

MATERIAL REVISION TO CHARTER OF BERT CORONA CHARTER SCHOOL

This Material Revision to the Charter of **Bert Corona Charter School** ("Material Revision") is made between Los Angeles Unified School District ("District"), a California public school district, and YPI Charter Schools, Inc. a California non-profit corporation, ("Parties") operating a California public Bert Corona Charter School known as **Bert Corona Charter School** ("Bert Corona Charter School").

This Material Revision is to be read in conjunction with and shall expressly amend the Renewal Charter of Bert Corona Charter School which is being recommended for approval by the Los Angeles Unified School District Board of Education on May 13, 2014. ("Charter"). The effective date of this Material Revision is the date of approval by the Board of Education on May 13, 2014 or on any such date the Board of Education approves the Material Revision.

A. WHEREAS, Parties agree to materially revise the Charter, and where required, its Bylaws, to reflect changes to the Charter as noted below.

B. WHEREAS, District and Bert Corona Charter School jointly agree to amend certain provisions of the Charter to reflect District policy and applicable state and federal laws, statutes, and regulations.

C. WHEREAS, if the renewal petition is approved, Bert Corona Charter School will be approved to serve grade levels 6 through 8 and with herein Material Revision amend the renewal petition to expand to grades levels 5 through 8.

D. WHEREAS, if the renewal petition is approved, Bert Corona Charter School will be approved to serve an enrollment capacity of 375 students and with herein Material Revision amend the renewal petition to increase its enrollment capacity to 500 students.

E. WHEREAS, **Bert Corona Charter School** is operated by YPI Charter Schools, Inc., a nonprofit California Public Benefit Corporation whose mission is to provide options in quality education for the communities served through the development and management of high quality Charter Schools; and

F. WHEREAS, on January 16, 2014, the Board of Trustees of Bert Corona Charter School approved the addition of grade 5; and

G. WHEREAS, the purpose of adding grade 5 for the benefit of looping, and

NOW, THEREFORE, the parties hereby acknowledge the adequacy of the consideration given for this Material Revision and, notwithstanding any provision to the contrary set forth in the Charter, the parties hereto expressly agree as follows:

1. Upon the approval of this Material Revision, Bert Corona Charter School shall follow the renewal petition and this material amendment.
2. Material Revision to Bert Corona Charter School:

- a. **Name:** The Bert Corona Charter School shall henceforth be named Bert Corona Charter. All references, in the Charter, to the name of the Bert Corona Charter School shall be deleted and replaced with "Bert Corona Charter".
- b. **Grades Served and Instructional Program:** All references in the Charter to the grades served at Bert Corona Charter School as 6-8 shall be deleted and replaced with "grades 5-8." Likewise, all references to the educational program and related components shall be materially revised to reflect grades 5-8.
- c. **Enrollment Capacity:** All references in the charter to the enrollment capacity of 375 students shall be replaced with the enrollment capacity of 500 students.

EDUCATIONAL PROGRAM

"A description of the educational program of the school, designed, among other things, to identify those whom the school is attempting to educate, what it means to be an 'educated person' in the 21st century, and how learning best occurs. The goals identified in that program shall include the objective of enabling pupils to become self-motivated, competent, and lifelong learners." Ed. Code § 47605 (b)(5)(A)

"A description, for the Bert Corona Charter School, of annual goals, for all pupils and for each subgroup of pupils identified pursuant to Section 52052, to be achieved in the state priorities, as described in subdivision (d) of Section 52060, that apply for the grade levels served, or the nature of the program operated, by the Bert Corona Charter School, and specific annual actions to achieve those goals. A charter petition may identify additional school priorities, the goals for the school priorities, and the specific annual actions to achieve those goals." Cal. Ed. Code § 47605(b)(5)(A)(ii).

General Information

- The contact person for Bert Corona Charter School is Dixon Singerland, Board President
- The contact address for Bert Corona Charter School is 634 S. Spring Street, 4th Floor, Los Angeles, CA 90014.
- The contact phone number for Bert Corona Charter School is (213) 688-2802.
- The proposed address or target community of Bert Corona Charter School is 9400 Remick Avenue, Pacoima, CA 91331 which is located in Los Angeles Unified School District ("LAUSD" or "District")
Board District 6 and Educational Service Center North.
- The term of this charter shall be from July 1, 2014 to June 30, 2019.
- The grade configuration of Bert Corona Charter School is 5th grade through 8th grade.
- The number of students in the first year will be 500 starting in 2015-2016.
- The grade level(s) of the students in the first year will be 5-8 starting in 2015-2016.
- The scheduled opening date of Bert Corona Charter School is Renewal.
- The admission requirements include: No admissions requirements.
- The enrollment capacity is 500. (Enrollment capacity is defined as all students who are enrolled in Bert Corona Charter School regardless of student residency).
- The type of instructional calendar (e.g. traditional/year-round, single track/multi-track, extended day/year) will be: Traditional,
- The bell schedule for Bert Corona Charter School will be: For Bert Corona Charter School 8:00-3:30
- If space is available, traveling students will have the option to attend.

Student Population To Be Served

Bert Corona Charter School serves grades 6 through 8th and looks to expanding into 5th grade during the 2015-2016 school year. Among the values that are core to the school's theory of action includes strong student-teacher relationships. One of the strategies that will be utilized to accomplish this goal is through the idea of "looping". Teachers move with their cohort of students from one grade-level to another. Currently, the school will be able to implement this theory of action in 7th and 8th grades. The later is not possible for the 6th grade teaching team as there is no place for them to loop.

Second, with the transition to Common Core State Standards adding grade 5 would allow the 6th grade teachers to team in planning interdisciplinary units of study both vertically and by grade level. In other words, teacher colleague-to-colleague relationships are as important in this theory of action. We believe that the relationships are critical at all levels of our program, teacher to teacher and student to student. As an example "private-practice" is effective in medicine but not in schools. Teaming is an important element of our program and adding the corresponding elementary grade will assist toward this aim of building strong teaching teams as it allows teachers to loop back and forth between 5th and 6th grades.

Third, many researchers and practitioners claim that 5th graders would benefit from inclusion in the middle school (Alley, 1992; Jenkins & McEwin, 2005), contending greater similarities between 5th and 6th graders and 7th and 8th graders (Alexander, Williams, Compton, Hines, Prescott, Kealy, 1968). Jenkins and McEwin (2005) concluded their study of programs and practices in three grade organizations (K-6, K-8, and 5-8), "Therefore, it is recommended that fifth graders be either placed at 5-8 middle schools or be provided with a more appropriate curriculum in K-5 or K-6 schools" (p.13).

Additionally, research conducted on Bert Corona Charter Schools throughout the state of California reveals findings that match the above stated research. Many middle schools that have a grade span of grades 5-8 outperform those who have a 6th-8th grade span. Other factors such as size and curriculum need to also be considered. Bert Corona will continue to operate as a small school even with adding grade 5. McEwin and others (1996) also concluded that in general 5-8 schools have higher implementation levels than other organizations of programs and practices that provide a better match between characteristics and needs of most fifth graders. We want to give our students the very best possible opportunities to have a successful middle school experience. Research further supports our rationale to add grade 5 to the Bert Corona Charter School.

Rationale for adding Grade 5 during the 2015-2016 school year. The school would need a year to obtain a zoning variance to increase the number of students on the campus. Additionally, the school would continue to use the current facility to add grade 5. Plans will move ahead to add additional bungalows or seek approval to use the additional unused classroom space held by the current landlord.

Student educational interests are targeted to areas of Service Learning/Project-based and technology integration (in all core subjects, including Mathematics and Science). Our Service Learning/Project-based and technology integration program will use a blended instructional model using teacher direct instruction, independent learning, and technology enhance learning. This learning model is used to support hands-on, real-world relevant integrated curriculum to support our students as they join our workforce and continue to prepare for the 21st century, thus preparing students for college and career-readiness.

Table 1.15 - Bert Corona Charter School Enrollment Roll-out Projections 2014-2019

GRADE	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
5		125	125	125	125
6	125	125	125	125	125
7	125	125	125	125	125
8	125	125	125	125	125
Total	375	500	500	500	500

STUDENT POPULATION

Bert Corona Charter School will increase grade levels to include 5th grade during the year 2 of our 5 year renewal, during the 2015-2016 school year.

The projected student population will reflect the demographics of the surrounding schools (see Demographic Information, below). According to the data, over 12% of the students enrolled at **Bert Corona Charter School** come from families at the federal poverty level. The majority of students (86%) are from low-income families that are eligible for free and reduced meals (86%). At **Bert Corona Charter School** all students will be granted equal access to the school resources no matter their economic or academic status. In addition, **Bert Corona Charter School** work and engages with the surrounding schools to ensure that students smoothly transition into and out of our program.

I. English Language Arts

The English Language Arts courses will prepare students for thoughtful study by conveying the importance of becoming active thinkers during reading and writing exercises. In the area of curriculum development and language arts instruction for grades 5-8, **Bert Corona Charter School** will:

- Develop a language arts curriculum that incorporates the grade-level curriculum content specified in the California Common Core State Standards See detailed summary below.
- Integrate reading, writing, speaking, and listening to form a greater understanding of history-social science, mathematics, and science.
- Develop important “habits of mind” in the form of evidence, connections and patterns, supposition, and meaning that will produce active and thoughtful writers, poets, researchers, and speakers.
- Teach students to read with ease, fluency, and enjoyment.
- Expose students to multicultural fiction, non-fiction, poetry, essays, and scripts.
- Teach students to write with clarity, expression, and purpose.
- Coach students to deliver and critique oral presentations effectively.
- Engage students to reflect upon ways literature and writing impact their lives through authentic writing and multicultural literature selections.
- Integrate appropriate technology and technological analysis into the study of English-Language Arts.

Fifth Grade Language Arts

<i>Reading: Word Analysis, Fluency, and Systematic Vocabulary Development</i>	Students will use their knowledge of word origins and word relationships, as well as historical and literary context clues, to determine the meaning of specialized vocabulary and to understand the precise meaning of grade-level appropriate words.
<i>Reading: Comprehension (Focus on Informational Materials)</i>	Students will read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose.
<i>Writing</i>	Students will write clear, coherent, and focused essays. The writing exhibits students' awareness of the audience and purpose. Essays contain formal introductions, supporting evidence, and conclusions. Students will progress through the stages of the writing process as needed.
<i>Literary Response and Analysis</i>	Students will read and respond to historically or culturally significant works of literature that reflect and enhance their studies of history and social science. They will clarify the ideas and connect them to other literary works.
<i>Written and Oral English Language Conventions</i>	Students will write and speak with a command of standard English conventions appropriate to the grade level.
<i>Listening and Speaking</i>	Students will deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They will learn to evaluate the content of oral communication.

II. Mathematics

Students will acquire a combination of mathematical hands-on skills and conceptual understanding. In the area of curriculum development and mathematic instruction for grades 5-8, **Bert Corona Charter School will:**

- Continue to implement and refine a mathematics curriculum that incorporates the grade-level curriculum
- Content specified in the *Mathematics California Common Core State Standards*. Integrate the core concepts of numbers, algebra, geometry, and statistics into a greater understanding of

- science, history-social science, and language arts.
- Develop important “habits of mind” in the form of evidence, connections and patterns, supposition, and meaning that will produce active and thoughtful mathematicians and statisticians.
- Teach students to understand and intuitively use mathematical reasoning: analyzing a problem; estimating a solution; expressing a clear solution and process; and checking validity of results.
- Engage students to reflect upon ways mathematical concepts and theories impact their lives through real-life examples and problems.
- Integrate appropriate technology and technological concepts into the study of mathematics.

Fifth Grade

As per the California Common Core State Standards In grade 5, instructional time should focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to two-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

- (1) Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)
- (2) Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.
- (3) Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real-world and mathematical problems

Students will learn about important events and documents shaping history as well as explore fundamental concepts of geography, economics, political science and sociology. In the area of curriculum development

and history-social sciences instruction for grades 5-8, Bert Corona Charter School will:

- Continue to implement and refine a history and social sciences curriculum that incorporates the grade-level curriculum content specified in the *History-Social Sciences Common Core State Standards*
- Integrate the core concepts of history and the social sciences into a greater understanding of science, mathematics, and language arts.
- Develop important “habits of mind” in the form of evidence, connections and patterns, supposition, and meaning that will produce active and thoughtful historians and social scientists.
- Present history through primary sources such as art, letters, music, maps, and personal accounts. Engage students in historiography enabling them to compare sources, identify bias, cite trends, and understand cause and effect, and debate issues of historical significance.
- Use geography as a medium for understanding historical trends and events, the movement of people and ideas, and the human relationship to its natural environment.
- Engage students to reflect upon ways history and the social sciences impact their lives through trends in government, economics, civics, and social change.
- Integrate appropriate technology and technological analysis into the study of history and the social sciences.

All grades will integrate the following skills into the study of social studies: Historical and social sciences analysis, chronological and spatial thinking as well as research, evidence, and point of view.

Fifth Grade

Grade 5 Students	
Craft and Structure	4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes. (See grade 5 Language standards 4–6 for additional expectations.) CA
	5. Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
	6. Describe how a narrator’s or speaker’s point of view influences how events are described.
Integration of Knowledge and	7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).
	8. (Not applicable to literature)

	9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.
Range of Reading Complexity	10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.

Grade 5 Students	
Key Ideas and Details	1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
	2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
	3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
Craft and Structure	4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a <i>grade 5 topic or subject area</i> . (See grade 5 Language standards 4–6 for additional expectations.) CA
	5. Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.
	6. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

IV. Science

Students will begin to understand how scientific processes operate and how those processes relate to one another. In the area of curriculum development and science instruction for grades 5-8, Bert Corona Charter School will:

- Continue to implement and refine a science curriculum that incorporates the grade-level curriculum content specified in the *Science California Common Core State Standards*
- Integrate the core concepts of earth science, life science, and physical science into a greater understanding of history-social science, mathematics, and language arts.
- Develop important “habits of mind” in the form of evidence, connections and patterns, supposition, and meaning that will produce active and thoughtful scientists.
- Teach students to understand and intuitively use the scientific method: identify a problem; pose relevant questions; state a hypothesis; conduct an experiment; understand the variables; analyze the data; and reach a conclusion or solution that serves as the hypothesis for the next round of inquiry.
- Provide opportunities for lab experiments, field trips, and service learning where students gather, manipulate and record data from their community to better understand the natural world around them.
- Engage students to reflect upon ways scientific concepts and theories impact their lives through their environmental and personal health.
- Integrate appropriate technology and technological concepts into the study of science.

Fifth Grade Science

Science and Engineering practices, Disciplinary core ideas is focused on matter flow in organisms. Cross Cutting concepts are in Energy and Matter.

5-LS1 From Molecules to Organisms: Structures and Processes		
Students who demonstrate understanding can:		
5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]		
The performance expectations above were developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> ▪ Support an argument with evidence, data, or a model. (5-LS1-1) 	LS1.C: Organization for Matter and Energy Flow in Organisms <ul style="list-style-type: none"> ▪ Plants acquire their material for growth chiefly from air and water. (5-LS1-1) 	Energy and Matter <ul style="list-style-type: none"> ▪ Matter is transported into, out of, and within systems. (5-LS1-1)
Connections to other DCIs in fifth grade: 5.PS1.A (5-LS1-1)		
Articulation of DCIs across grade-bands: K.LS1.C (5-LS1-1); 2.LS2.A (5-LS1-1); MS.LS1.C (5-LS1-1)		
Common Core State Standards Connections:		
ELA/Literacy –		
RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-LS1-1)		

RI.5.9	Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-LS1-1)
W.5.1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-LS1-1)
Mathematics –	
MP.2	Reason abstractly and quantitatively. (5-LS2-1)
MP.4	Model with mathematics. (5-LS2-1)
MP.5	Use appropriate tools strategically. (5-LS2-1)
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. (5-LS1-1)

-LS2 Ecosystems: Interactions, Energy, and Dynamics

5-LS2 Ecosystems: Interactions, Energy, and Dynamics

Students who demonstrate understanding can:

- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.** [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in 3–5 builds on K–2 models and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Develop a model to describe phenomena. (5-LS2-1) <p align="center">-----</p> <p align="center">Connections to Nature of Science</p> <p>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena</p> <ul style="list-style-type: none"> Science explanations describe the mechanisms for natural events. (5-LS2-1) 	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <ul style="list-style-type: none"> The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1) <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <ul style="list-style-type: none"> Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1) 	<p>Systems and System Models</p> <ul style="list-style-type: none"> A system can be described in terms of its components and their interactions. (5-LS2-1)

Connections to other DCIs in fifth grade: **5.ESS2.A** (5-LS2-1); **5.PS1.A** (5-LS2-1)

Articulation of DCIs across grade-bands: **2.PS1.A** (5-LS2-1); **2.LS4.D** (5-LS2-1); **4.ESS2.E** (5-LS2-1); **MS.LS1.C** (5-LS2-1); **MS.LS2.A** (5-LS2-1)

1); MS.LS2.B (5-LS2-1)	
<i>Common Core State Standards Connections:</i>	
<i>ELA/Literacy –</i>	
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-LS2-1)
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-LS2-1)
<i>Mathematics –</i>	
MP.2	Reason abstractly and quantitatively. (5-LS2-1)
MP.4	Model with mathematics. (5-LS2-1)

5-ESS1 Earth's Place in the Universe

5-ESS1 Earth's Place in the Universe	
Students who demonstrate understanding can:	
5-ESS1-1.	Support an argument that the apparent brightness of the sun and stars is due to their relative distances from Earth. [Clarification Statement: Absolute brightness of stars is the result of a variety of factors. Relative distance from Earth is one factor that affects apparent brightness and is the one selected to be addressed by the performance expectation.] [Assessment Boundary: Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, stage).]
5-ESS1-2.	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.] [Assessment Boundary: Assessment does not include causes of seasons.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Analyzing and Interpreting Data Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.</p> <ul style="list-style-type: none"> Represent data in graphical displays (bar graphs, pictographs and/or pie charts) to reveal patterns that indicate relationships. (5-ESS1-2) <p>Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s).</p> <ul style="list-style-type: none"> Support an argument with evidence, data, or a model. (5-ESS1-1) 	<p>ESS1.A: The Universe and its Stars</p> <ul style="list-style-type: none"> The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. (5-ESS1-1) <p>ESS1.B: Earth and the Solar System</p> <ul style="list-style-type: none"> The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year. (5-ESS1-2) 	<p>Patterns</p> <ul style="list-style-type: none"> Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena. (5-ESS1-2) <p>Scale, Proportion, and Quantity</p> <ul style="list-style-type: none"> Natural objects exist from the very small to the immensely large. (5-ESS1-1)

Connections to other DCIs in fifth grade: N/A

Articulation of DCIs across grade-bands: 1.ESS1.A (5-ESS1-2); 1.ESS1.B (5-ESS1-2); 3.PS2.A (5-ESS1-2); MS.ESS1.A (5-ESS1-1),(5-ESS1-2); MS.ESS1.B (5-ESS1-1),(5-ESS1-2);

<i>Common Core State Standards Connections:</i>	
RI.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-ESS1-1)
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-ESS1-1)
RI.5.8	Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s). (5-ESS1-1)
RI.5.9	Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-

W.5.1	ESS1-1) Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-ESS1-1)
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-ESS1-2)
<i>Mathematics –</i>	
MP.2	Reason abstractly and quantitatively. (5-ESS1-1),(5-ESS1-2)
MP.4	Model with mathematics. (5-ESS1-1),(5-ESS1-2)
5.NBT.A.1	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. (5-ESS1-1)
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (5-ESS1-2)

-ESS2 Earth's Systems

5-ESS2 Earth's Systems	
Students who demonstrate understanding can:	
5-ESS2-1.	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: The geosphere, hydrosphere (including ice), atmosphere, and biosphere are each a system and each system is a part of the whole Earth System. Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.] [Assessment Boundary: Assessment is limited to the interactions of two systems at a time.]
5-ESS2-2.	Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. [Assessment Boundary: Assessment is limited to oceans, lakes, rivers, glaciers, ground water, and polar ice caps, and does not include the atmosphere.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Develop a model using an example to describe a scientific principle. (5-ESS2-1) <p>Using Mathematics and Computational Thinking Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions.</p> <ul style="list-style-type: none"> Describe and graph quantities such as area and volume to address scientific questions. (5-ESS2-2) 	<p>ESS2.A: Earth Materials and Systems</p> <ul style="list-style-type: none"> Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (5-ESS2-1) <p>ESS2.C: The Roles of Water in Earth's Surface Processes</p> <ul style="list-style-type: none"> Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. (5-ESS2-2) 	<p>Scale, Proportion, and Quantity</p> <ul style="list-style-type: none"> Standard units are used to measure and describe physical quantities such as weight and volume. (5-ESS2-2) <p>Systems and System Models</p> <ul style="list-style-type: none"> A system can be described in terms of its components and their interactions. (5-ESS2-1)

Connections to other DCIs in fifth grade: N/A

Articulation of DCIs across grade-bands: 2.ESS2.A (5-ESS2-1); 2.ESS2.C (5-ESS2-2); 3.ESS2.D (5-ESS2-1); 4.ESS2.A (5-ESS2-1);

MS.ESS2.A (5-ESS2-1); MS.ESS2.C (5-ESS2-1),(5-ESS2-2); MS.ESS2.D (5-ESS2-1); MS.ESS3.A (5-ESS2-2)

Common Core State Standards Connections:

<i>ELA/Literacy –</i>	
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-ESS2-1),(5-ESS2-2)
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-ESS2-2)
SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-ESS2-1),(5-ESS2-2)
<i>Mathematics –</i>	
MP.2	Reason abstractly and quantitatively. (5-ESS2-1),(5-ESS2-2)
MP.4	Model with mathematics. (5-ESS2-1),(5-ESS2-2)
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. (5-ESS2-1)

5-ESS3 Earth and Human Activity

5-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.</p> <ul style="list-style-type: none"> Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem. (5-ESS3-1) 	<p>ESS3.C: Human Impacts on Earth Systems</p> <ul style="list-style-type: none"> Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1) 	<p>Systems and System Models</p> <ul style="list-style-type: none"> A system can be described in terms of its components and their interactions. (5-ESS3-1) <p style="text-align: center;">-----</p> <p style="text-align: center;">Connections to Nature of Science</p> <p>Science Addresses Questions About the Natural and Material World.</p> <ul style="list-style-type: none"> Science findings are limited to questions that can be answered with empirical evidence. (5-ESS3-1)

Connections to other DCIs in fifth grade: N/A

Articulation of DCIs across grade-bands: **MS.ESS3.A** (5-ESS3-1); **MS.ESS3.C** (5-ESS3-1); **MS.ESS3.D** (5-ESS3-1)

Common Core State Standards Connections:

ELA/Literacy –

RI.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-ESS3-1)
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.(5-ESS3-1)
RI.5.9	Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-ESS3-1)
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-ESS3-1)
W.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (5-ESS3-1)
<i>Mathematics –</i>	
MP.2	Reason abstractly and quantitatively. (5-ESS3-1)
MP.4	Model with mathematics. (5-ESS3-1)

5-PS1 Matter and Its Interactions

5-PS1 Matter and Its Interactions

Students who demonstrate understanding can:

5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples of evidence could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] [Assessment Boundary: Assessment does not include the atomic-scale mechanism of evaporation and condensation or defining the unseen particles.]

5-PS1-2.	Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. [Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that forms new substances.] [Assessment Boundary: Assessment does not include distinguishing mass and weight.]
5-PS1-3.	Make observations and measurements to identify materials based on their properties. [Clarification Statement: Examples of materials to be identified could include baking soda and other powders, metals, minerals, and liquids. Examples of properties could include color, hardness, reflectivity, electrical conductivity, thermal conductivity, response to magnetic forces, and solubility; density is not intended as an identifiable property.] [Assessment Boundary: Assessment does not include density or distinguishing mass and weight.]
5-PS1-4.	Conduct an investigation to determine whether the mixing of two or more substances results in new substances. [Clarification Statement: Examples of combinations that do not produce new substances could include sand and water. Examples of combinations that do produce new substances could include baking soda and vinegar or milk and vinegar.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Develop a model to describe phenomena. (5-PS1-1) <p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> Conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (5-PS1-4) Make observations and measurements to produce data to serve as the basis for evidence for an explanation of a phenomenon. (5-PS1-3) <p>Using Mathematics and Computational Thinking Mathematical and computational thinking in 3–5 builds on K–2 experiences and progresses to extending quantitative measurements to a variety of physical properties and using computation and mathematics to analyze data and compare alternative design solutions.</p> <ul style="list-style-type: none"> Measure and graph quantities such as weight to address scientific and engineering questions and problems. (5-PS1-2) 	<p>PS1.A: Structure and Properties of Matter</p> <ul style="list-style-type: none"> Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model shows that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon; the effects of air on larger particles or objects. (5-PS1-1) The amount (weight) of matter is conserved when it changes form, even in transitions in which it seems to vanish. (5-PS1-2) Measurements of a variety of properties can be used to identify materials. (Boundary: At this grade level, mass and weight are not distinguished, and no attempt is made to define the unseen particles or explain the atomic-scale mechanism of evaporation and condensation.) (5-PS1-3) <p>PS1.B: Chemical Reactions</p> <ul style="list-style-type: none"> When two or more different substances are mixed, a new substance with different properties may be formed. (5-PS1-4) No matter what reaction or change in properties occurs, the total weight of the substances does not change. (Boundary: Mass and weight are not distinguished at 	<p>Cause and Effect</p> <ul style="list-style-type: none"> Cause and effect relationships are routinely identified, tested, and used to explain change. (5-PS1-4) <p>Scale, Proportion, and Quantity</p> <ul style="list-style-type: none"> Natural objects exist from the very small to the immensely large. (5-PS1-1) Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume. (5-PS1-2),(5-PS1-3) <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">Connections to Nature of Science</p> <p>Scientific Knowledge Assumes an Order and Consistency in Natural Systems</p> <ul style="list-style-type: none"> Science assumes consistent patterns in natural systems. (5-PS1-2)

	this grade level.) (5-PS1-2)	
<i>Connections to other DCIs in fifth grade: N/A</i>		
<i>Articulation of DCIs across grade-bands: 2.PS1.A (5-PS1-1),(5-PS1-2),(5-PS1-3); 2.PS1.B (5-PS1-2),(5-PS1-4); MS.PS1.A (5-PS1-1),(5-PS1-2),(5-PS1-3),(5-PS1-4); MS.PS1.B (5-PS1-2),(5-PS1-4)</i>		
<i>Common Core State Standards Connections:</i>		
<i>ELA/Literacy –</i>		
RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS1-1)	
W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
W.5.8	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
W.5.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (5-PS1-2),(5-PS1-3),(5-PS1-4)	
<i>Mathematics –</i>		
MP.2	Reason abstractly and quantitatively. (5-PS1-1),(5-PS1-2),(5-PS1-3)	
MP.4	Model with mathematics. (5-PS1-1),(5-PS1-2),(5-PS1-3)	
MP.5	Use appropriate tools strategically. (PS1-2),(PS1-3)	
5.NBT.A.1	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. (5-PS1-1)	
5.NF.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (5-PS1-1)	
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real-world problems. (5-PS1-2)	
5.MD.C.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (5-PS1-1)	
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units. (5-PS1-1)	

5-PS2 Motion and Stability: Forces and Interactions

5-PS2 Motion and Stability: Forces and Interactions	
Students who demonstrate understanding can:	
5-PS2-1	Support an argument that the gravitational force exerted by Earth on objects is directed down. [Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.] [Assessment Boundary: Assessment does not include mathematical representation of gravitational force.]
The performance expectations above were developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :	

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence Engaging in argument from evidence in 3–5 builds on K–2 experiences and progresses to critiquing the scientific explanations or solutions proposed by peers by citing relevant evidence about the natural and designed world(s). <ul style="list-style-type: none"> Support an argument with evidence, data, or a model. (5-PS2-1) 	PS2.B: Types of Interactions <ul style="list-style-type: none"> The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1) 	Cause and Effect <ul style="list-style-type: none"> Cause and effect relationships are routinely identified and used to explain change. (5-PS2-1)

<i>Connections to other DCIs in fifth grade: N/A</i>		
<i>Articulation of DCIs across grade-bands: 3.PS2.A (5-PS2-1); 3.PS2.B (5-PS2-1); MS.PS2.B (5-PS2-1); MS.ESS1.B (5-PS2-1); MS.ESS2.C (5-PS2-1)</i>		
<i>Common Core State Standards Connections:</i>		
<i>ELA/Literacy –</i>		
RI.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (5-PS2-1)	
RI.5.9	Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (5-PS2-1)	

W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (5-PS2-1)

5-PS3 Energy

5-PS3 Energy

Students who demonstrate understanding can:

5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> Use models to describe phenomena. (5-PS3-1) 	<p>PS3.D: Energy in Chemical Processes and Everyday Life</p> <ul style="list-style-type: none"> The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1) <p>LS1.C: Organization for Matter and Energy Flow in Organisms</p> <ul style="list-style-type: none"> Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1) 	<p>Energy and Matter</p> <ul style="list-style-type: none"> Energy can be transferred in various ways and between objects. (5-PS3-1)

Connections to other DCIs in fifth grade: N/A

Articulation of DCIs across grade-bands: **K.LS1.C** (5-PS3-1); **2.LS2.A** (5-PS3-1); **4.PS3.A** (5-PS3-1); **4.PS3.B** (5-PS3-1); **4.PS3.D** (5-PS3-1); **MS.PS3.D** (5-PS3-1); **MS.PS4.B** (5-PS3-1); **MS.LS1.C** (5-PS3-1); **MS.LS2.B** (5-PS3-1)

Common Core State Standards Connections:

ELA/Literacy –

RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS3-1)

SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-PS3-1)

3-5-ETS1 Engineering Design

3-5-ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Asking Questions and Defining Problems Asking questions and defining problems in 3–5 builds on grades K–2 experiences and progresses to specifying qualitative relationships.</p> <ul style="list-style-type: none"> Define a simple design problem that can be solved through the development of an object, tool, process, or system and 	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <ul style="list-style-type: none"> Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for 	<p>Influence of Engineering, Technology, and Science on Society and the Natural World</p> <ul style="list-style-type: none"> People's needs and wants change over time, as do their demands for new and improved technologies. (3-5-ETS1-1) Engineers improve existing technologies

<p>includes several criteria for success and constraints on materials, time, or cost. (3-5-ETS1-1)</p> <p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide evidence to support explanations or design solutions.</p> <ul style="list-style-type: none"> Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. (3-5-ETS1-3) <p>Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in 3–5 builds on K–2 experiences and progresses to the use of evidence in constructing explanations that specify variables that describe and predict phenomena and in designing multiple solutions to design problems.</p> <ul style="list-style-type: none"> Generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design problem. (3-5-ETS1-2) 	<p>solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (3-5-ETS1-1)</p> <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2) At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2) Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3) <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. (3-5-ETS1-3) 	<p>or develop new ones to increase their benefits, decrease known risks, and meet societal demands. (3-5-ETS-2)</p>
<p><i>Connections to other DCIs in this grade-band:</i> <i>Connections to 3-5-ETS1.A: Defining and Delimiting Engineering Problems include:</i> Fourth Grade: 4-PS3-4 <i>Connections to 3-5-ETS1.B: Designing Solutions to Engineering Problems include:</i> Fourth Grade: 4-ESS3-2 <i>Connections to 3-5-ETS1.C: Optimizing the Design Solution include:</i> Fourth Grade: 4-PS4-3</p>		
<p><i>Articulation of DCIs across grade-bands:</i> K-2.ETS1.A (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); K-2.ETS1.B (3-5-ETS1-2); K-2.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.A (3-5-ETS1-1); MS.ETS1.B (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3); MS.ETS1.C (3-5-ETS1-2),(3-5-ETS1-3)</p>		
<p><i>Common Core State Standards Connections:</i></p> <p><i>ELA/Literacy –</i></p> <p>RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. (3-5-ETS-2)</p> <p>RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (3-5-ETS2)</p> <p>RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably. (3-5-ETS-2)</p> <p>W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p>W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p>W.5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. (3-5-ETS1-1),(3-5-ETS1-3)</p> <p><i>Mathematics –</i></p> <p>MP.2 Reason abstractly and quantitatively. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)</p> <p>MP.4 Model with mathematics. (3-5-ETS1-1),(3-5-ETS1-2),(3-5-ETS1-3)</p>		

VII. Physical Education and Health

In the area of curriculum development and physical education and health for grades 5-8, The primary goal of the physical education program is to teach its students a life-long pursuit and understanding of the importance of healthy living. Research demonstrates that the majority of students spend only 8% of their physical education class time in actual activity and are, instead, generally waiting or observing (Gutfeld, G. and Sangriorgio, M. P.E or not P.E. Prevention. July 1993, Vol 45, Issue 7, p 18). The **Bert Corona Charter School** believes that regular activity during the school day is strongly associated with higher concentration levels, as well as more directed, composed behavior (www.livestrong.com/article/529108-what-are-the-benefits-of-physical-education-in-school/#ixzz207tQ5hOI).

Based on this research and our core values, **Bert Corona Charter School** will allocate at least 140 minutes of physical and health education with additional opportunities for physical activities engagement in the extended day program.

Bert Corona Charter School will:

- Continue to implement and refine a physical education program using the guidelines specified in *Challenge Standards for Student Success: Physical Education* (California Department of Education, 1998).
- Continue to implement and refine a health curriculum that incorporates the grade-level curriculum content specified in the *Challenge Standards for Student Success: Health Education* (California Department of Education, 1998).
- Approach physical fitness with the goals of personal challenge, teamwork, sportsmanship, and fun.
- Promote excellent physical, social, and emotional health among students through stress management, sex education, nutrition, gang prevention, and conflict resolution.
- Engage students to reflect upon ways physical education and health impact their lives through personal wellbeing.

INSTRUCTIONAL MATERIALS

Instructional materials at **Bert Corona Charter School** were chosen by teachers and the site admin and coordinated within the teacher teams. Textbooks are integrated as appropriate in relation to an analysis of standards via the Strategic Design process. Specifically, teachers use the Appendices and recommended support materials to design units, and then integrate textbook resources as appropriate. The implementation of the CA CCSS, NEXT Generation and other state content standards will be used to support student academic achievement. The adoption of materials, textbooks and resources needed to fully implement each core area will be closely integrated with state identified and approved adoptions.fo textbooks, resources and supplemental materials.

Student texts and instructional materials are identified based on the following criteria:

- Alignment with Common Core State Standards
- Research-base and evaluation data showing success with similar student populations
- Accessibility for students
- Alignment with school's mission
- Ease of use for teachers

The school continuously evaluates, updates, and revises textbook adoptions based on student needs and research about the most effective resources. The following is a current list of textbooks in use at the school:

Level	Subject	Title	Publisher	Use
5	Language Arts	To be selected and aligned to Common Core State Standards	To be selected and aligned to Common Core State Standards	In Class Home
5	Math	To be selected and aligned to Common Core State Standards	To be selected and aligned to Common Core State Standards	In Class Home
5	Science	To be selected and aligned to Common Core State Standards	To be selected and aligned to Common Core State Standards	In Class Home
5	Social Studies	To be selected and aligned to Common Core State Standards	To be selected and aligned to Common Core State Standards	In Class Home

Academic Programs

Level	Subject	Title	Publisher	Use
5,6,7,8	Math English Science Social Studies	Success For All-Reading Edge Assessment Study Island Achieve3000 (Teen Biz)	Success For All Achieve3000	In Class After School Home
5,6,7,8	Math	ALEKS	ALEKS	In Class
5,6,7,8	Math	Adaptive Curriculum		In Class After School

Teachers are encouraged to use original and primary source material as much as possible. Instructional materials will include novels, photographs, essays, speeches, video, textbooks, and manipulatives. Teachers and students will have access to the Internet, educational software, word processing, data processing, and digital graphics in each classroom. Instructional material will be relevant, thought provoking, and interactive.

SCHEDULE

Bert Corona Charter School students will participate in cohorts throughout their daily schedule. Each student will take at minimum the following course scope and sequence designed specifically to meet the grade level standards.

Bert Corona Course Sequence				
Subject	5 th grade	6 th grade	7 th Grade	8 th Grade
English Language Arts	English Language Arts	English Language Arts	English Language Arts	English Language Arts
History	History 5	History 6 Ancient History	History 7 World History	History 8 US History
Mathematics	Math 5	Math 6	Math 7	Math 8
Science	Science 5	Science 6 Earth Science	Science 7 Biological Science	Science 8 Physical Science
Physical Education	PE	PE	PE	PE
Advisory	Advisory 5	Advisory 6	Advisory 7	Advisory 8
SFA/Reading elective	SFA/Reading elective	SFA/Reading elective	SFA/Reading elective	SFA/Reading elective
Communications/ELD	Communications/ELD	Communications/ELD	Communications/ELD	Communications/ELD

Bert Corona Charter School uses a schedule that gives teachers ample time to develop student understanding. Core subject classes (Language Arts, Math, Social Studies, and Science) are given 50 minutes or more for all grades. Before school and after-school learning opportunities equal approximately 3 hours each day.

Before- and after-school time will continue to be used for intervention for struggling students, enrichment, extra- curricular activities, and community services.

Advisory Period - Students meet with faculty or staff in small groups (approximately 25:1 ratio) throughout the course of the school year. In the beginning of each year, the advisory groups focuses on academic reflection and development of digital portfolios. They also build a sense of community among students and adults and establish trusting relationships. As the year progresses, the advisory provides a forum for goal setting, problem-solving, and launching service learning activities. At the middle and end of each year, the advisory provides an avenue for students to reflect on their efforts in school, their behavior, and their academic accomplishments.

Bert Corona Charter School have block scheduling for the school week. Periods 1,2,3 meet on Mondays and Wednesdays. Periods 4,5,6 meet on Tuesdays and Thursdays. All periods will meet on Fridays. Students will participate in PE activities on Mondays, Wednesdays, and Thursdays, and have an Advisory/Study Hall on Wednesday/Thursday. Each day begins with a 0 period which begins at 7:55 and ends at 8:45 for the SFA Reading Elective Monday-Friday.

Grades	Grades Offered	Number of Regular Days	Number of Instr. Minutes Per Regular Day	Number of Early Dismissal Days	Number of Instr. Minutes Per Early Dismissal Day	Number of Minimum Days	Number of Instr. Minutes Per Minimum Day	Number of [Other] Days	Number of Instr. Minutes Per [Other] Day	Total Number of Instr. Days	Minutes Req'd Per State Law	Total Number of Instr. Minutes	Number of Instr. Minutes Above/ Below State Req't.
TK/K	No	NA	NA	NA	NA	NA	NA	NA	NA	0	36000	0	-36000
1	No	NA	NA	NA	NA	NA	NA	NA	NA	0	50400	0	-50400
2	No	NA	NA	NA	NA	NA	NA	NA	NA	0	50400	0	-50400
3	No	NA	NA	NA	NA	NA	NA	NA	NA	0	50400	0	-50400
4	No	NA	NA	NA	NA	NA	NA	NA	NA	0	54000	0	-54000
5	Yes	136	393	34	331	10	229	0	0	180	54000	66992	12992
6	Yes	136	393	34	331	10	229	0	0	180	54000	66992	12992
7	Yes	136	393	34	331	10	229	0	0	180	54000	66992	12992
8	Yes	136	393	34	331	10	228	0	0	180	54000	66982	12982
9	No	NA	NA	NA	NA	NA	NA	NA	NA	0	64800	0	-64800
10	No	NA	NA	NA	NA	NA	NA	NA	NA	0	64800	0	-64800
11	No	NA	NA	NA	NA	NA	NA	NA	NA	0	64800	0	-64800
12	No	NA	NA	NA	NA	NA	NA	NA	NA	0	64800	0	-64800

A TYPICAL DAY

A typical day at **Bert Corona Charter School** is designed for deep exploration of subject matter content and to provide ample opportunities for students to socialize and engage in enriching extra-curricular activities. The schedule is set up to ensure equitable access for all students to a curriculum that meets their needs and challenges them academically. Students generally arrive at school between 7:30 a.m. and 8:00 a.m. so that they can have breakfast and prepare for the day. Every day begins with all students attending an advisory class where they eat breakfast and check in with their advising teacher. Then, they head to a reading elective course during period 1; the program is entitled Success For All: The Reading Edge. This program provides prevention, intervention, and gifted (honors) reading instruction. Students then have a recess break and transition into their core content courses and/or other electives (Technology and Communications).

Fifth, sixth and seventh grade students have four 75 minute blocks for their core curriculum. These longer blocks allow for deeper exploration of subject matter and thematic integration to ensure mastery of content. Furthermore, each sixth and seventh grade student only sees 3 or 4 teachers in the course of the day, and make only 4-5 transitions. This supports a small learning community and minimizes opportunities for problems to arise. Eighth grade students have seven, 50 minute blocks so that they have more opportunity for electives and PE each day. For ELA and History, students visit their teachers every-other day for 100 minutes instead of daily for 50 minutes. While this equates to the same number of instructional minutes, the longer blocks for instruction allow teachers to more adequately meet the needs of all learners and the requirements of the rigorous ELA standards outline in the College and Career Readiness Standards. The day ends at 3:36 p.m. except on Mondays, when the instructional day ends at 2:20 p.m., and teachers stay on campus until 4:30 p.m. for professional development. Every day, students participate in intervention workshops, enrichment, extra-curricular activities, and community service after school between 3:36 p.m. (2:20 p.m. on Mondays) and 6:00 p.m.

Student's lunch is served hot every day. Sixth grade students have a separate lunch time in order to foster a safe and pro-social environment during this year of transition from elementary to middle school.

With funding from the Carol M. White Physical Education (PE) program, Bert Corona Charter School teachers and staff created a physical education program that is beneficial to students on multiple levels. PE teachers have been trained in, and are implementing the Sports, Play, and Active Recreation for Kids (SPARK) curriculum. The program includes sports, dance, and general fitness, and is aligned to National PE standards. Students also engage in team building, leadership and communication through the Fulcrum program.

All **Bert Corona Charter School** students participate in advisory meetings, or class council meetings, where topics such as conflict resolution, college awareness, and service-learning projects are discussed. The advisory curriculum is taught weekly during a longer advisory block on Mondays. Then, teachers have a quick check-in with their advisory students each subsequent day of the week.

Summative Assessment Performance Targets

Below is a chart “consistent with the way information is reported on a school accountability report card”, EC § 47605(b)(5)(C)), identifying and describing specific targets that align with the eight (8) state priorities identified in California Education Code § 52060(d).

As the school becomes more familiar with its target student population, the school’s goals, actions and targets associated to the Eight State Priorities may be revised depending on the local control and accountability plan which will be adopted.

To the extent that the targets set forth in the charter do not meet state requirements, the state targets shall supersede the state standardized assessments and goals in the chart.

MEASURES AND SKILL DEVELOPMENT

Bert Corona Charter School will evaluate academic; as well as, critical-thinking, problem-solving, and interpersonal skills. The following student outcomes are more fully described in Element 1 under “Academic Core Curriculum.” In addition, the assessment methods by which the outcomes will be evaluated are outlined in Element 3 under “Methods to Measure Student Outcomes”

Student Outcomes Align with State Common Core State Standards:

Both classroom assessments and standardized test scores help to measure subject specific outcomes related to the Common Core State Standards. The chart below demonstrates what each student will master in each core subject.

Academic Rigor and the California Common Core State Standards Goals

Bert Corona expects its graduates to develop the following abilities:

Table 2.2 BERT CORONA CHARTER SCHOOL Common Core State Standards Goals

	strand in Reading, Critical Thinking		units on the software are completed	
Publisher Assessments	Common Core State Standards/Language Arts	5-8	Teacher choice, Approximately 4 times a year	80 %
Various Software Monitoring Voyager/ Vocabulary Journeys	Common Core State Standards/Language Arts Standards	5-8	Throughout the year as episodes or units on the software are completed	80%
Internally-Created Assessment (Teacher Formative Assessments)	Measure standards mastery	5-8	Daily or Weekly	70%
ELA Smarter Balance	Mastery of Content Standards	5-8	Annual	70%

Portfolios-Student Reflections	Learning Experiences are captured	5-8	On-going	80%
Presentation of Learning	Service Learning Project Mastery	8	Annual	70%
Mathematics				
Mathematics Skills 4Sight Mathematics	CST Equivalent	5-7	Quarterly (4 times a year)	70%
Study Island Mathematics Skills	CST Equivalent	5-8	Quarterly (4 times a year)	70 %
Voyager Mathematics	Measure standards mastery	5-8	Ongoing	70%
Smarter Balance Math	Math Numeracy	5-8	Every Six weeks out of our learning lab (six times a year)	Grade Level Status
Various Software Monitoring Study Island Math, ALEKS, Kahn Academy	Mathematics Standards	5-8	Throughout the year as episodes or units on the software are completed	80%
Internally-Created Assessment	Measure standards mastery	5-8	Daily or Weekly	70%
Published Designed Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%
Internally-Created Assessment	Measure standards mastery	5-8	Daily or Weekly	70%
Published Designed Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%
Internally-Created Assessment	Measure standards mastery	5-8	Daily or Weekly	70%
Published Designed Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%
English Language Learners				
ELD Common Core State Standards	Common Core State Standards			
Various Software Monitoring Voyager/ Vocabulary Journeys	Measures English Language Development	5-8	Three Times a year	Level 4 or RFEP Equivalency
Internally-Created Assessment	Measure standards mastery	5-8	Daily or Weekly	70%
Publisher Designed Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%
Science				
Science Skills	Common Core State Standards NEXT Generation	5-8	Quarterly (4 times a year)	70%
Study Island Science Skills	Mastery of Content	5-8	<ul style="list-style-type: none"> • Every two weeks using computer assisted learning • Throughout the year as episodes or units on the software are completed 	80%

Publisher Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%
History/Social Studies				
Social Studies Skills	Common Core State Standards NEXT Generation	5-8	Quarterly (4 times a year)	70%
Study Island Science Skills	Mastery of Content	5-8	<ul style="list-style-type: none"> • Every two weeks using computer assisted learning • Throughout the year as episodes or units on the software are completed 	70%
Publisher Assessments	Measure standards mastery	5-8	Daily, weekly, and each quarter	70%

IN WITNESS WHEREOF, the parties hereto have caused this Material Revision to be duly executed and delivered in their respective names by their authorized representatives as of the date set forth below.

DATED: May 13, 2014

BERT CORONA CHARTER SCHOOL
("Charter School")

By: _____

Title: _____

Authorized Representative of Bert Corona Charter School.

DATED: May 13, 2014

LOS ANGELES UNIFIED SCHOOL DISTRICT
("District")

By: _____

Title: _____

Authorized Representative of Los Angeles Unified School District.