



Summer School Plan 2023

Larimore Elementary
Kimberly Burroughs Neeley, Principal

Program Dates	June 12, 2023-June 30, 2023
Times	8:50-2:00 pm
Professional Development	<p>Lego Education Kits and professional development Summer School Program PD Mathical-Webinar Building Futures PD Clerical attendance PD</p>
Lunch	Breakfast will be provided. Early snacks and lunch will be provided daily.
Course Offerings	<p>PLTW</p> <p>STEAM with Lego Education Grades K-5 Storybook STEM Grades K-2</p> <ul style="list-style-type: none"> Students will help their favorite storybook characters solve some of their problems through engineering design. The district provides materials. <p>Building Futures Grades K-5</p> <ul style="list-style-type: none"> Already board approved an MOU issued <p><u>Stop Lego Animation</u></p> <ul style="list-style-type: none"> In Stop Motion Animation, students will learn how to make stop motion films like <i>The Lego Movie</i> and <i>The Nightmare Before Christmas</i>. We will come up with story ideas and write scripts for our movies. We will then use Legos to create films using stop-motion animation technology. <p><u>Mathical</u></p> <ul style="list-style-type: none"> Cross-curricular stories that teach reading and math concepts

	<p>2 Title one paid Reading Interventionist</p> <p>2 Title on paid Math Interventionist</p> <p>STEAM Farm Visits to CAASTL (walking field trips)</p> <p>Library grades K-5</p> <p>Math intervention grades K-5</p> <p>Reading intervention support grades K-5</p>
Budget	<p>Lego Stop Motion Animation Kits \$450</p> <p>Building Futures \$15,000</p> <p>Lunch-District provided</p> <p>Snacks \$ \$800.00</p> <p>Student Supplies \$1700.00</p> <p>District Created Courses-Supplies provided by district</p>

Stop Motion Animation

Course Description
<p>In Stop Motion Animation; students will learn how to make stop motion films like <i>The Lego Movie</i> and <i>The Nightmare Before Christmas</i>. We will come up with story ideas and write scripts for our movies. We will then use Legos to create films using stop-motion animation technology.</p>
Materials and Cost
<ul style="list-style-type: none"> ● 1 iPad for every two students ● Legos - <ul style="list-style-type: none"> ○ https://www.lego.com/en-us/product/green-baseplate-11023 (1 for every 2 students) ○ https://www.lego.com/en-us/product/lego-medium-creative-brick-box-10696 (3) ○ https://www.lego.com/en-us/product/lego-minifigures-series-24-6-pack-66733 ● Stop Motion Studio Pro - iPad application
Standards
<ul style="list-style-type: none"> ● 3.R.2.C ● 3.R.3.A ● 3.R.4.A ● 3.W.1.A
PD

N/A

STEAM with Lego Education

LEGO Education is based on a hands-on learning approach that actively involves students in their own learning process. LEGO students use LEGO bricks and digital tools to solve problems creatively and to excel at working with others and thinking critically. We have created this course to teach Math, Science, and ELA standards identified by HSD to address learning loss in a fun and engaging way. Growth and progress monitoring of the essential standards in Reading and Math will be tracked through assessments. Additionally, reading and math interventions will identify and address individualized instructional needs.

Grade	ELA Standards	Math Standards	Description	Materials
K-1	<p>Use technology such as simple gears and wheels in appropriate ways</p> <p>Ask and answer questions about science and technology-related concepts.</p> <p>Experiment/test "what would happen if" questions.</p> <p>Observe and describe what happens.</p> <p>Role-play using figures to make predictions and inferences.</p> <p>Record data using</p>	<p>Sort and categorize objects</p> <p>K.DS.A.1 Classify objects into given categories, count the number of objects in each category</p> <p>Identify numbers, and count quantities</p> <p>K.NS.A.4 Read and write numerals and represent a number of objects 0-20</p> <p>K.NS.A.1 Count to 100 by ones and tens</p> <p>1.RA.A.1 Use addition and subtraction within 20 to solve problems.</p> <p>1.NS.A.1 Count to 120 starting at any number.</p> <p>1.NBT.A.3 Compare two digit numbers using >, <, or =.</p> <p>Pretend that the figures perform art, such as dance, music, or drama.</p> <p>Create two- and</p>	<p>We will address unfinished learning in a fun and innovative way through Lego Education.</p> <p>STEAM Park builds on every child's natural curiosity and desire to create, explore, and investigate the world of early science, technology, engineering, art, and math (STEAM) through creative play. The possibilities are endless, as you work with them to construct a STEAM Park full of dynamic moving rides, fun games, and scenes using the special selection of LEGO® DUPLO® bricks. With every trip to STEAM Park, children grow their understanding of gears, motion, measurement, and solving problems in a fun and engaging way.</p> <p>Students will construct a STEAM Park full of moving rides, games and scenes using the LEGO DUPLO bricks.</p> <p>Key learning areas:</p>	<p>STEAM Park by LEGO® Education \$1,000 for 5 kits of 6 (30 kids)</p> <p>Link for ordering: https://education.lego.com/en-us/products/steam-park-by-lego-education/45024#steam-park</p> <p>Link to teachers guide: https://education.lego.com/en-us/product-resources/steam-park/teacher-resources/teacher-guide-pdfs</p>

	<p>graphs</p> <p>Respond to the art of others</p> <p>Identify cause and effect relationships</p>	<p>three-dimensional art that expresses their ideas K.GM.C.9: Draw or model simple two-dimensional shapes.</p>	<ul style="list-style-type: none"> ● Cause and effect ● Spatial awareness ● Observing and describing ● Problem-solving ● Role play and collaboration <p>Throughout the lessons, students will explore the world around them as they use functional elements to build interactive models. Using the Teacher Guide, teachers can teach lessons in which students learn to think like scientists as they build models, and experiment and test ideas to answer questions.</p> <p>*11 Lessons-would have to be modified and adapted to meet K and 1 standards</p>	
2-5	<p>Speaking and Listening</p> <p>Motion and Stability-Force and Motion</p> <p>Engineer Design Process</p>	<p>Measurement & Data » Solve problems involving measurement and estimation.</p>	<p>To determine how to address unfinished learning, you'll need to prioritize the most important content knowledge and skills from previous years that students need to be successful in their current grade. This unit will develop students' understanding of forces and motion as they engage in and conduct investigations about the effects of balanced and unbalanced forces. They'll investigate the patterns in an object's motion, developing and sharpening their ability to predict future motion. Along the way, they'll develop their collaborative conversation skills as they effectively engage in a range of discussions.</p>	<p>Winning with Science Brick Motion Lego Kits</p> <p>https://education.lego.com/en-us/lessons/bricq-motion-winning-with-science</p>

Building Futures-project-based learning

Through this partnership with Washington University, Project-Based Learning (PBL) is used as a teaching method in which students learn by actively engaging in real-world and personally meaningful projects. Projects will reinforce the relevance and rigor of standards identified by HSD as essential to address gaps in learning.

Grade	Math Standards	Description	Materials
K-5	<p>.K.place and justify the solution.</p> <p>GM.C.7 Describe the relative positions of objects in space.</p> <p>K.GM.C.7 Describe the relative positions of objects in space.</p> <p>K.NS.A.1 Count to 100 by ones and tens.</p> <p>1.RA.A.1 Use addition and subtraction within 20 to solve problems.</p> <p>1.RA.A.4 Determine the whole unknown number in an addition or subtraction equation relating three whole numbers.</p> <p>1.NS.A.2 Read and write numerals and represent a number of objects with a written numeral.</p> <p>2.GM.D.12 Find the value of combinations of dollar bills, quarters, dimes, nickels and</p>	<p>The Building Futures curriculum engages the entire student. Activity/Project-Based Guided Learning, Play Space Learning, and Design/Build experiences are supported by research-based best practices for student learning. Building Futures cultivates learning by integrating Howard Gardner's multiple intelligences and the program's academic foundation and learning approach. In that students learn differently and have different natural talents to contribute to their learning, the incorporation of this academic foundation allows for a diverse group of learners to benefit from the programs. Students who are challenged or failing in school will have an innovative and creative way to find success. The innovation learns 2D and 3D problem-solving skills by designing projects which begin at an architectural model scale and continue to build at full scale. Project-based learning, focusing on STEAM goals, focused on addressing academic standards, and increasing rigor and relevance. To determine how to address unfinished learning, you'll need to prioritize the most important content knowledge and skills from previous years that students need to be successful in their current grades.</p>	<p>Building Futures Student materials Kits included in the contract and provided by BF</p> <p>Lesson Modules</p>

	<p>pennies, using \$ and ¢ appropriately.</p> <p>2.NBT.C.11 Write and solve problems involving addition and subtraction within 100.</p> <p>3.RA.A.3 Describe in words or drawings a problem that illustrates a multiplication or division situation.</p> <p>3.RA.A.4 Use multiplication and division within 100 to solve problems.</p> <p>3.RA.A.3 Describe in words or drawings a problem that illustrates a multiplication or division situation.</p> <p>4.NF.A.3 Compare two fractions using the symbols $>$, $=$ or $<$, and justify the solution.</p> <p>4.NBT.A.5 Demonstrate fluency with addition and subtraction of whole numbers.</p> <p>5.NBT.A.6 Add and subtract multi-digit whole numbers and decimals to the thousandths</p> <p>5.NBT.A.7 Multiply multi-digit whole numbers and decimals to</p>		
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	the hundredths place, and justify the solution.		
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Mathical Books Cross-Curricular Course Options

Arranged by grade level and book title

Mathical books are a special selection of titles that encourage a love of math and literature through a series of engaging and interactive activities and lessons that accompany each title. The Mathical Book Prize is awarded by the Mathematical Sciences Research Institute in Berkley, CA. The prize is awarded to book titles that showcase the importance of math in ways that make it more accessible to students than ever before. *“The Mathical Book Prize aims to inspire a love of mathematics in the everyday world in children of all ages.”* We have created this course to focus on the essential Math and ELA standards identified by HSD to fill gaps and learning loss.

In this course, the teacher will be provided with two Mathical books per week. The teacher will be able to select books to teach an ELA and math standard within the same book.

Grade	ELA Standards	Math Standards	Description:	Materials
K/1	<p>K.R.1.A.b asking and responding to questions about texts read aloud</p> <p>KW.1.A.a Using pictures, oral language or written letters, and/or words</p> <p>K.W.2.B.a Use a combination of drawings and writing to name and inform about a topic or text.</p> <p>K.R.1.A.d Connecting the information and</p>	<p>K.NS.B.e Demonstrate that a number can be used to represent “how many” are in a set.</p> <p>K.RA.1.a Represent addition and</p> <p>1.RA.1.a Use addition and subtraction within 20 to solve problems.</p> <p>K.GM.1.a Describe several</p>	<p>Nothing Stopped Sophie is the story of Sophie Germain, a woman who went off to University to study math at a time when women weren’t allowed at University. She won prizes for her work and became a famous mathematician. This book can teach students about gender inequality over the years but also teach students that math can be used to solve important practical problems, like measuring the size of the earth.</p> <p>Some of the math concepts taught in this book are a measurement of lengths, tallying (add up), patterns of vibration, calculations, balance, and mathematical equations. Students will have the opportunity to discuss the application of</p>	<p>Primary writing notebooks for each student</p> <p>Pencils</p> <p>Crayons</p> <p>Access to book room/leveled texts</p> <p>Mathical Book of engaging age appropriate chapter book of choice?</p> <p>Suggestions</p> <p><u>Mathical books:</u> Pigeon Math by Asia Citro</p>

	<p>events of a text to experience K.R.3.C.c. Name the main topic and recall key details of the text K.R.2.A.a Identify elements of a story including setting, characters, and key details K.R.3.A.b Use title and illustrations to make predictions about text</p>	<p>measurable attributes of objects. K.GM.1.b Compare the measurable attributes of two objects 1.GM.1.a Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes. 1.GM.2.a Order three or more objects by length. 1.GM.2.c Demonstrate the ability to measure length or distance using objects.</p>	<p>math in real-world situations. There are many ways to build ELA skills from <i>Nothing Stopped Sophie</i> as well. Students will have discussions about equality and fairness as well as make text to self connections between themselves and the main character Sophie. Writing prompts can focus on overcoming a personal challenge.</p>	<p>Nothing Stopped Sophie: The Story of Unshakable Mathematician Sophie Germain by Cheryl Bardoe Sheep Sheep Won't Sleep: Counting by 2s, 5s, and 10s by Judy Cox Absolutely One Thing: Featuring Charlie and Lola by Lauren Child Max's Math by Kate Bank One Big Pair of Underwear by Laura Geh Mathical Book or engaging age-appropriate chapter book of choice? Suggestions <u>Bookroom:</u> Mr. Putter & Tabby Ramona & Beezus Cam Jensen <u>African American main character:</u> Nikki & Deja series by Karen English</p>
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				<u>Other:</u>
2-3	<p>1.RF.3.A.g reading irregularly spelled words</p> <p>1.RF.3.A.j reading high-frequency words</p> <p>1.RF.3.A.k demonstrating decoding skills when reading</p> <p>1.RF.4.A.a use context to confirm or self-correct word recognition and understanding, rereading as necessary</p> <p>2.R.1.A.a using text features to make and confirm predictions, explain why not confirm</p> <p>2.R.1.A.b asking and responding to relevant questions</p> <p>2.R.1.A.c seeking clarification and using information facts and details about texts and supporting answers with evidence from text.</p> <p>2.RF.3.A.j</p>	<p>1.NBT.B.a Use place value understanding to add and subtract within 100</p> <p>2.NBT.B.a Demonstrate fluency with addition and subtraction within 100.</p> <p>2.NBT.C.a Write and solve problems involving addition and subtraction within 100.</p>	<p>Mathical books are a special selection of titles that encourage a love of math and literature through a series of engaging and interactive activities and lessons that accompany each title. The Mathical Book Prize is awarded by the Mathematical Sciences Research Institute in Berkley, CA. The prize is awarded to book titles that showcase the importance of math in ways that make it more accessible to students than ever before. <i>“The Mathical Book Prize aims to inspire a love of mathematics in the everyday world in children of all ages.”</i></p> <p><i>Counting on Katherine</i> is a picture book about Katherine Johnson, an African-American mathematician who worked for NASA during the space race of the 1950’s. This is the same woman who was featured in the popular movie <i>Hidden Figures</i>. The book focuses on Katherine as a child and her already budding love for math and numbers.</p> <p>The learning opportunities presented in this book are vast. Social studies and history opportunities exist in the elements of racial injustice in the 1950’s. Science learning can be had through activities and discussions about NASA, space and planets, and rocket ships launching into space. Many ELA opportunities exist in discussions of character traits, the main idea, using facts from the text to answer questions. Sight words and vocabulary building are also</p>	<p>Writing notebooks for each student</p> <p>Pencils</p> <p>Crayons</p> <p>Access to book room/leveled texts</p> <p>Books: Counting on Katherine</p> <p><u>Mathical books:</u></p> <p>Counting on Katherine: How Katherine Johnson Saved Apollo 13 by Helaine Becker</p> <p>Count on Me by Miguel Tanco</p> <p>The Girl With a Mind for Math: The Story of Raye Montague by Julia Finley Mosca</p> <p>When Sophie Thinks She Can’t by Molly Bang</p> <p>Zero the Hero by Joan Holub</p> <p>3x4 by Ivan Brunetti</p> <p>Edgar Allan Poe’s Pie: Math Puzzlers in Classic Poems by J. Patrick Lewis</p> <p>Numbed! by David</p>

	<p>Demonstrating decoding skills when reading new words in a text 3.R.1.A.b: drawing conclusions and support with textual evidence 3.R.1.A.c: summarizing a story's beginning, middle, and end determining its central message, lesson, or moral 3.R.1.B.a. decoding and identifying the meaning of common prefixes and suffixes and knowing how they change the meaning of root words. 3.R.1.B.b. using sentence level context to determine the relevant meaning of unfamiliar words or distinguish among multiple meaning words 3.R.1.C.b-text to world (text ideas regarding experiences in the world) 3.R.1.C.a: text to text (ideas and information in various fiction and nonfiction works, using</p>		<p>built-in. The math elements of the book go into counting and computing numbers, as well as valuations in relation to physics and how math concepts apply to real-world scenarios and careers.</p>	<p>Lubar</p> <p>The Rookie Bookie by L. Jon Wertheim and Tobias Moskowitz</p> <p><u>Bookroom:</u> Flat Stanley Ellray Jake is NOT a Chicken Magic Tree House A Dyamonde Daniel Book Series</p> <p><u>African American main character:</u> Jada Jones Rockstar Kena Ford Clean Getaway by Nic Stone</p> <p><u>Others:</u> Amelia Bedelia Junie B Jones</p>
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	compare and contrast) 3.R.2.A.a. summarize and sequence the events/plot and explain how past events impact future events			
4-5	<p>4&5.R.1.A.a: drawing conclusions and inferring by referencing textual evidence of what the text says explicitly as well as inferences drawn from the text</p> <p>4&5.R.1.A.b: drawing conclusions by providing textual evidence of what the text says explicitly (as well as inferences drawn from the text)</p> <p>4&5.R.1.C.a: text to text (ideas and information in various fiction and nonfiction works, using compare and contrast)</p> <p>4.R.1.C.b: text to world (text ideas regarding experiences in the world by demonstrating an awareness that literature reflects a cultural and</p>	<p>4&5.RA.A.a Use the four operations with whole numbers to solve problems.</p> <p>4&5.RA.B.a Work with factors and multiples. Write and interpret numerical expressions.</p> <p>5.RA.C.a Use the four operations to represent and solve problems</p>	<p>Mathical books are a special selection of titles that encourage a love of math and literature through a series of engaging and interactive activities and lessons that accompany each title. The Mathical Book Prize is awarded by the Mathematical Sciences Research Institute in Berkeley, CA. The prize is awarded to book titles that showcase the importance of math in ways that make it more accessible to students than ever before. <i>“The Mathical Book Prize aims to inspire a love of mathematics in the everyday world in children of all ages.”</i></p> <p><i>Solving for M</i> is a chapter book about Mika, a fifth-grader who has never been a “math person”. When her new math teacher tells the class they must keep a journal, Mika is caught off guard. She doesn’t understand how a journal will help in math....until eventually, it does. The relatable nature of this enduring story is already a great jumping-off point for students. It will allow them to see that it is ok to struggle with math and that asking for help is the best way forward.</p> <p>The academic opportunities in <i>Solving for M</i> are strong in the math and ELA areas. The math “journal entries” that</p>	<p>Writing notebooks for each student Pencils Highlighters Access to book room/leveled texts Chromebooks Mathical Book or engaging age-appropriate chapter book of choice? suggestions below</p> <p><u>Bookroom:</u> Ramona the Pest</p> <p><u>African American main character:</u> One Crazy Summer by Rita Williams Garcia</p> <p>Brown Girl Dreaming by Jacqueline Woodson</p> <p>The Boy Who Harnessed the Wind</p>

	<p>historical time frame) 4&5.R.3.B.b: analyze, make inferences, and draw conclusions about the persuasive text; use evidence from the text to explain the author's purpose; support the analysis (noting important similarities and differences) 4(5).W.1.A Follow a writing process to plan a first draft by: 4.W.1.A.c accessing prior knowledge or building background knowledge related to the topic</p>		<p>Mika must write in her journal are actual math problems that can be worked out in a lesson, there are 25 journal entries, all are complex story problems. As the book is so relatable to the target audience, book discussions and writing prompts will provide many opportunities to strengthen ELA comprehension skills.</p>	<p><u>Mathical books:</u> Animals by the Numbers: A Book of Infographics by Steve Jenkins Bedtime Math: This Time It's Personal by Laura Overdeck Blockhead: The Life of Fibonacci by Joseph D'Agnese By the Numbers 3.14: 110.01 Cool Infographics Packed with STATS and Figures by National Geographic Kids DK Life Stories: Katherine Johnson by Ebony Joy Wilkins Eat Your Math Homework: Recipes for Hungry Minds by Ann McCallum Edgar Allan Poe's Pie: Math Puzzlers in Classic Poems by J. Patrick Lewis Hidden Women: The African-American Mathematicians of NASA Who Helped America Win the Space Race by</p>
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				<p>Rebecca Rissman</p> <p>Just the Right Size: Why Big Animals are Big and Little Animals are Little by Nicola Davies</p> <p>Numbed! by David Lubar</p> <p>The Rookie Bookie by L. Jon Wertheim and Tobias Moskowitz</p>
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