain).	Full	1.10.1-1.10.4 2.6.1-2.6.6 3.7.1-3.7.10	
	2. Know that various nutrients are required for specific parts and functions of the body (e.g., milk for bones and teeth, protein for muscles, sugar for energy).	Partial	2.6.6	The teacher will supplement the curriculum to include the concept that various nutrients are required for specific parts and functions of the body.
	3. Identify the functions of human systems (e.g., respiratory, circulatory, digestive).	Full	1.10.1-1.10.4 2.6.5	
	K-4 Benchmark I: Know the structure of the solar system and the objects in the universe.			
Strand II: Content of Science Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's	1. Observe that the phase of the moon appears a little different every day but looks the same again after about four weeks.	Full	3.10.3	
	2. Observe that some objects in the night sky are brighter than others.	Full	3.11.1-3.11.8	
	3. Know that the sun is a star.	Full	3.11.1	
	K-4 Benchmark II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.			
	1. Know that rocks have different shapes and sizes (e.g., boulders, pebbles, sand) and that smaller rocks result from the breaking and weathering of larger rocks.	Full	2.7.2-2.7.7 2.8.4	
	2. Understand that rocks are made of materials with distinct properties.	Full	2.7.2-2.7.7	
	3. Know that soil is made up of weathered rock and organic materials, and that soils differ in their capacity to support the growth of plants.	Full	2.8.1-2.8.7	
	4. Recognize the characteristics of the seasons.	Full	3.10.2	
	K-4 Benchmark I: Describe how science influences decisions made by individuals and societies.			
Strand III: Science and	1. Describe ways to prevent the spread of germs (e.g., soap, bleach, cooking).	Full	1.10.5 2.6.1	

Strand III: Science and Society Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	2. Know that science has ways to help living things avoid sickness or recover from sickness (e.g., vaccinations, medicine) and adult supervision is needed to administer them.	None		The teacher will supplement the curriculum to include the concept of avoiding or recovering from sickness.
	3. Know that some materials are better than others for making particular things (e.g., paper, cardboard, plastic, metal, fiberglass, wood).	None		The teacher will supplement the curriculum to include the concept that some materials are better than others for making particular things.
	4. Understand that everybody can do science, invent things, and formulate ideas.	Full	Embedded throughout, for example: 2.5.8 2.6.2	
	5. Know that science has discovered many things about objects, events, and nature and that there are many more questions to be answered.	Full	Embedded throughout, for example: 2.5.8 2.7.8	

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New Mexico Grade 3 Science Standards
Compared to K12 Grade 3 Science

Strand	Benchmarks and Performance Standards	Coverage	K12 grade, unit, lesson	Comments
	K-4 Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.			
	1. Make new observations when discrepancies exist between two descriptions of the same object or phenomenon to improve accuracy.	Full	3.1.4	
	2. Recognize the difference between data and opinion.	Partial	2.1.5	The teacher will supplement the curriculum to include the concept of opinion.
	3. Use numerical data in describing and comparing objects, events, and measurements.	Full	2.1.1-2.1.7	
	4. Collect data in an investigation and analyze those data.	Full	Embedded throughout, for example: 3.1.3 3.6.2 3.9.4	
Strand I: Scientific Thinking and Practice Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	5. Know that the same scientific laws govern investigations in different times and places (e.g., gravity, growing).	Full	Embedded throughout, for example: 3.1.2 3.6.1 3.8.3	
	K-4 Benchmark II: Use scientific thinking and knowledge and communicate findings.			
	1. Use a variety of methods to display data and present findings.	Full	Embedded throughout, for example: 3.1.4 3.5.1 3.10.3	
	2. Understand that predictions are based on observations, measurements, and cause-and-effect relationships.	Full	Embedded throughout, for example: 3.5.1 3.8.3 3.9.3	
	K-4 Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.			
	1. Use numerical data in describing and comparing objects, events, and measurements.	Full	2.1.1-2.1.7	
	2. Pose a question of interest and present observations and measurements with accuracy.	Full	Embedded throughout, for example: 3.5.1 3.8.1 3.9.3	
	3. Use various methods to display data and present findings and communicate results in accurate mathematical language.	Full	Embedded throughout, for example: 3.1.4 3.5.1 3.10.3	
	K-4 Benchmark I: Recognize that matter has different forms and properties.			
	1. Identify and compare properties of pure substances and mixtures (e.g., sugar, fruit juice).	Full	4.3.1	
	2. Separate mixtures based on properties (e.g., by size or by substance; rocks and sand, iron filings and sand, salt and sand).	Full	4.3.3	
	K-4 Benchmark II: Know that energy is needed to get things done and that energy has different forms.			

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Standard	Objective	Status	Code	Notes
Strand II: Content of Science Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	1. Understand that light is a form of energy and can travel through a vacuum.	Partial	3.9.1 3.9.3	The teacher will supplement the curriculum to include the concept of light traveling through a vacuum.
	2. Know that light travels in a straight line until it strikes an object and then it is reflected, refracted, or absorbed.	Full	3.9.1	
	3. Measure energy and energy changes (e.g., temperature changes).	Partial	3.8.1 3.8.2	The teacher will supplement the curriculum to include the concept of measuring energy and energy changes.
	4. Construct charts or diagrams that relate variables associated with energy changes (e.g., melting of ice over time).	Full	3.8.2	
	K-4 Benchmark III: Identify forces and describe the motion of objects.			
	1. Recognize that magnets can produce motion by attracting some materials (e.g., steel) and have no effect on others (e.g., plastics).	Full	2.4.1 2.4.2	
	2. Describe how magnets have poles (N and S) and that like poles repel each other while unlike poles attract.	Full	2.4.2	
	3. Observe that some forces produce motion without objects touching (e.g., magnetic force on nails).	Full	2.4.1	
	4. Describe motion on different time scales (e.g., the slow motion of a plant toward light, the fast motion of a tuning fork).	Different level	5.4.1	Teachers will supplement K12 lessons to include content which covers this standard.
Strand II: Content of Science Standard II (Life Science): Understand	**K-4 Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.**			
the properties, structures, and processes of living things and the interdependence of living things and their environments.	1. Know that an adaptation in physical structure or behavior can improve an organism's chance for survival (e.g., horned toads, chameleons, cacti, mushrooms).	Different level	1.5.1-1.5.5	
	2. Observe that plants and animals have structures that serve different functions (e.g., shape of animals' teeth).	Full	2.9.2-2.9.6 3.2.3	
	3. Classify common animals according to their observable characteristics (e.g., body coverings, structure).	Full	3.2.1-3.2.5	
	4. Classify plants according to their characteristics (e.g., tree leaves, flowers, seeds).	Partial	2.9.2-2.9.6	The teacher will supplement the curriculum to include the concept classification according to these characteristics.
	K-4 Benchmark II: Know that living things have similarities and differences and that living things change over time.			
	1. Identify how living things cause changes to the environments in which they live, and that some of these changes are detrimental to the organism and some are beneficial.	Full	4.1.1-4.1.-6	
	2. Know that some kinds of organisms that once lived on Earth have become extinct (e.g., dinosaurs) and that others resemble those that are alive today (e.g., alligators, sharks).	Full	3.4.1-3.4.5	
	K-4 Benchmark III: Know the parts of the human body and their functions.			
	1. Know that bacteria and viruses are germs that affect the human body.	Full	2.6.1	
	2. Describe the nutrients needed by the human body.	Full	2.6.6	
Strand II: Content of Science Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the...	**K-4 Benchmark I: Know the structure of the solar system and the objects in the universe.**			
	1. Describe the objects in the solar system (e.g., sun, Earth and other planets, moon) and their features (e.g., size, temperature).	Full	3.11.1-3.11-8	
	2. Describe the relationships among the objects in the solar system (e.g., relative distances, orbital motions).	Full	3.11.1	
	3. Observe that the pattern of stars stays the same as they appear to move across the sky nightly.	Full	3.11.6	
	4. Observe that different constellations can be seen in different seasons.	Full	3.11.6	
	5. Know that telescopes enhance the appearance of some distant objects in the sky (e.g., the moon, planets).	Full	3.11.1	
	K-4 Benchmark II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.			

		Coverage	Codes	Notes
solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Know that Earth's features are constantly changed by a combination of slow and rapid processes that include the action of volcanoes, earthquakes, mountain building, biological changes, erosion, and weathering.	Full	4.8.5-4.8.8 4.9.1-4.9.5	
	2. Know that fossils are evidence of earlier life and provide data about plants and animals that lived long ago.	Full	4.10.1 4.10.2	
	3. Know that air takes up space, is colorless, tasteless, and odorless, and exerts a force.	Full	3.5.1 4.4.1	
	4. Identify how water exists in the air in different forms (e.g., in clouds and fog as tiny droplets; in rain, snow, and hail) and changes from one form to another through various processes (e.g., freezing/condensation, precipitation, evaporation).	Full	3.1.1 3.5.2	
	K-4 Benchmark I: Describe how science influences decisions made by individuals and societies.			
Strand III: Science and Society	1. Describe how food packaging (e.g., airtight containers, date) and preparation (heating, cooling, salting, smoking, drying) extend food life and the safety of foods (e.g., elimination of bacteria).	None		The teacher will supplement the curriculum to include the concept of food packaging and preparation extending the food life and safety of foods.
Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	2. Know that science produces information for the manufacture and recycling of materials (e.g., materials that can be recycled [aluminum, paper, plastic] and others that cannot [gasoline]).	None		The teacher will supplement the curriculum to include the concept of science producing information for the manufacture and recycling of materials.
	3. Know that naturally occurring materials (e.g., wood, clay, cotton, animal skins) may be processed or combined with other materials to change their properties.	Full	3.6.1 3.6.2	
	4. Know that using poisons can reduce the damage to crops caused by rodents, weeds, and insects, but their use may harm other plants, animals, or the environment.	None		The teacher will supplement the curriculum to include the concept of using poisons to reduce the damage to crops, which may harm other plants, animals, or the environment.

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New Mexico Grade 4 Science Standards
Compared to K[12] Grade 4 Science

Strand	Benchmarks and Performance Standards	Coverage	K[12] grade, unit, lesson	Comments
	K-4 Benchmark I: Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.			
	1. Use instruments to perform investigations (e.g., timers, balances) and communicate findings.	Full	Embedded throughout, for example: 4.3.2 4.5.1 4.9.2	
	2. Differentiate observation from interpretation and understand that a scientific explanation comes in part from what is observed and in part from how the observation is interpreted.	Different level	ES.11.4-ES.11.7	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Conduct multiple trials to test a prediction, draw logical conclusions, and construct and interpret graphs from measurements.	Full	Embedded throughout, for example: 4.3.5 4.4.4 4.9.3	
Strand I: Scientific Thinking and Practice Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	4. Collect data in an investigation using multiple techniques, including control groups, and analyze those data to determine what other investigations could be conducted to validate findings.	Full	4.4.2 4.9.1	
	K-4 Benchmark II: Use scientific thinking and knowledge and communicate findings.			
	1. Communicate ideas and present findings about scientific investigations that are open to critique from others.	Different level	ES.11.9 ES.11.10	Teachers will supplement K12 lessons to include content which covers this standard.
	2. Describe how scientific investigations may differ from one another (e.g., observations of nature, measurements of things changing over time).	Full	Embedded throughout, for example: 4.1.4 4.2.1 4.9.3	
	3. Understand how data are used to explain how a simple system functions (e.g., a thermometer to measure heat loss as water cools).	Full	Embedded throughout, for example: 4.3.3 4.4.1 4.7.3	
	K-4 Benchmark III: Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.			
	1. Conduct multiple trials using simple mathematical techniques to make and test predictions.	Full	Embedded throughout, for example: 4.3.1 4.5.5 4.7.4	
	2. Use mathematical equations to formulate and justify predictions based on cause-and-effect relationships.	Full	Embedded throughout, for example: 4.3.6 4.4.4	
	3. Identify simple mathematical relationships in a scientific investigation (e.g., the relationship of the density of materials that will or will not float in water to the density of water).	Full	4.4.1-4.4.6	
	K-4 Benchmark I: Recognize that matter has different forms and properties.			
	1. Know that changes to matter may be chemical or physical and when two or more substances are combined, a new substance may be formed with properties that are different from those of the original substances (e.g., white glue and borax, cornstarch and water, vinegar and baking soda).	Full	3.6.1 3.6.2 4.3.1	

Strand / Standard	Standard	Coverage	Code	Notes
Strand II: Content of Science Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	2. Know that materials are made up of small particles (atoms and molecules) that are too small to see with the naked eye.	Full	3.6.3 5.5.1-5.5.3	
	3. Know that the mass of the same amount of material remains constant whether it is together, in parts, or in a different state.	Full	3.5.4	
	K-4 Benchmark II: Know that energy is needed to get things done and that energy has different forms.			
	1. Identify the characteristics of several different forms of energy and describe how energy can be converted from one form to another (e.g., light to heat, motion to heat, electricity to heat, light, or motion).	Full	3.8.1 3.8.2	
	2. Recognize that energy can be stored in many ways (e.g., potential energy in gravity or springs, chemical energy in batteries).	Full	3.8.1	
	3. Describe how some waves move through materials (e.g., water, sound) and how others can move through a vacuum (e.g., x-ray, television, radio).	Partial	4.7.1 4.7.4 4.7.5	The teacher will supplement the curriculum to include the concept of waves moving through a vacuum.
	4. Demonstrate how electricity flows through a simple circuit (e.g., by constructing one).	Full	4.7.4	
	K-4 Benchmark III: Identify forces and describe the motion of objects.			
	1. Know that energy can be carried from one place to another by waves (e.g., water waves, sound waves), by electric currents, and by moving objects.	Full	5.2.3 4.7.4 5.4.1	
	2. Describe the motion of an object by measuring its change of position over a period of time.	Full	5.4.1	
	3. Describe that gravity exerts more force on objects with greater mass (e.g., it takes more force to hold up a heavy object than a lighter one).	Full	5.4.2	
	4. Describe how some forces act on contact and other forces act at a distance (e.g., a person pushing a rock versus gravity acting on a rock).	Partial	5.4.2	The teacher will supplement the curriculum to include the concept that other forces act at a distance.
	K-4 Benchmark I: Know that living things have diverse forms, structures, functions, and habitats.			
	1. Explain that different living organisms have distinctive structures and body systems that serve specific functions (e.g., walking, flying, swimming).	Full	3.2.1-3.2.5 4.5.1-4.5.10 5.8.1-5.8.8	
Strand II: Content of Science Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	2. Know that humans and other living things have senses to help them detect stimuli, and that sensations (e.g., hunger) and stimuli (e.g., changes in the environment) influence the behavior of organisms.	Partial	4.5.2	The teacher will supplement the curriculum to include the concept that other living things detect stimuli and that sensations and stimuli influence the behavior of the organism.
	3. Describe how roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from sunlight (photosynthesis).	None		The teacher will supplement the curriculum to include the concept of how roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from sunlight.
	4. Describe the components of and relationships among organisms in a food chain (e.g., plants are the primary source of energy for living systems).	Full	4.1.3 4.2.3	
	5. Describe how all living things are made up of smaller units that are called cells.	Full	5.6.1-5.6.8	
	K-4 Benchmark II: Know that living things have similarities and differences and that living things change over time.			
	1. Know that in any particular environment some kinds of plants and animals survive well, some survive less well, and others cannot survive at all.	Full	3.3.1-3.3.10 4.1.1	
	2. Know that a change in physical structure or behavior can improve an organism's chance of survival (e.g., a chameleon changes color, a turtle pulls its head into its shell, a plant grows toward the light).	Full	3.3.1-3.3.10	

	3. Describe how some living organisms have developed characteristics from generation to generation to improve chances of survival (e.g., spines on cacti, long beaks on hummingbirds, good eyesight on hawks).	Full	3.3.1-3.3.10	
	K-4 Benchmark III: Know the parts of the human body and their functions.			
	1. Know that the human body has many parts that interact to function as systems (e.g., skeletal, muscular) and describe the parts and their specific functions in selected systems (e.g., the nose, lungs, and diaphragm in the respiratory system).	Full	3.7.1-3.7.9 4.5.1-4.5.10 5.6.1-5.6.8	
	2. Recognize that the human body is organized from cells, to tissues, to organs, to systems, to the organism.	Full	3.7.1-3.7.9 4.5.1-4.5.10 5.6.1-5.6.8	
Strand II: Content of Science	**K-4 Benchmark I: Know the structure of the solar system and the objects in the universe.**			
Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Understand that the number of stars visible through a telescope is much greater than the number visible to the naked eye.	Full	3.11.1	
	2. Know that there are various types of telescopes that use different forms of light to observe distant objects in the sky.	Full	3.11.1	
	3. Know that the pattern of stars (e.g., constellations) stays the same although they appear to move across the sky nightly due to Earth's rotation.	Full	3.11.6	
	K-4 Benchmark II: Know the structure and formation of Earth and its atmosphere and the processes that shape them.			
	1. Know that the properties of rocks and minerals reflect the processes that shaped them (i.e., igneous, metamorphic, and sedimentary rocks).	Full	4.8.1-4.8.9	
	2. Describe how weather patterns generally move from west to east in the United States.	Full	3.1.2 5.3.6	
	3. Know that local weather information describes patterns of change over a period of time (e.g., temperature, precipitation symbols, cloud conditions, wind speed/direction).	Full	3.1.4	
Strand III: Science and Society	**K-4 Benchmark I: Describe how science influences decisions made by individuals and societies.**			
Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	1. Know that science has identified substances called pollutants that get into the environment and can be harmful to living things.	Full	4.1.5 5.1.3	
	2. Know that, through science and technology, a wide variety of materials not appearing in nature have become available (e.g., steel, plastic, nylon, fiber optics).	None		The teacher will supplement the curriculum to include the concept that through science and technology, a wide variety of materials not appearing in nature have become available.
	3. Know that science has created ways to store and retrieve information (e.g., paper and ink, printing press, computers, CD ROMs) but that these are not perfect (e.g., faulty programming, defective hardware).	None		The teacher will supplement the curriculum to include the concept that science has created ways to store and retrieve information but that these are not perfect.
	4. Know that both men and women of all races and social backgrounds choose science as a career.	Full	Embedded, for example: 3.6.4	

New Mexico Grade 5 Science Standards
Compared to K¹² Grade 5 Science

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.			
Strand I: Scientific Thinking and Practice **Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.**	1. Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, and communicating findings.	Full	Embedded throughout, for example: ES.11.1 - ES.11.8 LS.10.1 - LS.10.8	
	2. Use appropriate technologies (e.g., calculators, computers, balances, spring scales, microscopes) to perform scientific tests and to collect and display data.	Full	Embedded throughout, for example: 4.3.3 5.5.8 LS.2.4	
	3. Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.	Full	Embedded throughout, for example: 4.7.2 5.6.7 ES.1.3	
	4. Describe how credible scientific investigations use reproducible elements including single variables, controls, and appropriate sample sizes to produce valid scientific results.	Full	ES.11.3 LS.10.2 LS.10.3 PS.10.2 PS.10.3	
	5. Communicate the steps and results of a scientific investigation.	Full	ES.11.1 - ES.11.8 LS.10.1 - LS.10.8 PS.10.1 - PS.10.8	
	5-8 Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.			
	1. Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).	Full	ES.11.1 - ES.11.8 LS.10.1 - LS.10.8 PS.10.1 - PS.10.8	
	2. Understand that scientific conclusions are subject to peer and public review.	None		Teachers will supplement the curriculum by providing students the opportunity to understand that scientific conclusions are subject to peer and public review.
	5-8 Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.			
	1. Use appropriate units to make precise and varied measurements.	Full	Embedded throughout, for example: 5.1.2 5.5.5	
	2. Use mathematical skills to analyze data.	Full	Embedded throughout, for example: 4.3.6 5.5.5	
	3. Make predictions based on analyses of data, observations, and explanations.	Full	4.4.4 5.4.5	
	4. Understand the attributes to be measured in a scientific investigation and describe the units, systems, and processes for making the measurement.	Full	4.3.6 4.4.1 5.5.5	
	5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.			
	1. Describe properties (e.g., relative volume, ability to flow) of the three states of matter.	Different level	3.5.1	Teachers will supplement K12 lessons to include content which covers this standard.

Strand / Standard	Standard	Level	Code	Comments
Strand II: Content of Science **Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.**	2. Describe how matter changes from one phase to another (e.g., condensation, evaporation).	Different level	3.5.2	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Know that matter is made up of particles (atoms) that can combine to form molecules and that these particles are too small to see with the naked eye.	Different level	3.5.1	Teachers will supplement K12 lessons to include content which covers this standard.
	4. Know that the periodic table is a chart of the pure elements that make up all matter.	Full	5.4.2	
	5. Describe the relative location and motion of the particles (atoms and molecules) in each state of matter.	Different level	3.5.1	Teachers will supplement K12 lessons to include content which covers this standard.
	6. Explain the relationship between temperature and the motion of particles in each state of matter.	Different level	3.5.2	Teachers will supplement K12 lessons to include content which covers this standard.

5-8 Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy.

	Standard	Level	Code	Comments
	1. Know that heat is transferred from hotter to cooler materials or regions until both reach the same temperature.	Different level	PS.6.10	Teachers will supplement K12 lessons to include content which covers this standard.
	2. Know that heat is often produced as a by-product when one form of energy is converted to another form (e.g., when machines or organisms convert stored energy into motion).	Full	PS.6.12	
	3. Know that there are different forms of energy.	Full	5.4.3 PS.6.3-PS.6.8	
	4. Describe how energy can be stored and converted to a different form of energy (e.g., springs, gravity) and know that machines and living things convert stored energy to motion and heat.	Different level	PS.6.3-PS.6.8	Teachers will supplement K12 lessons to include content which covers this standard.

5-8 Benchmark III: Describe and explain forces that produce motion in objects.

	Standard	Level	Code	Comments
	1. Understand how the rate of change of position is the velocity of an object in motion.	Full	5.4.1	Teachers will supplement K12 lessons to include content which covers this standard.
	2. Recognize that acceleration is the change in velocity with time.	Different level	PS.4.5	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Identify forces in nature (e.g., gravity, magnetism, electricity, friction).	Full	5.4.2	
	4. Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.	Full	5.4.2	
	5. Identify simple machines and describe how they give advantage to users (e.g., levers, pulleys, wheels and axles, inclined planes, screws, wedges).	Full	5.4.4	

5-8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.

Strand / Standard	Standard	Level	Code	Comments
Strand II: Content of Science **Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.**	1. Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators).	Full	4.1.2	
	2. Understand how food webs depict relationships between different organisms.	Full	4.1.3	
	3. Know that changes in the environment can have different effects on different organisms (e.g., some organisms move, some survive, some reproduce, some die).	Full	4.1.5	
	4. Describe how human activity impacts the environment.	Full	5.1.3 ES.8.2	

5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.

	Standard	Level	Code	Comments
	1. Know that plants and animals have life cycles that include birth, growth and development, reproduction, and death and that these cycles differ for different organisms.	Different level	2.9.1 2.10.1	Teachers will supplement K12 lessons to include content which covers this standard.
	2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower color in plants) and other characteristics that are learned or result from interactions with the environment.	Full	4.2.5 LS.7.1-LS.7.13	
	3. Understand that heredity is the process by which traits are passed from one generation to another.	Full	LS.7.2-LS.7.4	

5-8 Benchmark III: Understand the structure of organisms and the function of cells in living systems.

	Standard	Level	Code	Comments
	1. Understand that all living organisms are composed of cells from one to many trillions, and that cells are usually only visible through a microscope.	Different level	3.7.1	Teachers will supplement K12 lessons to include content which covers this standard.

Strand / Standard	Benchmark / Content	Coverage	Code	Notes
	2. Know that some organisms are made of a collection of similar cells that cooperate (e.g., algae) while other organisms are made of cells that are different in appearance and function (e.g., corn, birds).	Different level	LS.2.1-LS.2.3 LS.2.7	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Describe the relationships among cells, tissues, organs, organ systems, whole organisms, and ecosystems.	Full	4.5.1	
	5-8 Benchmark I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.			
Strand II: Content of Science Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Know that many objects in the universe are huge and are separated from one another by vast distances (e.g., many stars are larger than the sun but so distant that they look like points of light).	None		Teachers will host an online synchronous session to expose students to the size of the sun and the Earth and the distance of the stars by reviewing lessons K.15.2 and 3.11.5.
	2. Understand that Earth is part of a larger solar system, which is part of an even larger galaxy (Milky Way), which is one of many galaxies.	Different level	3.11.7	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Know that there have been manned and unmanned journeys to space and to the moon.	None		Teachers will host an online synchronous session to expose students to manned space exploration by reviewing lessons K.15.4 and K.15.6.
	5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.			
	1. Understand that water and air relate to Earth's processes, including: • how the water cycle relates to weather • how clouds are made of tiny droplets of water, like fog or steam.	Full	5.3.4	
	2. Know that air is a substance that surrounds Earth (atmosphere), takes up space, and moves, and that temperature fluctuations and other factors produce wind currents.	Full	5.3.1 - 5.3.2	
	3. Know that most of Earth's surface is covered by water, that most of that water is salt water in oceans, and that fresh water is found in rivers, lakes, underground sources, and glaciers.	Full	5.1.1 5.2.1	
	4. Recognize that the seasons are caused by Earth's motion around the sun and the tilt of Earth's axis of rotation.	Full	ES.9.5	
	5-8 Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.			
Strand III: Science and Society Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	1. Describe the contributions of science to understanding local or current issues (e.g., watershed and community decisions regarding water use).	Full	5.1.4	
	2. Describe how various technologies have affected the lives of individuals (e.g., transportation, entertainment, health).	None		Teachers will supplement the curriculum to provide students the opportunity to describe how various technologies have affected the lives of individuals.

New Mexico Grade 6 Science Standards
Compared to K¹² Middle School Science curriculum

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.			
	1. Construct appropriate graphs from data and develop qualitative and quantitative statements about the relationships between variables being investigated.	Full	ES.11.1-ES.11.6	
Strand I: Scientific Thinking and Practice	2. Examine the reasonableness of data supporting a proposed scientific explanation.	Full	ES.11.1-ES.11.6	
Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	3. Justify predictions and conclusions based on data.	Full	ES.11.1-ES.11.6	
	5-8 Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.			
	1. Understand that scientific knowledge is continually reviewed, critiqued, and revised as new data become available.	None		Teachers will supplement the curriculum to include understanding that scientific knowledge is continually reviewed, critiqued, and revised as new data become available.
	2. Understand that scientific investigations use common processes that include the collection of relevant data and observations, accurate measurements, the identification and control of variables, and logical reasoning to formulate hypotheses and explanations.	Full	ES.11.1-ES.11.6	
	3. Understand that not all investigations result in defensible scientific explanations.	Full	ES.11.1-ES.11.6	
	5-8 Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.			
	1. Evaluate the usefulness and relevance of data to an investigation.	Full	ES.11.1-ES.11.6	
	2. Use probabilities, patterns, and relationships to explain data and observations.	None		Teachers will supplement the curriculum to include using probabilities, patterns, and relationships to explain data and observations.
	5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.			
	1. Understand that substances have characteristic properties and identify the properties of various substances (e.g., density, boiling point, solubility, chemical reactivity).	Partial	PS.2.7 PS.2.8	Teachers will supplement the curriculum to include additional substances.
Strand II: Content of Science	2. Use properties to identify substances (e.g., for minerals: the hardness, streak, color, reactivity to acid, cleavage, fracture).	Full	ES.2.2	
Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.	**5-8 Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy.**			
	1. Identify various types of energy (e.g., heat, light, mechanical, electrical, chemical, nuclear).	Full	ES.6.1	
	2. Understand that heat energy can be transferred through conduction, radiation and convection.	Full	ES.6.10 ES.6.11	
	3. Know that there are many forms of energy transfer but that the total amount of energy is conserved (i.e., that energy is neither created nor destroyed).	Full	ES.6.1 ES.6.2	
	4. Understand that some energy travels as waves (e.g., seismic, light, sound), including: • the sun as source of energy for many processes on Earth • different wavelengths of sunlight (e.g., visible, ultraviolet, infrared) • vibrations of matter (e.g., sound, earthquakes) • different speeds through different materials.	Partial	ES.9.6 PS.7.1-PS.7.4	Teachers will supplement the curriculum to include vibrations of matter, different speeds through different materials and identifying the sun as the source of energy for many processes on Earth.
	5-8 Benchmark III: Describe and explain forces that produce motion in objects.			
	1. Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).	Full	PS.4.2 ES.7.6	

Grade 6

Strand/Standard	Description	Full/Partial/None	Code	Notes
Strand II: Content of Science Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	2. Know that gravitational force is hard to detect unless one of the objects (e.g., Earth) has a lot of mass.	Full	PS.4.2	
	5-8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.			
	1. Understand how organisms interact with their physical environments to meet their needs (i.e., food, water, air) and how the water cycle is essential to most living systems.	Full	5.1.1 LS.5.1	
	2. Describe how weather and geologic events (e.g., volcanoes, earthquakes) affect the function of living systems.	None		Teachers will supplement the curriculum to include the concept of how weather and geologic events affect the function of living systems.
	3. Describe how organisms have adapted to various environmental conditions.	Full	LS.6.1 LS.6.2	
	5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.			
	1. Understand that the fossil record provides data for how living organisms have evolved.	Full	ES.3.4 ES.3.5	
	2. Describe how species have responded to changing environmental conditions over time (e.g., extinction, adaptation).	Full	4.1.5 LS.6.1-LS.6.4	
	5-8 Benchmark III: Understand the structure of organisms and the function of cells in living systems.			
	1. Explain how fossil fuels were formed from animal and plant cells.	Full	ES.8.3	
	2. Describe the differences between substances that were produced by living organisms (e.g., fossil fuels) and substances that result from nonliving processes (e.g., igneous rocks).	Full	ES.Unit 2 ES.8.3	
	5-8 Benchmark I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures			
	Universe 1. Describe the objects in the universe, including: • billions of galaxies, each containing billions of stars • different sizes, temperatures, and colors of stars in the Milky Way galaxy.	Partial	ES.9.1-ES.9.14	Teachers will supplement the curriculum to include the concept of temperatures and colors of stars.
	Solar System 2. Locate the solar system in the Milky Way galaxy. 3. Identify the components of the solar system, and describe their defining characteristics and motions in space, including: • sun as a medium sized star • sun's composition (i.e., hydrogen, helium) and energy production • nine planets, their moons, asteroids. 4. Know that the regular and predictable motions of the Earth-moon-sun system explain phenomena on Earth, including: • Earth's motion in relation to a year, a day, the seasons, the phases of the moon, eclipses, tides, and shadows • moon's orbit around Earth once in 28 days in relation to the phases of the moon.	Full	3.10.1 3.10.2 3.11.2 ES.9.1-ES.9.14	
Strand II: Content of Science Standard III (Earth and Space Science): Understand the structure of Earth, the	**5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.**			
	Structure of Earth 1. Know that Earth is composed of layers that include a crust, mantle, and core. 2. Know that Earth's crust is divided into plates that move very slowly, in response to movements in the mantle. 3. Know that sedimentary, igneous, and metamorphic rocks contain evidence of the materials, temperatures, and forces that created them.	Full	ES.2.1-ES.2.7 ES.4.2 ES.4.6	

solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	Weather and Climate 4. Describe the composition (i.e., nitrogen, oxygen, water vapor) and strata of Earth's atmosphere, and differences between the atmosphere of Earth and those of other planets. 5. Understand factors that create and influence weather and climate, including: • heat, air movement, pressure, humidity, oceans • how clouds form by condensation of water vapor • how weather patterns are related to atmospheric pressure • global patterns of atmospheric movement (e.g., El Niño) • factors that can impact Earth's climate (e.g., volcanic eruptions, impacts of asteroids, glaciers). 6. Understand how to use weather maps and data (e.g., barometric pressure, wind speeds, humidity) to predict weather.	ES.5.2-ES.5-13	Full
	Changes to Earth 7. Know that landforms are created and change through a combination of constructive and destructive forces, including: • weathering of rock and soil, transportation, deposition of sediment, and tectonic activity • similarities and differences between current and past processes on Earth's surface (e.g., erosion, plate tectonics, changes in atmospheric composition) • impact of volcanoes and faults on New Mexico geology. 8. Understand the history of Earth and how information about it comes from layers of sedimentary rock, including: • sediments and fossils as a record of a very slowly changing world • evidence of asteroid impact, volcanic and glacial activity.	ES.1.2-ES.1.7 ES.3.2-ES.3.7	Partial	Teachers will supplement the curriculum to include opportunities for students to understand the impact of volcanoes and faults on New Mexico geology.
Strand III: Science and Society **Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by**	**5-8 Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.**		
	1. Examine the role of scientific knowledge in decisions (e.g., space exploration, what to eat, preventive medicine and medical treatment).	ES.9.15 ES.9.16	Partial	Teachers will supplement the curriculum to include additional information about the role of scientific knowledge in decisions.
	2. Describe the technologies responsible for revolutionizing information processing and communications (e.g., computers, cellular phones, Internet).		None	Teachers will supplement the curriculum to include describing the technologies responsible for revolutionizing information processing and communications.

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New Mexico Grade 7 Science Standards
Compared to K¹² Middle School Science curriculum

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.			
	1. Use a variety of print and web resources to collect information, inform investigations, and answer a scientific question or hypothesis.	Full	Embedded throughout, for example: LS.10.2 ES.11.3	
	2. Use models to explain the relationships between variables being investigated.	Full	PS.6.5 PS.6.7-PS.6.9	
	5-8 Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.			
Strand I: Scientific Thinking and Practice Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.	1. Describe how bias can affect scientific investigation and conclusions.	None		Teachers will supplement the curriculum to include providing opportunities to describe how bias can affect scientific investigations and conclusions.
	2. Critique procedures used to investigate a hypothesis.	None		Teachers will supplement the curriculum to include critiquing procedures used to investigate a hypothesis.
	3. Analyze and evaluate scientific explanations.	Full	Embedded throughout, for example: ES.11.5 LS.10.4	
	5-8 Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.			
	1. Understand that the number of data (sample size) influences the reliability of a prediction.	Partial	4.2.1	Teachers will supplement the curriculum to include sample size.
	2. Use mathematical expressions to represent data and observations collected in scientific investigations.	Full	PS.4.16	
	3. Select and use an appropriate model to examine a phenomenon.	Partial	ES.4.10	Teachers will supplement the curriculum to include selecting a model to examine a phenomenon.
	5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.			
	1. Explain how matter is transferred from one organism to another and between organisms and their environment (e.g., consumption, the water cycle, the carbon cycle, the nitrogen cycle).	Full	LS.5.6 LS.5.7 ES.7.2	
	2. Know that the total amount of matter (mass) remains constant although its form, location, and properties may change (e.g., matter in the food web).	Full	LS.5.10 PS.2.7	
Strand II: Content of Science Standard I (Physical Science): Understand the structure and properties of matter,	3. Identify characteristics of radioactivity, including: • decay in time of some elements to others • release of energy • damage to cells.	None		Teachers will supplement the curriculum to include identifying characteristics of radioactivity.
	4. Describe how substances react chemically in characteristic ways to form new substances (compounds) with different properties (e.g., carbon and oxygen combine to form carbon dioxide in respiration).	Full	LS.5.6 PS.3.2	
	5. Know that chemical reactions are essential to life processes.	Full	LS.Unit 2	
	5-8 Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy.			

the characteristics of energy, and the interactions between matter and energy.		Level	Codes	Notes
	1. Know how various forms of energy are transformed through organisms and ecosystems, including: • sunlight and photosynthesis • energy transformation in living systems (e.g., cellular processes changing chemical energy to heat and motion) • effect of mankind's use of energy and other activities on living systems (e.g., global warming, water quality).	Full	5.1.3. ES.7.2 LS.2.1 LS.2.7 LS.2.8 PS.6.1 PS.6.10	
5-8 Benchmark III: Describe and explain forces that produce motion in objects.				
	1. Know that forces cause motion in living systems, including: • the principle of a lever and how it gives mechanical advantage to a muscular/skeletal system to lift objects • forces in specific systems in the human body (e.g., how the heart generates blood pressure, how muscles contract and expand to produce motion).	Full	LS.Unit 3 PS.6.7 PS.6.8	
5-8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.				
	Populations and Ecosystems 1. Identify the living and nonliving parts of an ecosystem and describe the relationships among these components. 2. Explain biomes (i.e., aquatic, desert, rainforest, grasslands, tundra) and describe the New Mexico biome. 3. Explain how individuals of species that exist together interact with their environment to create an ecosystem (e.g., populations, communities, niches, habitats, food webs). 4. Explain the conditions and resources needed to sustain life in specific ecosystems. 5. Describe how the availability of resources and physical factors limit growth (e.g., quantity of light and water, range of temperature, composition of soil) and how the water, carbon, and nitrogen cycles contribute to the availability of those resources to support living systems.	Full	4.1.1 4.1.4 LS.Unit 5 LS.6.5	
	Biodiversity 6. Understand how diverse species fill all niches in an ecosystem. 7. Know how to classify organisms: domain, kingdom, phylum, class, order, family, genus, species.	Partial Different Level	5.7.2 5.7.9 LS.1.5-LS.1.7	Teachers will supplement the curriculum to include the concept of how diverse species fill all niches in an ecosystem.
5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.				
	Reproduction 1. Know that reproduction is a characteristic of all living things and is essential to the continuation of a species. 2. Identify the differences between sexual and asexual reproduction. 3. Know that, in sexual reproduction, an egg and sperm unite to begin the development of a new individual. 4. Know that organisms that sexually reproduce fertile offspring are members of the same species.	Full	LS.3.11 LS.3.12 LS.3.13	

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Strand II: Content of Science **Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.**	Heredity 5. Understand that some characteristics are passed from parent to offspring as inherited traits and others are acquired from interactions with the environment. 6. Know that hereditary information is contained in genes that are located in chromosomes, including: • determination of traits by genes • traits determined by one or many genes • more than one trait sometimes influenced by a single gene.	Full	LS.Unit 7	
	Biological Evolution 7. Describe how typical traits may change from generation to generation due to environmental influences (e.g., color of skin, shape of eyes, camouflage, shape of beak). 8. Explain that diversity within a species is developed by gradual changes over many generations. 9. Know that organisms can acquire unique characteristics through naturally occurring genetic variations. 10. Identify adaptations that favor the survival of organisms in their environments (e.g., camouflage, shape of beak). 11. Understand the process of natural selection. 12. Explain how species adapt to changes in the environment or become extinct and that extinction of species is common in the history of living things. 13. Know that the fossil record documents the appearance, diversification, and extinction of many life forms.	Full	LS.3.4 LS.3.5 LS.6.1-LS.6.4 LS.7.7	
	5-8 Benchmark III: Understand the structure of organisms and the function of cells in living systems.			
	Structure of Organisms 1. Understand that organisms are composed of cells and identify unicellular and multicellular organisms. 2. Explain how organs are composed of tissues of different types of cells (e.g., skin, bone, muscle, heart, intestines).	Full	LS.1.10 LS.1.12 LS.Unit 2 LS.Unit 3	
	Function of Cells 3. Understand that many basic functions of organisms are carried out in cells, including: • growth and division to produce more cells (mitosis) • specialized functions of cells (e.g., reproduction, nerve-signal transmission, digestion, excretion, movement, transport of oxygen). 4. Compare the structure and processes of plant cells and animal cells. 5. Describe how some cells respond to stimuli (e.g., light, heat, pressure, gravity). 6. Describe how factors (radiation, UV light, drugs) can damage cellular structure or function.	Partial	5.6.2 5.6.4 5.6.5 LS.2.1-LS.2.11	Teachers will supplement the curriculum to provide students an opportunity to describe how some cells respond to stimuli and how factors can damage cellular structure or function.
	5-8 Benchmark I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.			
Strand II: Content of Science **Standard III (Earth and**	1. Explain why Earth is unique in our solar system in its ability to support life.	Full	ES.9.7	
	2. Explain how energy from the sun supports life on Earth.	Different level	3.11.2	
	5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.			

Strand / Standard	Benchmark	Coverage	Code	Notes
...(Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Understand how the remains of living things give us information about the history of Earth, including: • layers of sedimentary rock, the fossil record, and radioactive dating showing that life has been present on Earth for more than 3.5 billion years.	Full	ES.2.1-ES.2.8 ES.3.4-ES.3.7	
	2. Understand how living organisms have played many roles in changes of Earth's systems through time (e.g., atmospheric composition, creation of soil, impact on Earth's surface).	None		Teachers will supplement the curriculum to include understanding how living organisms have played many roles in changes of Earth's systems through time (e.g., atmospheric composition, creation of soil, impact on Earth's surface).
	3. Know that changes to ecosystems sometimes decrease the capacity of the environment to support some life forms and are difficult and/or costly to remediate.	Full	4.1.5 LS.6.5	
5-8 Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.				
Strand III: Science and Society Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.	1. Analyze the contributions of science to health as they relate to personal decisions about smoking, drugs, alcohol, and sexual activity.	None		Teachers will supplement the curriculum to include analyzing the contributions of science to health as they relate to personal decisions about smoking, drugs, alcohol, and sexual activity.
	2. Analyze how technologies have been responsible for advances in medicine (e.g., vaccines, antibiotics, microscopes, DNA technologies).	Partial	LS.2.6 LS.1.12	Teachers will supplement the curriculum to include additional information analyzing how technologies have been responsible for advances in medicine.
	3. Describe how scientific information can help individuals and communities respond to health emergencies (e.g., CPR, epidemics, HIV, bio-terrorism).	None		Teachers will supplement the curriculum to include describing how scientific information can help individuals and communities respond to health emergencies.

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New Mexico Grade 8 Science Standards
Compared to K¹² Middle School Science curriculum

Strand	Benchmarks and Performance Standards	Coverage	K¹² grade, unit, lesson	Comments
	5-8 Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.			
Strand I: Scientific Thinking and Practice **Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.**	1. Evaluate the accuracy and reproducibility of data and observations.	Full	Embedded throughout, for example: PS.10.3 PS.10.4 LS.10.3 LS.10.4	
	2. Use a variety of technologies to gather, analyze and interpret scientific data.	Full	Embedded throughout, for example: PS.Unit 10 LS.Unit 10	
	3. Know how to recognize and explain anomalous data.	None		Teachers will supplement the curriculum to include knowing how to recognize and explain anomalous data.
	5-8 Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.			
	1. Examine alternative explanations for observations.	None		Teachers will supplement the curriculum to include alternative explanations for observations.
	2. Describe ways in which science differs from other ways of knowing and from other bodies of knowledge (e.g., experimentation, logical arguments, skepticism).	Partial	PS.1.2	Teachers will supplement the curriculum to include additional information to describe ways in which science differs from other ways of knowing and from other bodies of knowledge.
	3. Know that scientific knowledge is built on questions posed as testable hypotheses, which are tested until the results are accepted by peers.	Partial	PS.10.1 PS.10.2	Teachers will supplement the curriculum to include testing until the results are accepted by peers.
	5-8 Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge.			
	1. Use mathematical expressions and techniques to explain data and observations and to communicate findings (e.g., formulas and equations, significant figures, graphing, sampling, estimation, mean).	Full	PS.4.3-PS.4.7	
	2. Create models to describe phenomena.	Full	Embedded throughout, for example: ES.4.10 ES.5.9 LS.5.11	
	5-8 Benchmark I: Know the forms and properties of matter and how matter interacts.			
	Properties of Matter 1. Know how to use density, boiling point, freezing point, conductivity, and color to identify various substances. 2. Distinguish between metals and non-metals. 3. Understand the differences among elements, compounds, and mixtures by: • classification of materials as elements, compounds, or mixtures • interpretation of chemical formulas • separation of mixtures into compounds by methods including evaporation, filtration, screening, magnetism.	Partial	PS.2.7 PS.2.8 PS.3.8-PS.3.13 PS.3.3	Teachers will supplement the curriculum to include knowing how to use density, boiling point, freezing point, conductivity, and color to identify various substances.

Strand / Standard	Content	Completeness	Code	Notes
	Structure of Matter 4. Identify the protons, neutrons, and electrons within an atom and describe their locations (i.e., in the nucleus or in motion outside the nucleus). 5. Explain that elements are organized in the periodic table according to their properties. 6. Know that compounds are made of two or more elements, but not all sets of elements can combine to form compounds.	Full	PS.1.1-PS.1.6	
	Changes in Matter 7. Know that phase changes are physical changes that can be reversed (e.g., evaporation, condensation, melting). 8. Describe various familiar physical and chemical changes that occur naturally (e.g., snow melting, photosynthesis, rusting, burning). 9. Identify factors that influence the rate at which chemical reactions occur (e.g., temperature, concentration). 10. Know that chemical reactions can absorb energy (endothermic reactions) or release energy (exothermic reactions).	Full	PS.1.7-PS.1.9 PS.Unit 3	
Strand II: Content of Science **Standard I (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.**	**5-8 Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy.** Energy Transformation 1. Know that energy exists in many forms and that when energy is transformed some energy is usually converted to heat. 2. Know that kinetic energy is a measure of the energy of an object in motion and potential energy is a measure of an object's position or composition, including: • transformation of gravitational potential energy of position into kinetic energy of motion by a falling object. 3. Distinguish between renewable and nonrenewable sources of energy. 4. Know that electrical energy is the flow of electrons through electrical conductors that connect sources of electrical energy to points of use, including: • electrical current paths through parallel and series circuits • production of electricity by fossil-fueled and nuclear power plants, wind generators, geothermal plants, and solar cells • use of electricity by appliances and equipment (e.g., calculators, hair dryers, light bulbs, motors).	Partial	ES.8.2 ES.8.3 ES.8.5 PS.Unit 6 PS.8.1-PS.8.5	Teachers will supplement the curriculum to include the use of electricity by appliances and equipment.

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Standard	Code	Coverage	Notes
Waves 5. Understand how light and radio waves carry energy through vacuum or matter by: • straight-line travel unless an object is encountered • reflection by a mirror, refraction by a lens, absorption by a dark object • separation of white light into different wavelengths by prisms • visibility of objects due to light emission or scattering. 6. Understand that vibrations of matter (e.g., sound, earthquakes, water waves) carry wave energy, including: • sound transmission through solids, liquids, and gases • relationship of pitch and loudness of sound to rate and distance (amplitude) of vibration • ripples made by objects dropped in water.	PS.7.1-PS.7.6	Partial	Teachers will supplement the curriculum to provide students an opportunity to understand that vibrations of matter carry wave energy including ripples made by objects dropped in water.
5-8 Benchmark III: Describe and explain forces that produce motion in objects.			
Forces 1. Know that there are fundamental forces in nature (e.g., gravity, electromagnetic forces, nuclear forces). 2. Know that a force has both magnitude and direction. 3. Analyze the separate forces acting on an object at rest or in motion (e.g., gravity, elastic forces, friction), including how multiple forces reinforce or cancel one another to result in a net force that acts on an object. 4. Know that electric charge produces electrical fields and magnets produce magnetic fields. 5. Know how a moving magnetic field can produce an electric current (generator) and how an electric current can produce a magnetic field (electromagnet). 6. Know that Earth has a magnetic field.	PS.4.1 PS.4.2 PS.8.6-PS.8.9	Partial	Teachers will supplement the curriculum to provide students an opportunity to know that Earth has a magnetic field.
Motion 7. Know that an object's motion is always described relative to some other object or point (i.e., frame of reference). 8. Understand and apply Newton's Laws of Motion: • Objects in motion will continue in motion and objects at rest will remain at rest unless acted upon by an unbalanced force (inertia). • If a greater force is applied to an object a proportionally greater acceleration will occur. • If an object has more mass the effect of an applied force is proportionally less.	PS.4.1-PS.4.3 PS.4.9	Full	
5-8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.			
1. Describe how matter moves through ecosystems (e.g., water cycle, carbon cycle).	LS.5.6	Full	
2. Describe how energy flows through ecosystems (e.g., sunlight, green plants, food for animals).	LS.5.6	Full	
3. Explain how a change in the flow of energy can impact an ecosystem (e.g., the amount of sunlight available for plant growth, global climate change).	4.1.5	Different level	Teachers will supplement K12 lessons to include content which covers this standard.
5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.			

Strand II: Content of Science

Standard II (Life

Strand/Standard	Objective	Code	Coverage	Notes
Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.	1. Understand that living organisms are made mostly of molecules consisting of a limited number of elements (e.g., carbon, hydrogen, nitrogen, oxygen).		None	Teachers will supplement the curriculum to include understanding that living organisms are made mostly of molecules consisting of a limited number of elements.
	2. Identify DNA as the chemical compound involved in heredity in living organisms.	LS.2.6	Full	
	3. Describe the widespread role of carbon in the chemistry of living systems.	LS.5.6	Full	
5-8 Benchmark III: Understand the structure of organisms and the function of cells in living systems.				
things and their environments.	1. Describe how cells use chemical energy obtained from food to conduct cellular functions (i.e., respiration).	LS.2.7 LS.2.8	Full	
	2. Explain that photosynthesis in green plants captures the energy from the sun and stores it chemically.	LS.2.7	Full	
	3. Describe how chemical substances can influence cellular activity (e.g., pH).		None	Teachers will supplement the curriculum to include describing how chemical substances can influence cellular activity
5-8 Benchmark I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.				
Strand II: Content of Science Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.	1. Understand how energy from the sun and other stars, in the form of light, travels long distances to reach Earth.	3.11.5	Different level	Teachers will supplement K12 lessons to include content which covers this standard.
	2. Explain how the properties of light (e.g., emission, reflection, refraction) emitted from the sun and stars are used to learn about the universe, including: • distances in the solar system and the universe • temperatures of different stars.	3.11.5	Different level	Teachers will supplement K12 lessons to include content which covers this standard.
	3. Understand how gravitational force acts on objects in the solar system and the universe, including: • similar action on masses on Earth and on other objects in the solar system • explanation of the orbits of the planets around the sun.	ES.9.3 ES.9.4	Full	
5-8 Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.				
	1. Describe the role of pressure (and heat) in the rock cycle.	ES.2.7	Full	
	2. Understand the unique role water plays on Earth, including: • ability to remain liquid at most Earth temperatures • properties of water related to processes in the water cycle: evaporation, condensation, precipitation, surface run-off, percolation • dissolving of minerals and gases and transport to the oceans • fresh and salt water in oceans, rivers, lakes, and glaciers • reactant in photosynthesis.	ES.Unit 7	Partial	Teachers will supplement the curriculum to include the unique role water plays in the reactant in photosynthesis.
	3. Understand the geologic conditions that have resulted in energy resources (e.g., oil, coal, natural gas) available in New Mexico.		None	Teachers will supplement the curriculum to include understanding the geologic conditions that have resulted in energy resources (e.g., oil, coal, natural gas) available in New Mexico.
5-8 Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies.				
Strand III: Science and Society Standard I: Understand how scientific discoveries, inventions	1. Analyze the interrelationship between science and technology (e.g., germ theory, vaccines).		None	Teachers will supplement the curriculum to include analyzing the interrelationship between science and technology.
	2. Describe how scientific information can help to explain environmental phenomena (e.g., floods, earthquakes, volcanoes, fire, extreme weather).	ES.4.12 ES.4.13	Partial	Teachers will supplement the curriculum to include additional ways scientific information can help to explain environmental phenomena.

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| discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies. | 3. Describe how technological revolutions have significantly influenced societies (e.g., energy production, warfare, space exploration). | None | Teachers will supplement the curriculum to include describing how technological revolutions have significantly influenced societies. |
| | 4. Critically analyze risks and benefits associated with technologies related to energy production. | None | Teachers will supplement the curriculum to include critically analyzing risks and benefits associated with technologies related to energy production. |

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New Mexico Grade 9 English Literacy Standards - ADP
Compared to K¹² ENG102: LAC I

Strand	Benchmarks and Performance Standards	Coverage	Course, unit, lesson	Comments
	Know how to use comprehension strategies for unfamiliar vocabulary.			
	Know roots, prefixes, suffixes (Greek/Latin), and etymology to determine the meaning of unfamiliar vocabulary : 1. know word families and word suffixes to assist understanding (educate=education=educational); 2. develop one's knowledge of common prefixes and root words; 3. use general and specialized dictionaries, thesauri, and glossaries (print and electronic) to determine the definition, and pronunciation of unfamiliar words; 4. understand etymology, principles behind spelling, and usage of words; 5. differentiate shades of meaning and multiple meanings of words, including the significance of both connotation and denotation.	Full	Embedded throughout, for example: ENG102A VOC 1.1-1.8 ENG102A VOC 2.1-2.9 ENG102A 3.1-3.10 ENG102B 1.1-1.9 ENG102B 2.1-2.10 ENG102B 3.1-3.9	
	Know how to comprehend the message or meaning of a text.			
	• Identify the author's main purpose.	Full	ENG102A LIT/ COMP 2.1-2.12 ENG102B LIT/ COMP 4.1-4.14	
	• Recognize and recall main ideas by selecting topic sentences, identifying thesis statements, selecting key words and phrases, and summarizing the material.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
Strand A: Reading	• Recognize and recall specific and important details - who, what, where, when, why, how - narrational or chronological sequences and cause-effect relationships.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
	Know how to infer, analyze, and synthesize.			
	• Interpret information from graphs, charts, diagrams and the like.	None		Teachers will supplement the curriculum to include opportunities for students to interpret information from graphs, charts, diagrams and the like.
	• Evaluate texts according to text-specific standards (book reports according to a book report rubric for example.)	None		Teachers will supplement the curriculum to include opportunities for students to evaluate texts according to text-specific standards.
	Know how to use meta-cognitive strategies.			
	• Use multiple strategies to monitor one's pace and comprehension.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
	Demonstrate control of Standard English through the correct understanding and use of syntax.			

Strand AA: Laguage

Objective	Status	Standards	Notes
• Differentiate between SV and SVDO patterns with transitive and intransitive verbs.	Partial	ENG102A GUM 3.1 / ENG102A GUM 3.2 / ENG102B GUM 1.1-1.7	Teachers will supplement the curriculum to include opportunities for students to differentiate between SV and SVDO patterns with transitive and intransitive verbs.
• Differentiate between SLVPA and SLVPN sentences with predicate adjectives and predicate nouns.	Partial	ENG102A GUM 2.1 / ENG102A 2.2 / ENG102A GUM 4.1 / ENG102A GUM4.2 / ENG102B GUM 4.1-4.4	Teachers will supplement the curriculum to include opportunities for students to differentiate between SLVPA and SLVPN sentences with predicate adjectives and predicate nouns.
• Master knowledge of conjunctions and coordination to create parallel structures and balanced and compound sentences.	Partial	ENG102A GUM 1.1 / ENG102A GUM 1.2 / ENG102A GUM 10.1-10.4	Teachers will supplement the curriculum to include opportunities for students to master knowledge of conjunctions and coordination to create parallel structures and balanced and compound sentences.
• Eliminate run-ons, fused sentences, and inappropriate fragments.	Full	ENG102A GUM 10.1-10.4	
Demonstrate control of Standard English through the correct understanding and use of grammar and usage.			
• Master prepositional phrases and their functions as adjectives and adverbs.	Full	ENG102A GUM 5.1-5.5	
• Master the use of appositives to rename and define nouns.	Full	ENG102A GUM 7.1-7.5	
• Differentiate among multiple meanings of words that sound the same but have different meanings such as their, there, they're.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 / ENG102A LIT/ COMP 2.1-2.12 / ENG102A LIT/ COMP 3.1-3.8 / ENG102B LIT/ COMP 1.1-1.8 / ENG102B LIT/ COMP 2.1-2.13 / ENG102B LIT/ COMP 4.1-4.14	
• Master the multiple characteristics of parts of speech, especially nouns, verbs, adjectives, adverbs, and prepositional phrases that act as adjectives or adverbs.	Full	Embedded throughout, for example: ENG102A GUM 1.1-1.2 / ENG102A GUM 2.1-2.2 / ENG102A GUM 3.1-3.2 / ENG102B GUM 1.1-1.7 / ENG102B GUM 2.1-2.8 / ENG102B GUM 3.1-3.10	
• Demonstrate correct subject/verb and pronoun/antecedent agreement.	Full	ENG102B GUM 3.1-3.10	
Demonstrate control of Standard English through the correct understanding and use of punctuation, capitalization, and spelling.			
• Develop legible manuscript forms such as paragraphs and text structures, especially for open-ended academic responses or requirements of the workforce.	Full	ENG102A LIT/ COMP 1.1-1.10 / ENG102A LIT/ COMP 3.1-3.8 / ENG102A LIT/ COMP 6.1-6.7 / ENG102A LIT/ COMP 9.1-9.7 / ENG102B LIT/ COMP 2.1-2.13 / ENG102B LIT/ COMP 6.1-6.19	
• Correctly capitalize proper nouns and appropriate words in sentences, titles, and elsewhere.	Full	ENG102B GUM 5.1-5.5	
• Correctly apply basic rules of spelling in all forms of writing.	Full	ENG102A LIT/ COMP 1.1-1.10 / ENG102A LIT/ COMP 3.1-3.8 / ENG102A LIT/ COMP 6.1-6.7 / ENG102A LIT/ COMP 9.1-9.7 / ENG102B LIT/ COMP 2.1-2.13 / ENG102B LIT/ COMP 6.1-6.19	

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• Correctly use end marks, apostrophes, and quotation marks with direct quotes. Correctly use commas for the following purposes: items in a series, date/year, city/state, direct address, appositives, direct quotes, and compound sentences.	Full	ENG102B GUM 7.1-7.5 ENG102B GUM 8.1-8.8	

Give spoken instructions to perform specific tasks, to answer questions, or to solve problems.

• Identify purposes and audience to determine the important information to communicate and the language needed to convey it.	Partial	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19	Teachers will supplement the curriculum to include opportunities for students to identify purposes and audience to determine the important information to communicate and the language needed to convey it.
• Master strategies to develop this skill such as repeating the instructions to ensure recall, following a process, emphasizing key points, and employing appropriate diction.	None		Teachers will supplement the curriculum to include opportunities for students to master strategies to develop this skill such as repeating the instructions to ensure recall, following a process, emphasizing key points, and employing appropriate diction.

Make oral presentations that exhibit a logical structure appropriate to the audience, context, and purpose; group related ideas and maintain a consistent focus; include smooth transitions; support judgments with sound evidence and well-chosen details; make skillful use of rhetorical devices; provide a coherent conclusion; employ proper eye contact, speaking rate, volume, enunciation, inflection, and gestures to communicate ideas effectively.

N/A	N/A	N/A	

Select precise vocabulary to appeal to an intended audience.

• Improve one's language by the strategic use of vivid, compelling verbs.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19	

Follow spoken instructions to perform specific tasks, to answer questions, or to solve problems.

• Consider the purpose and the speaker in order to understand what is being communicated and the language being used to convey the message.	None		Teachers will supplement the curriculum to include opportunities for students to consider the purpose and the speaker in order to understand what is being communicated and the language being used to convey the message.
• Master strategies to develop this skill such as repeating the instructions to ensure recall, following a process, and identifying key points.	None		Teachers will supplement the curriculum to include opportunities for students to master strategies to develop this skill such as repeating the instructions to ensure recall, following a process, and identifying key points.
• Practice listening skills to enhance the ability to complete a task from oral instructions.	None		Teachers will supplement the curriculum to include opportunities for students to practice listening skills to enhance the ability to complete a task from oral instructions.

Summarize and paraphrase information presented orally by others.

Strand B: Communication

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Standard	Coverage	Codes
• Use a variety of strategies to enhance comprehension of complex literal messages in order to summarize information presented orally such as: listening for contextual clues to infer meaning of unknown words; interpreting figurative language; interpreting nonverbal clues; listening to distinguish between main ideas and details; listening for transitions; noting sequence and organization of ideas; extending the speaker's ideas based on prior knowledge and personal experience; determining the need for further information or research; visualizing using mnemonic devices; summarizing and synthesizing; and determining significance, value, and possible uses of information.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14
• Evaluate effectiveness of selected strategies.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14
Identify the thesis of a speech and determine the essential elements that elaborate it.		
N/A	N/A	N/A
Analyze the ways in which the internal and contextual variables of a speech support or confound its meaning or purpose.		
N/A	N/A	N/A
Participate productively in self-directed work teams for a particular purpose (for example, to interpret literature, write or critique a proposal, solve a problem or make a		
N/A	N/A	N/A
Demonstrate proficiency in producing a variety of compositions.		
• Demonstrate mastery in the creation of narrative texts such as biography, autobiography, history, personal anecdote, or short story that (1) engage the reader by establishing a context and point of view; (2) establish plot and setting, (3) develop characters, (4) employ concrete sensory details; and (5) conclude effectively.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7
• Produce imaginative and expressive texts such as poetry, drama, screenplay, monologue, and song lyrics, that (1) engage the reader by establishing a context and point of view; (2) develop characters and plot; (3) creatively employ figurative language; and (4) conclude effectively.	None	Teachers will supplement the curriculum to include opportunities for students to produce imaginative and expressive texts such as poetry, drama, screenplay, monologue, and song lyrics, that (1) engage the reader by establishing a context and point of view; (2) develop characters and plot; (3) creatively employ figurative language; and (4) conclude effectively.
Plan writing by taking notes, writing informal outlines, and researching.		
• Use a variety of pre-writing strategies to guide the generation of content by activating prior knowledge such as brainstorming, ideamapping, free-writing, outlining, keeping a journal, asking journalist's questions—who, what, when, where, why, and how.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Select major ideas and develop them with relevant reasons, supporting examples and details.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
Select and use formal or informal literary or technical language appropriate for thepurpose, audience, and context of the communication.		

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• Use vivid descriptive language to create sensory images in the mind of the audience.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Use language to stimulate the emotions of the reader.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
Organize ideas in writing with a thesis statement in the introduction, well-constructed paragraphs, a conclusion, and transition sentences that connect paragraphs into a		
• Organize and deliver an argument by (1) wording the claim clearly; (2) specifying convincing reasons to support the claim, and (3) adopting a stance and appropriate tone toward the issue.	Full	ENG102B LIT/ COMP 2.1-2.13
• Select and use appropriate structures and organizational patterns such as problem-solution, compare-contrast, cause-effect to (1) select content; (2) represent ideas; (3) make connections; (4) generate new insights; and (5) develop an organizational structure.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Construct focused paragraphs with topic sentences leading toward a logical conclusion.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Provide supporting evidence from texts and other outside sources such as direct quotations, paraphrasing, and examples.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Draw a reasonable conclusion connected to the topic sentence and supporting evidence.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
Drawing on readers' comments on working drafts, revise documents to develop or support ideas more clearly, address potential objections, ensure effective transitions		
• Use a rubric, outline, or organizational map to check the development of the draft to see if paragraph focus is clear, transitions are apparent, and organizational patterns are clear and well-signaled.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Analyze whether claims and opinions are supported by evidence in the form of reasons, examples, or facts.	Full	ENG102B LIT/ COMP 2.1-2.13
• Analyze whether counter arguments are anticipated and addressed.	Full	ENG102B LIT/ COMP 2.1-2.13

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Strand C: Writing

Objective	Level	Standards
• Delete material that disturbs the flow and development of a paragraph.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Analyze overall effectiveness of one's own writing.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Analyze and revise one's own work and the work of others for consistency of facts and ideas and development of argument or plot.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
Edit one's own work for grammar, style, and tone appropriate to audience, purpose and context.		ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Correct errors in spelling, grammatical conventions, format, and structure.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Evaluate for audience, purpose, and readability (word choice, vocabulary, sentence construction for example).	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
• Consult resources like handbooks, style manuals, spell check, dictionaries, thesauri, and style sheets to correct errors.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19
Cite sources properly when paraphrasing or summarizing information, quoting, or using graphics.		
• Beginning in 9th grade, use appropriate publication manuals to cite source materials and to prepare bibliographies, lists of works cited, and quoted passages: textbook appendices, MLA Handbook for Writers of Research Papers, The Chicago Manual of Style, the Publication Manual of the American Psychological Association, and The Associated Press Stylebook.	Full	ENG102B LIT/ COMP 6.1-6.19
Present written material using basic software programs such as Word, Excel, and PowerPoint so that graphics can be incorporated to present information and ideas best		
• Select production elements based on an analysis of one's purpose and the available media production resources.	Full	ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 3.1-3.8 ENG102A LIT/ COMP 6.1-6.7 ENG102A LIT/ COMP 9.1-9.7 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 6.1-6.19

• Incorporate into the final draft of written reports graphic materials appropriate for the particular communication such as graphs, charts, tables, maps, and photographs.	None	Teachers will supplement the curriculum to include opportunities for students to incorporate into the final draft of written reports graphic materials appropriate for the particular communication such as graphs, charts, tables, maps, and photographs.
Produce effective work-related texts such as business letters, resumes, biographies, job applications, work procedures, work orders, and briefs.		
• Address audience needs and state purpose and context in an efficient manner.	None	Teachers will supplement the curriculum to include opportunities for students to address audience needs and state purpose and context in an efficient manner.
• Demonstrate proficiency in accessing and sending information electronically.	None	Teachers will supplement the curriculum to include opportunities for students to demonstrate proficiency in accessing and sending information electronically.
• Follow conventions of work-place writing with business letter and memo formats.	None	Teachers will supplement the curriculum to include opportunities for students to follow conventions of work-place writing with business letter and memo formats.
• Make use of appropriate writing strategies, such as creating a visual hierarchy, using white space and graphics as appropriate, and providing smooth transitions between sections or steps of the text.	None	Teachers will supplement the curriculum to include opportunities for students to make use of appropriate writing strategies, such as creating a visual hierarchy, using white space and graphics as appropriate, and providing smooth transitions between sections or steps of the text.
• Include relevant information and exclude extraneous information.	None	Teachers will supplement the curriculum to include opportunities for students to include relevant information and exclude extraneous information.
• Anticipate problems, mistakes, and misunderstandings that might arise for the reader.	None	Teachers will supplement the curriculum to include opportunities for students to anticipate problems, mistakes, and misunderstandings that might arise for the reader.
• Include necessary dates and other essential identifying information.	None	Teachers will supplement the curriculum to include opportunities for students to include necessary dates and other essential identifying information.
Define and narrow a problem or research topic.		
• Form and refine a question for investigation using a topic of personal choice.	Full	ENG102B LIT/ COMP 6.1-6.19
Gather relevant information for a research topic from a variety of print and electronic sources, as well as from direct observation, interviews, or surveys.		
• Preview reading selections to determine whether a text contains relevant information.	Full	ENG102B LIT/ COMP 6.1-6.19
• Use multiple resources to gather information for evaluating particular problems and exploring solutions.	Full	ENG102B LIT/ COMP 6.1-6.19
• Use credible news sources for researching topics.	Full	ENG102B LIT/ COMP 6.1-6.19
Make distinctions about the credibility, reliability, consistency, strengths and limitations of various resources, including information gathered from websites.		
• Read critically and independently from different sources to draw conclusions.	Full	ENG102B LIT/ COMP 6.1-6.19
Report research findings in an effective manner appropriate to a designated audience.		
• Identify audience to whom researched findings might be meaningful.	Full	ENG102B LIT/ COMP 6.1-6.19
• Develop written or oral presentations of appropriate length that effectively report one's research findings.	Full	ENG102B LIT/ COMP 6.1-6.19

Strand D: Research

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Write an extended research essay of medium length.

Standard	Depth	Course
• Use primary and secondary sources to develop a researched topic.	Full	ENG102B LIT/ COMP 6.1-6.19
• Use evidence in support of a clear thesis statement and related claims.	Full	ENG102B LIT/ COMP 6.1-6.19
• Write a researched essay that examines a focused topic (1-5 pages).	Full	ENG102B LIT/ COMP 6.1-6.19
• Paraphrase and summarize with accuracy the range of arguments and evidence supporting or refuting the thesis, as appropriate.	Full	ENG102B LIT/ COMP 6.1-6.19
• Cite sources correctly and document quotations, paraphrases, and other information, employing an accepted academic manuscript style such as MLA or APA.	Full	ENG102B LIT/ COMP 6.1-6.19
• Employ various modes as appropriate: cause and effect, comparison/contrast, process analysis.	Full	ENG102B LIT/ COMP 6.1-6.19

Distinguish among facts and opinions, evidence and inference.

Standard	Depth	Course
• Identify relevant reasons and evidence used as a basis for argument in texts in order to support conclusions.	Full	ENG102B LIT/ COMP 2.1-2.13
• Identify logical, authoritative, and emotional arguments and evaluate their effectiveness, noting logical fallacies and propaganda devices.	Full	ENG102B LIT/ COMP 2.1-2.13
• Distinguish between evidence that is directly stated and evidence that is inferred from or implied within an argument.	Full	ENG102B LIT/ COMP 2.1-2.13

Identify false premises in an argument.

Standard	Depth	Course
• Identify stylistic and rhetorical devices used to persuade in written and oral communication.	Full	ENG102B LIT/ COMP 2.1-2.13
• Examine texts for arguments and develop informed opinions by noting the progression of ideas that substantiate the proposal.	Full	ENG102B LIT/ COMP 2.1-2.13

Describe the structure of a given argument; identify its claims and evidence; and evaluate connections among evidence, inferences, and claims.

Standard	Depth	Course
• Identify the structure of a multi-faceted argument.	Full	ENG102B LIT/ COMP 2.1-2.13
• Examine texts for multi-faceted arguments, citing a stated main claim or conclusion and explicit or inferred evidence.	Full	ENG102B LIT/ COMP 2.1-2.13
• In a multifaceted argument, cite a main claim and explicit or inferred evidence that supports it.	Full	ENG102B LIT/ COMP 2.1-2.13

Evaluate the range and quality of evidence used to support or oppose an argument.

Standard	Depth	Course
• Develop and use standardized criteria to evaluate the quality and effectiveness of evidence used in oral or written communication.	Full	ENG102B LIT/ COMP 2.1-2.13
• Support informed opinions by providing relevant and convincing reasons.	Full	ENG102B LIT/ COMP 2.1-2.13

Recognize common logical fallacies such as the appeal to pity (argumentum ad misericordiam), the personal attack (argumentum ad hominem), the appeal to general opinion (argumentum ad populum) and the false dilemma (assuming only two options when there are more available); and understand why these fallacies do not prove the point being argued.

Standard	Depth	Course
• Establish and defend a particular perspective.	Full	ENG102B LIT/ COMP 2.1-2.13
• Respond respectfully to the viewpoints and biases of others.	Full	ENG102B LIT/ COMP 2.1-2.13
• Recognize propaganda as a purposeful technique.	Full	ENG102B LIT/ COMP 2.1-2.13

Analyze written and oral communication for false assumptions, errors, loaded terms, caricature, sarcasm, leading questions, and faulty reasoning.

Standard	Depth	Course
• Recognize logical fallacies in written or oral communication such as loaded terms, false assumptions, and faulty reasoning.	Full	ENG102B LIT/ COMP 2.1-2.13

Understand the distinction between a deductive argument in which, if all the premises are true and the argument's form is valid, the conclusion is inescapably true; and an inductive argument, in which the conclusion provides the best or most probable explanation of the truth of the premise, but is not necessarily true.

Standard	Depth	Course
• Identify deductive arguments in oral and written communication.	Full	ENG102B LIT/ COMP 2.1-2.13
• Identify inductive arguments in oral and written communication.	Full	ENG102B LIT/ COMP 2.1-2.13

Analyze two or more texts addressing the same topic to determine how authors reach similar or different conclusions.

Standard	Depth	Course
• Use a variety of resources to gather information in order to critically analyze texts for meaning.	Full	ENG102B LIT/ COMP 2.1-2.13
• Analyze themes, main ideas, and supporting ideas across multiple complex texts.	Full	ENG102B LIT/ COMP 2.1-2.13
• Generate different types of questions to clarify and extend comprehension of texts.	Full	ENG102B LIT/ COMP 2.1-2.13

Strand E: Logic

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Construct oral and written arguments that demonstrate clear and knowledgeable judgment by:

Skill	Coverage	Code
• Demonstrate the ability to expound upon ideas comprehensively, concretely and concisely.	Full	ENG102B LIT/ COMP 2.1-2.13
• Select a logical organizational pattern.	Full	ENG102B LIT/ COMP 2.1-2.13
• Develop main ideas based on an audience's prior knowledge and interests.	Full	ENG102B LIT/ COMP 2.1-2.13
• Draft a clear and substantive thesis claim.	Full	ENG102B LIT/ COMP 2.1-2.13
• Develop coherent and smooth progression of ideas strategically including supporting ideas.	Full	ENG102B LIT/ COMP 2.1-2.13
• Identify areas needing supporting evidence and support claims and opinions with evidence.	Full	ENG102B LIT/ COMP 2.1-2.13
• Draw a persuasive conclusion.	Full	ENG102B LIT/ COMP 2.1-2.13
• Demonstrate an awareness of possible questions, concerns, and counter arguments.	Full	ENG102B LIT/ COMP 2.1-2.13
• Recognize strategies that employ personal experience and narrative as evidentiary support in persuasive argument.	Full	ENG102B LIT/ COMP 2.1-2.13

Follow instructions in informational or technical texts to perform specific tasks, answer questions, or solve problems.

Skill	Coverage	Code
• Identify a wide variety of resources used to acquire informational and technical information.	Full	ENG102B LIT/COMP 4.1-4.14
• Evaluate the accuracy of a sequence of instructions or tasks.	Full	ENG102B LIT/COMP 4.1-4.14

Identify the main ideas of informational text and determine the essential elements that elaborate them.

Skill	Coverage	Code
• Examine informational sources for ideas and concepts.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19
• Accurately interpret information from and detect inconsistencies in informational sources.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19

Summarize informational and technical texts and explain the visual components that support them.

Skill	Coverage	Code
• Examine various types of charts, graphs, and other types of visual representations in different texts.	None	Teachers will supplement the curriculum to include opportunities for students to examine various types of charts, graphs, and other types of visual representations in different texts.

Distinguish between a summary and a critique.

Skill	Coverage	Code
• Distinguish between a summary (fact) and a critique (opinion).	Full	ENG102B LIT/COMP 4.1-4.14

Interpret and use information in maps, charts, graphs, timelines, tables, and diagrams.

Skill	Coverage	Code
• Identify types of graphical representations in complex texts: photographs, captions, maps, tables, and timelines.	None	Teachers will supplement the curriculum to include opportunities for students to identify types of graphical representations in complex texts: photographs, captions, maps, tables, and timelines.

Identify interrelationships between and among ideas and concepts within a text, such as cause and effect relationships.

Skill	Coverage	Code
• Recognize clear cause-effect relationships within informational text.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19
• Order sequences of events in complex processes.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19
• Utilize transitions effectively as ideas develop.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19

Synthesize information from multiple informational and technical sources or texts.

Skill	Coverage	Code
• Demonstrate proficiency in accessing and sending information electronically.	None	Teachers will supplement the curriculum to include opportunities for students to demonstrate proficiency in accessing and sending information electronically.
• Gather and synthesize information from primary and secondary informational sources.	Full	ENG102B LIT/COMP 4.1-4.14 / ENG102B LIT/ COMP 6.1-6.19

Draw conclusions based on evidence from informational and technical texts or sources.

Strand F: Informational Text

• Generalize and draw conclusions in technical and informational text using details that support the main points.	Full	ENG102B LIT/COMP 4.1-4.14 ENG102B LIT/ COMP 6.1-6.19	
Analyze the ways in which a text's organizational structure supports or confounds its meaning or purpose.			
• Analyze textual features (table of contents, organization, structure, and graphics) to evaluate the importance of information.	Full	ENG102B LIT/COMP 4.1-4.14 ENG102B LIT/ COMP 6.1-6.19	
Recognize the use or abuse of ambiguity, contradiction, incongruities, overstatement, and understatement in texts and explain their effect on the reader.			
• Analyze theme, key idea, main ideas, and supporting ideas across complex texts.	Full	ENG102B LIT/COMP 4.1-4.14 ENG102B LIT/ COMP 6.1-6.19	
Evaluate informational and technical texts for their clarity, simplicity and coherence and for the appropriateness of their graphic and visual appeal.			
• Analyze a variety of graphical representations and evaluate the relevance of that information to the information presented textually.	None		Teachers will supplement the curriculum to include opportunities for students to analyze a variety of graphical representations and evaluate the relevance of that information to the information presented textually.
Evaluate the aural, visual, and written images and other special effects used in television, radio, film, and the Internet for their ability to inform, persuade, and entertain.			
• Express reflections and personal reactions to aural and visual media.	None		Teachers will supplement the curriculum to include opportunities for students to express reflections and personal reactions to aural and visual media.
• Identify characteristics of types of media such as radio, film, Internet, magazine, newspaper, and television.	None		Teachers will supplement the curriculum to include opportunities for students to identify characteristics of types of media such as radio, film, Internet, magazine, newspaper, and television.
• Identify target audience and persuasive elements used in print, radio, and film advertising such as propaganda, hidden messages, bandwagon, testimonial, glittering generalities, and other advertising techniques.	None		Teachers will supplement the curriculum to include opportunities for students to identify target audience and persuasive elements used in print, radio, and film advertising such as propaganda, hidden messages, bandwagon, testimonial, glittering generalities, and other advertising techniques.
• Identify target audiences of specific media.	None		Teachers will supplement the curriculum to include opportunities for students to identify target audiences of specific media.
• Identify elements of media productions designed to appeal to particular audiences.	None		Teachers will supplement the curriculum to include opportunities for students to identify elements of media productions designed to appeal to particular audiences.
• Identify types of media bias as it targets specific audiences.	None		Teachers will supplement the curriculum to include opportunities for students to identify types of media bias as it targets specific audiences.
Evaluate the effectiveness of a particular medium such as verbal, visual, photographic, television, and the Internet in achieving a particular purpose.			
• Recognize how perceptions of fact and opinion are affected by the use of fallacies, false dilemmas, propaganda, emotional appeals, and by presentation in different media (print, image, multimedia).	None		Teachers will supplement the curriculum to recognize how perceptions of fact and opinion are affected by the use of fallacies, false dilemmas, propaganda, emotional appeals, and by presentation in different media (print, image, multimedia).
Create coherent media productions using effective images, text, graphics, music, and/or sound effects to present a distinctive point of view on a topic whether through			

Strand G: Media

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Objective	Alignment	Course Reference	Supplemental Notes
• Select appropriate media format such as radio, film, Internet, magazine, newspaper, or television for a specific task.	None		Teachers will supplement the curriculum to include opportunities for students to select appropriate media format such as radio, film, Internet, magazine, newspaper, or television for a specific task.
• Use effective images, text, graphics, and sound to present a distinctive point of view on a topic.	None		Teachers will supplement the curriculum to include opportunities for students to use effective images, text, graphics, and sound to present a distinctive point of view on a topic.
Demonstrate knowledge of foundational literary works.			
• Recognize characteristics of significant 18th, 19th, and 20th century foundational works of American literature.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
• Recognize characteristics of the following: 1. Hispanic & Native American oral & written literatures 2. multi-cultural and cross-cultural literary works	Partial	ENG102B LIT/ COMP 1.1-1.8	Teachers will supplement the curriculum to include opportunities for students to recognize characteristics of the following: 1. Hispanic & Native American oral & written literatures 2. multi-cultural and cross-cultural literary works
Analyze foundational U.S. documents and indigenous cultural narratives for their historical and literary significance.			
• Recognize key foundational U.S. documents and literary movements.	None		Teachers will supplement the curriculum to include opportunities for students to recognize key foundational U.S. documents and literary movements.
• Recognize key forms and characteristics of cultural narratives from around the world and within the United States.	Partial	ENG102A LIT/ COMP 9.1-9.7	Teachers will supplement the curriculum to include opportunities for students to recognize key forms and characteristics of cultural narratives from around the world and within the United States.
Interpret significant literary elements across all forms of literature; use understanding of genre characteristics to allow deeper and subtler interpretations of texts.			
• Analyze an author's manipulation of time and sequence to create effects such as suspense. Recognize complex literary devices such as foreshadowing, flashback, and stream-of-consciousness writing.	Full	ENG102B LIT/ COMP 1.1-1.8	
• Identify and distinguish between the mood and tone of literary works.	Full	ENG102A LIT/ COMP 10.1-10.7 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 4.1-4.14	
• Recognize an author's use of wit and humor.	Full	ENG102B LIT/ COMP 4.1-4.14	
Analyze setting, plot, theme, characterization, and narration in literary prose, particularly classic and contemporary short stories and novels.			
• Discover personal connections to prose writing.	Full	ENG102A LIT/ COMP 9.1-9.7	
• Demonstrate an understanding of why certain works might be considered classics. Define common attributes of classic literature through the creation and application of personal rubrics.	None		Teachers will supplement the curriculum to include opportunities for students to demonstrate an understanding of why certain works might be considered classics. Define common attributes of classic literature through the creation and application of personal rubrics.

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Shtrand H: Literature			
• Explain the various effects of common narrative points of view (first person, third person limited, third person omniscient, objective) on the reader's understanding of a literary work.	Full	ENG102A LIT/ COMP 9.1-9.7	
• Assess the reliability of various narrators in literary works.	None		Teachers will supplement the curriculum to include opportunities for students to assess the reliability of various narrators in literary works.
• Identify the defining characteristics of common cultural narratives, such as myth, legend, folk tale, fairy tale/magic tale, beast tale, fable, tall tale, and epic.	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
• Identify various types of characters in prose (antagonist/ protagonist, hero/heroine, tragic hero, archetype, stock character, flat character/round character, static character/dynamic character, foil).	Full	Embedded throughout, for example: ENG102A LIT/ COMP 1.1-1.10 ENG102A LIT/ COMP 2.1-2.12 ENG102A LIT/ COMP 3.1-3.8 ENG102B LIT/ COMP 1.1-1.8 ENG102B LIT/ COMP 2.1-2.13 ENG102B LIT/ COMP 4.1-4.14	
Demonstrate knowledge of the common elements of poetry: metrics, rhyme scheme, rhythm, alliteration, and other conventions.	Full	ENG102A LIT/ COMP 10.1-10.7	
• Discover personal connections to poetry.			
• Analyze elements of poetry including: 1. style: poetic voice and diction 2. meter and rhythm: stressed and unstressed syllables 3. sound devices: end rhyme, rhyme scheme 4. poetic forms: haiku, narrative poem, lyric poem 5. poetic structures: stanzas as units of organization (regular and irregular) 6. poetic device: hyperbole, simile, metaphor, personification 7. theme: identifying speaker, situation, and purpose (to tell a story, to persuade, to express a feeling).	Full	ENG102A LIT/ COMP 10.1-10.7	
Identify how elements of dramatic literature articulate a playwright's vision.			
• Discover personal connections to dramatic literature.	Full	ENG102B LIT/ COMP 1.1-1.8	
• Identify characteristics of dramatic forms such as extended monologue, one-act, three-act, and five-act plays.	Full	ENG102B LIT/ COMP 1.1-1.8	
• Identify elements of tragedy and tragic form in drama.	Full	ENG102B LIT/ COMP 1.1-1.8	
• Identify examples of colloquial language in dramatic literature.	Full	ENG102B LIT/ COMP 1.1-1.8	
• Identify theme in drama, supported by examples from the plot and from dramatic conventions such as stage directions.	Full	ENG102B LIT/ COMP 1.1-1.8	
Analyze works of literature for what they suggest about the time period and social or cultural context in which they were written.			
• Identify a particular cultural perspective in a literary work from the past or present, including Native American and Hispanic oral traditions.	Partial	ENG102B LIT/ COMP 1.1-1.8	Teachers will supplement the curriculum to include opportunities for students to identify a particular cultural perspective in a literary work from the past or present, including Native American and Hispanic oral traditions.

New Mexico Grade 10 English Literacy Standards - ADP
Compared to K^{12} ENG202: LAC II

Strand	Benchmarks and Performance Standards	Coverage	Course, unit, lesson	Comments
	Know how to use comprehension strategies for unfamiliar vocabulary.			
	Know roots, prefixes, suffixes (Greek/Latin), and etymology to determine the meaning of unfamiliar vocabulary : 1. know word families and word suffixes to assist understanding (educate=education=educational=educationally); 2. develop one's knowledge of common prefixes and root words; 3. use general and specialized dictionaries, thesauri, and glossaries (print and electronic) to determine the definition, and pronunciation of unfamiliar words; 4. understand etymology, principles behind spelling, and usage of words; 5. differentiate shades of meaning and multiple meanings of words, including the significance of both connotation and denotation.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.1-4.11	
	Know how to comprehend the message or meaning of a text.			
	• Use prior knowledge in understanding text.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.1-4.11	
Strand A: Reading	• Recognize primary organizing structures: narrative, descriptive, expository, persuasive.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.1-4.11	
	Know how to infer, analyze, and synthesize.			
	• Recognize the presence and effect of a specific point of view.	Full	ENG202A 2.6-2.7 ENG202B 1.7 ENG202B 1.8 ENG202B 4.2 ENG202B 4.8	
	• Recognize the sources of information in a text whether primary or secondary.	Full	ENG202B 7.1-7.13 ENG202B 9.1-9.13	
	Know how to use meta-cognitive strategies.			
	• Draw conclusions from information in texts to arrive at new knowledge.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.1-4.11	
	Demonstrate control of Standard English through the correct understanding and use of syntax.			

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• Differentiate between SVDO patterns with indirect objects and object complements.	Partial	ENG202A 5.2-5.3 ENG202A 5.11-5.12 ENG202B 7.7 ENG202B 7.11-7.12	Teachers will supplement the curriculum to include opportunities for students to differentiate between SVDO patterns with indirect objects and object complements.
• Master knowledge of contradictory elements and conjunctions to create balanced sentences that express contrast.	Partial	ENG202A 8.6 ENG202A 8.8-8.9	Teachers will supplement the curriculum to include opportunities for students to master knowledge of contradictory elements and conjunctions to create balanced sentences that express contrast.
• Eliminate comma splices and dangling or misplaced modifiers.	Full	ENG202B 9.9 ENG202B 9.11-9.13	
Demonstrate control of Standard English through the correct understanding and use of grammar and usage.			
• Master the use of participles as adjectives. Master the use of essential and nonessential adjective clauses. Master absolute phrases and clauses to modify entire thoughts.	Full	ENG202A 8.3-8.4 ENG202A 8.6 ENG202A 8.8-8.9 ENG202B 9.2 ENG202B 9.11-9.12	
• Use all forms of words correctly such as verb tenses, degrees of adjectives, possessives and plural forms of nouns and pronouns, first/second/third person, and compound sentence parts.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11	
Demonstrate control of Standard English through the correct understanding and use of punctuation, capitalization, and spelling.			
• Correctly use commas for the following purposes: initial adverb phrases and clauses, nonessential adjective phrases and clauses, coordinate adjectives, contradictory elements, tag questions, commentary, and interjections.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11	
Give spoken instructions to perform specific tasks, to answer questions, or to solve problems.			
N/A			
Make oral presentations that exhibit a logical structure appropriate to the audience, context, and purpose; group related ideas and maintain a consistent focus; include smooth transitions; support judgments with sound evidence and well-chosen details; make skillful use of rhetorical devices; provide a coherent conclusion; employ proper eye contact, speaking rate, volume, enunciation, inflection, and gestures to communicate ideas effectively.			
• Consider purpose and context e.g., time limit and setting; research and analyze characteristics of the audience such as prior knowledge and experiences related to the topic, needs, interests, values, beliefs, culture, age, and gender; and use these characteristics to select and adapt the topic or literary passage to the audience, develop a thesis or literary theme, guide language choices, and plan the presentation or performance.	Full	ENG202A 8.1-8.9	
• Select an organizational pattern: topical, spatial, chronological, sequential, problem-solutions, compare-and-contrast, cause-and-effect, or claim-evidence.	Full	ENG202A 8.1-8.9	

Strand AA: language

Strand B: Communication

• Develop main ideas based on audience prior knowledge and interests; use signposts and transitions to highlight important ideas and signal clear connections among ideas; develop an introduction that engages audience attention and previews presentation content; and develop a conclusion that summarizes main ideas, restates thesis, and leaves a strong impression on the audience.	Full	ENG202A 8.1-8.9
• Select from among a variety of presentational aids or performance props to enhance ideas and achieve greater audience response.	None	Teachers will supplement the curriculum to include opportunities for students to select from among a variety of presentational aids or performance props to enhance ideas and achieve greater audience response.
• Rehearse the presentation orally to gain fluency, build confidence, and develop poise. Use feedback from others to evaluate whether the presentation leaves a strong impression on the audience and whether the presentation appeals to the audience and achieves its purpose and goals.	Full	ENG202A 8.1-8.9
• Review and respond selectively to feedback to revise the presentation.	Full	ENG202A 8.1-8.9
Select precise vocabulary to appeal to an intended audience.		
• Employ non-standard or standard words & regionalisms as appropriate to the occasion.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11
• Employ a formal or informal tone, as appropriate to the occasion.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11
• Select precise vocabulary to develop credibility & support findings.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11
Follow spoken instructions to perform specific tasks, to answer questions, or to solve problems.		
N/A		
Summarize and paraphrase information presented orally by others.		
• Use a variety of response strategies to clarify, elaborate, and synthesize explicit and implicit meanings of messages such as integrating new learning with prior knowledge; asking questions to guide and clarify inferences, understanding, and interpretations; asking the speaker to extend or elaborate his or her meaning; paraphrasing meaning back to the speaker; and predicting ways in which speaker's content may be used.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 ENG202A 2.1-2.12 ENG202A 4.1-4.11 ENG202B 1.1-1.14 ENG202B 2.1-2.13 ENG202B 4.14.11
Identify the thesis of a speech and determine the essential elements that elaborate it.		

Standard	Level	Codes
Use a model of the communication process to analyze the components of a communication event and to critique the communication's effectiveness in achieving its intended goals.	None	Teachers will supplement the curriculum to include opportunities for students to use a model of the communication process to analyze the components of a communication event and to critique the communication's effectiveness in achieving its intended goals.

Analyze the ways in which the internal and contextual variables of a speech support or confound its meaning or purpose.

Standard	Level	Codes
• Analyze the internal variables that affect a communication event, such as the speaker's and listener's background knowledge, experiences, culture, opinions, values, beliefs, emotional states, and familiarity with the language, and critique the communication in light of intended goals.	Full	Embedded throughout, for example: ENG202A 1.1-1.12 / ENG202A 2.1-2.12 / ENG202A 4.1-4.11 / ENG202B 1.1-1.14 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11

Participate productively in self-directed work teams for a particular purpose (for example, to interpret literature, write or critique a proposal, solve a problem or make a

Standard	Level	Codes
N/A	N/A	N/A

Demonstrate proficiency in producing a variety of compositions.

Standard	Level	Codes
• Demonstrate mastery in the creation of expository and process essays that (1) introduce the situation, provide necessary background knowledge, and clearly state the thesis or purpose; (2) follow an organizational pattern particular to type; (3) offer evidence for the validity of the descriptions or proposed solutions including direct quotes, indirect quotes, and paraphrases from supporting material when necessary; and (4) make effective use of factual descriptions, concrete images, shifting perspectives and vantage points, and sensory detail.	Full	ENG202A 2.1-2.12 / ENG202A 10.1-10.2 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11 / ENG202B 7.1-7.13 / ENG202B 9.1-9.13

Plan writing by taking notes, writing informal outlines, and researching.

Standard	Level	Codes
• Use a variety of pre-writing strategies to guide the generation of content by activating prior knowledge such as brainstorming, ideamapping, free-writing, outlining, keeping a journal, asking journalist's questions—who, what, when, where, why, and how.	Full	ENG202A 2.1-2.12 / ENG202A 10.1-10.2 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11 / ENG202B 7.1-7.13 / ENG202B 9.1-9.13
• Select major ideas and develop them with relevant reasons, supporting examples and details.	Full	ENG202A 2.1-2.12 / ENG202A 10.1-10.2 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11 / ENG202B 7.1-7.13 / ENG202B 9.1-9.13

Select and use formal or informal literary or technical language appropriate for the purpose, audience, and context of the communication.

Standard	Level	Codes
• Use vivid descriptive language to create sensory images in the mind of the audience.	Full	ENG202A 2.1-2.12 / ENG202A 10.1-10.2 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11
• Use language to stimulate the emotions of the reader.	Full	ENG202A 2.1-2.12 / ENG202A 10.1-10.2 / ENG202B 2.1-2.13 / ENG202B 4.1-4.11

Organize ideas in writing with a thesis statement in the introduction, well-constructed paragraphs, a conclusion, and transition sentences that connect paragraphs into a

Standard	Level	Codes
• Organize and deliver an argument by (1) wording the claim clearly; (2) specifying convincing reasons to support the claim, and (3) adopting a stance and appropriate tone toward the issue.	Full	ENG202A 8.1-8.9 / ENG202A 10.3-10.4

Strand C: Writing

Skill	Level	Standards
• Select and use appropriate structures and organizational patterns such as problem-solution, compare-contrast, cause-effect to (1) select content; (2) represent ideas; (3) make connections; (4) generate new insights; and (5) develop an organizational structure.	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13
• Construct focused paragraphs with topic sentences leading toward a logical conclusion.	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13
• Provide supporting evidence from texts and other outside sources such as direct quotations, paraphrasing, and examples.	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13
• Draw a reasonable conclusion connected to the topic sentence and supporting evidence.	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13
Drawing on readers' comments on working drafts, revise documents to develop or support ideas more clearly, address potential objections, ensure effective transitions		
• Use a rubric, outline, or organizational map to check the development of the draft to see if paragraph focus is clear, transitions are apparent, and organizational patterns are clear and well-signaled.	Full	ENG202A 8.2 ENG202A 10.2 ENG202A 10.4
• Analyze whether claims and opinions are supported by evidence in the form of reasons, examples, or facts.	Full	ENG202A 8.1-8.9 ENG202A 10.3-10.4
• Analyze whether counter arguments are anticipated and addressed.	Full	ENG202A 8.1-8.9 ENG202A 10.3-10.4
• Delete material that disturbs the flow and development of a paragraph.	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13
• Analyze overall effectiveness of one's own writing.	Full	ENG202A 8.2 ENG202A 10.2 ENG202A 10.4
• Analyze and revise one's own work and the work of others for consistency of facts and ideas and development of argument or plot.	Full	ENG202A 8.2 ENG202A 10.2 ENG202A 10.4
Edit one's own work for grammar, style, and tone appropriate to audience, purpose and context.		
• Correct errors in spelling, grammatical conventions, format, and structure.	Full	ENG202A 8.2 ENG202A 10.2 ENG202A 10.4
• Evaluate for audience, purpose, and readability (word choice, vocabulary, sentence construction for example).	Full	ENG202A 2.1-2.12 ENG202A 10.1-10.2 ENG202B 2.1-2.13 ENG202B 4.1-4.11 ENG202B 7.1-7.13 ENG202B 9.1-9.13