

Second Grade Curriculum Guide 2017-2018

English Language Arts

Whitelaw & Pollara

Note: Content order subject to change in accordance with meeting student needs

Trimester #1 (August 29 - Nov 21)

In these initial units, "Reading and Writing Growth Spurt / Lessons from the Masters: Reading and Writing Fiction," students will focus on expectations, routines and procedures involved with 2nd grade Reader's and Writer's Workshops. They will know how to select a "just-right book" and build their stamina in order to develop a love of reading. Within reading, students will look deeper into characters in their favorite books and use these in Writer's Workshop to develop realistic fiction stories of their own. The second part of this trimester will focus on nonfiction reading and writing. Students will work on nonfiction books and focus on growing knowledge as they pay attention to details, put parts of text together, and question texts.

Reading	Writing
<p>Second Grade Reading Growth Spurt</p> <ul style="list-style-type: none"> ● Develop a love and sense of purpose for reading/writing ● Establish reading logs, book-shopping schedules, rules in Reading ● Reinforce Workshop structures including selecting "Just Right" books and Writing process ● Build stamina and engagement ● Generate ideas for reading and writing <p>Becoming Experts: Reading Non-Fiction</p> <ul style="list-style-type: none"> ● Distinguish literature from informational texts in reading and writing ● Identify main idea and details of a section and explain how that relates to the theme of the text ● Determine importance of informational text ● Write down main topics and supporting facts ● Use text structure and features to distinguish types of text (scientific, technical/procedural, historical) ● Research and become expert on a nonfiction topic 	<p>Lessons from the Masters: Improving Narrative Craft</p> <ul style="list-style-type: none"> ● Use mentor texts for reading and writing ● Determine importance within text ● Make predictions based on textual evidence ● Infer about and interpret characters actions', thoughts and feelings ● Synthesize character traits and events across chapters ● Utilize small moments to create realistic fiction stories ● Build tension by looking for and writing about problems <p>A How To Guide to Nonfiction</p> <ul style="list-style-type: none"> ● Setting a purpose for writing nonfiction ● Activating prior knowledge ● Learning about nonfiction (nonfiction vs. fiction) ● Learning from nonfiction features ● Using Keywords to Build Meaning ● Using "Stop and Think" strategies ● Learning how to write for an audience

Trimester #2 (November 28-March 2)

During this trimester, students will be using a variety of reading strategies to tackle both tricky words and vocabulary development to navigate them through their books. Students will be able to grow knowledge as they read topic sets of text, comparing, contrasting and connecting information across text sets. From studying a variety of fiction and nonfiction mentor texts, students will begin crafting their own information writing, and later on, develop ideas to create poems. We will then continue diving deep into characters this quarter by examining characters in all types of fiction - realistic, folktales and fables. Students will compare and contrast different versions of the same story, develop ideas/opinions about the characters in their texts and interpret the morals and lessons within their stories. Finally students will write about their reading, writing essays to persuade others about the theories they have about the characters and plot.

Reading	Writing
<p>Bigger Books Mean Amping Up Reading Power</p> <ul style="list-style-type: none"> ● Jot notes while reading to organize into bigger ideas ● Notice and understand meaning of literary language ● Talk about reading in clubs and partnerships ● Accumulate and synthesize longer pieces of texts ● Use writing to strengthen reading of more complex texts ● Set goals for reading <p>Studying Characters and Our Stories</p> <ul style="list-style-type: none"> ● Deeply understand challenges that face characters/look for resolution ● Investigate with a critical eye; explore opinion writing ● Persuade and elaborate with facts and opinions ● Identify and analyze deeper meaning in text; relate to self ● Support and elaborate on opinions ● Connect to personal challenges and set goals 	<p>Poetry: Big Thoughts in Small Packages</p> <ul style="list-style-type: none"> ● Use mentor poetry texts for deeper understanding of how to read and write poetry ● Feel the rhythm of poetry and read it with fluency and expression ● Envision parts of poems ● Recognize theme and purpose for poems ● Explain author's message ● Generate ideas for poems ● Bring music/life to their poems <p>A World Beyond Our Own: Fiction, Folktales, and Fairy Tales</p> <ul style="list-style-type: none"> ● Compare and contrast versions of the same story across cultures ● Interpret morals or lessons ● Closely interpret author's craft ● Observe and use common structures of genre ● Role-play events from the text, empathizing with characters ● Read closely, noticing clues about predictable characters/storylines ● Recreate fairy tales and/or folktales <p>Writing about Reading</p> <ul style="list-style-type: none"> ● Write essays to persuade others ● Gather evidence to support each opinion ● Add quotes to support opinions ● Create multiple paragraph responses ● Use writing to strengthen reading of more complex texts

Trimester #3 (March 6 - June 6)

In this trimester, students will aim to boost their nonfiction reading to gain a deeper understanding and work on their speaking and listening skills as they teach others about major observations and main ideas from their books. Our writing unit will correlate well with Quest, as students learn how to write lab reports and about science topics they are interested in. Researching information from our reading unit will translate well into our writing, prompting students to transfer skills across their learning. In addition, we will continue our deeper discussions of texts by further promoting writing about our reading.

Reading	Writing
<p>Reading Non-Fiction Cover to Cover</p> <ul style="list-style-type: none"> ● Draw on everything they know about information reading, thinking about how parts of the book go together and how to use a “teaching voice” to share findings in non-fiction book clubs ● Holding meaningful conversations, making inferences, revising thinking and growing ideas in non-fiction book clubs ● Comparing and contrasting two or more books on the same topic to develop thinking <p>Supporting Our Reading by Reading in Book Clubs</p> <ul style="list-style-type: none"> ● Develop ideas and opinions about reading, especially characters in text ● Clearly state opinions and retell stories so that opinions make sense ● Talk about reading in clubs and partnerships ● Accumulate and synthesize longer pieces of texts 	<p>Writing about Reading (Continued)</p> <p>Lab Reports and Science Books</p> <ul style="list-style-type: none"> ● Learning how to write about science through looking back on procedural writing (how to), using observations to teach others about new discoveries and conclusions they have draw and learning from others to improve our writing. ● Comparing experiment results and reading more on the topic to ask further questions ● Designing and writing new experiments. Working on self and peer editing for detail, structure and conventions ● Writing information books on science topics by looking to mentor texts and considering how to address an audience

ELA Personalized Learning Approach

Students will work in differentiated groups based on their individual needs. Instruction will be a combination of: whole class instruction, small group instruction, partner work and independent work. Differentiated groups will be determined through ongoing formal and informal assessments and will support their work in strategy and guided reading groups.

Student Work

The majority of student work will be completed within their Reader’s and Author’s notebooks. This year, Charlotte Lab School is using an online portfolio system called SeeSaw which enables students to independently showcase what they are learning in each one of their content areas. Both students and teachers are able to view and assess progress and growth over time. In ELA, students post to SeeSaw to share their current work and progress toward their personalized goals. Teachers provide regular feedback as well. Families are invited to also leave encouraging comments on their student’s work as well.

Homework and Home-School Connection

Homework will consist of daily reading and will be assigned as needed to complete in-class tasks and for extra practice. Students will be encouraged to read and write independently or with adults whenever possible and appropriate.

Later in first trimester, students will also have a reading log for their out of school reading to foster independence and reflection on their reading habits. Students are responsible for filling out their logs in order for teachers to discuss and reflect on the student's book choices, stamina, and reading habits.

We also encourage parents to review and engagement with SeeSaw at home with their children; this allows parents to connect with what your child is learning in ELA.

Here are some other things you can do at home to reinforce the learning that is taking place at school:

- *Track the books and genres that your child is reading at home*
- *Set goals for the minutes spent reading and add time to build stamina*
- *Have your child go on RAZ kids to listen to and read a book aloud, then answer comprehension questions*
- *Discuss the book with your child and ask him/her inferential question stems provided*
- *Comment and ask questions on Seesaw posts made by students and teachers*

Parent-Teacher Communication

The best way to communicate general questions is through your student's advisor. If a specific ELA question arises, please directly email the ELA team and an answer will be provided within 48 hours.

Kaylee Whitelaw, 2nd grade ELA Lead (kwhitelaw@charlottelabschool.org)

Maria Pollara, 2nd grade Exceptional Children's Teacher (mpollara@charlottelabschool.org)

Mathematics

Hollands & Pollara

Trimester #1 (August 28- November 21)

In this unit students will explore surveying peers and place the information gathered into a bar graph and pictograph. Students will also be able to recognize that three-digit numbers can be identified by hundreds, tens, and ones. They will be able to break down numbers into expanded form and compare numbers and add and subtract using a variety of strategies.

Unit Topics, Objectives & Vocabulary

Below is a list of the topics that will be introduced each trimester. While this represents pacing for a typical 2nd grader, teachers will group students according to their level of mastery in each of these concepts and will personalize pacing and work for the students; some students may need to review prerequisite topics while others may have already mastered what is listed below and will move on to deeper content.

<u>Topics</u>	<u>Objectives</u> Students will...	<u>Vocabulary</u>
Graphing	<ul style="list-style-type: none"> ● Collect data by surveying and/or measuring objects ● Represent data in bar graphs and pictographs 	<i>Bar graph, pictograph, data</i>
Place Value	<ul style="list-style-type: none"> ● Understand three digit numbers in relation to place value ● Read and write numbers to 1,000 	<i>Place, value, ones, tens, hundreds, expanded form, base ten</i>
Comparing Numbers	<ul style="list-style-type: none"> ● Compare two three-digit numbers ● Successfully use $>$, $=$, and $<$ symbols to compare numbers 	<i>Greater than, less than, equal to</i>
Addition/ Subtraction	<ul style="list-style-type: none"> ● Fluently add and subtract within 100 ● Add up to four two-digit numbers ● Add and subtract within 1,000 ● Mentally add and subtract 10 or 100 from a given number ● Explain why addition and subtraction strategies work ● Solve one and two-step word problems ● Add and subtract using a number line ● Understand the difference between odd and even 	<i>Add, subtract, sum, difference, odd, even, number line</i>

Trimester #2 (November 28 - March 2)

In this unit students will develop a stronger foundation for measurement of lengths, units of time, and money, and to gain a deeper awareness for how to describe and analyze shapes.

In Measurement, Time and Money, students will learn more about standard and nonstandard forms of measurement, estimate and measure various lengths of objects, and make their own measurement tools to utilize as benchmarks. Additionally, students will use rulers and other measurement tools such as rules, yard and meter sticks, and measuring tape. Students will also practice telling time to the nearest five minutes and begin to explore elapsed time. Students will continue to explore the concept of money, reviewing the value of coins and dollars, and calculating costs and estimates.

In Geometry, students will investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding of area, volume, congruence, similarity, and symmetry, which they will build upon in later grades. They will also examine the shapes' sides and angles and develop spatial awareness.

Unit Topics, Objectives & Vocabulary

<u>Topics</u>	<u>Objectives</u> Students will...	<u>Vocabulary</u>
Measurement	<ul style="list-style-type: none"> • Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tape • Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen • Estimate lengths using units of inches, feet, centimeters, and meters • Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit • Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem 	<i>measure, about, a little less than, a little more than, longer, shorter, standard units, inch, foot, metric units, centimeter, meter, tools, ruler, yardstick, meter stick, measuring tape, estimate</i>
Time	<ul style="list-style-type: none"> • Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. 	<i>clocks, hand, hour hand, minute hand, hour, minute, a.m., p.m., o'clock, multiples of 5 (e.g., five, ten, fifteen, etc.), analog clock, digital clock, quarter 'til, quarter after, half past, quarter hour, half hour, thirty minutes before, 30 minutes after, 30 minutes until, 30 minutes past, elapsed time</i>
Money	<ul style="list-style-type: none"> • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ (dollars) and ¢ (cents) symbols appropriately 	<i>quarter, dime, nickel, dollar, cent(s), \$, ¢, heads, tails, value, cost, price</i>
Geometry	<ul style="list-style-type: none"> • Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes 	<i>attribute, feature, angle, side, triangle, quadrilateral, square, rectangle, trapezoid, pentagon, hexagon, cube, face, edge, vertex, surface,</i>

		<i>figure, shape, closed, open, partition, equal size, equal shares, half, halves, thirds, half of, a third of, whole, two halves, three thirds, four fourths, rows, columns (review: circle, sphere, half-circle, quarter-circle, cone, prism, cylinder, trapezoid)</i>
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Trimester #3 (March 6- June 6)

In this unit students will review analyzing shapes and their attributes while also partitioning shapes. Fractions will be introduced and will be followed by exploring concepts of multiplication through the exploration of equal groups and skip counting.

Students will further investigate, describe, and reason about decomposing and combining shapes to make other shapes through building, drawing, and analyzing two- and three-dimensional shapes. Students develop a foundation for the understanding of area, volume, congruence, similarity, and symmetry, which they will build upon in later grades. Students will also partition shapes into equal parts and describe equal shares using the words halves, thirds, and fourths.

After reviewing geometry concepts and introducing the foundational skills of fractions we will begin to build the key skills of multiplication. The first skill will include reviewing even and odd numbers. We will then determine whether a group of objects are odd or even by pairing objects into groups of 2 or equal shares. We will then examine how addition helps find the total number of objects in an array and how to write equations to represent the problem. Students will continue to explore how to calculate equal groups using a variety of strategies while incorporating word problems.

Unit Topics, Objectives & Vocabulary

<u>Topics</u>	<u>Objectives</u> Students will...	<u>Vocabulary</u>
Understanding Multiplication Principles	<ul style="list-style-type: none"> ● Determine if a number is even or odd ● Prove that an even number can be formed from the addition of two equal addends ● Sort objects into a rectangular array to determine if the rows are equal or unequal ● Understand the relationship between repeated addition and arrays ● Understand the relationship multiplication has to equal shares, arrays, and skip-counting 	<i>skip-count, odd, even, row, column, rectangular array, equal, addend</i>
Recognizing and Drawing Shapes	<ul style="list-style-type: none"> ● Identify the attributes of 2D and 3D shapes based on the given attributes ● Compare / contrast 2D and 3D shapes ● Understand spatial awareness by creating rectangles with specific rows and columns 	<i>cube, face, edge, vertex, surface, partition, equal size, rows, columns, circle, sphere, cone, prism, cylinder</i>

Partitioning Shapes into Equal Shares	<ul style="list-style-type: none"> Partition shapes into equal shares to solve real world problems 	<i>fraction, part, whole, group, partition, half, halves, thirds, half of, a third of, whole, two halves, three thirds, four fourths, half-circle, quarter-circle, equal shares, partition</i>
Describing and Identifying Fractions	<ul style="list-style-type: none"> Describe the equal shares using <i>halves, thirds, half of, a third of, etc.</i> Describe the whole as <i>two halves, three thirds, four fourths</i> Recognize that equal shares of identical wholes need not have the same shape 	

Math Personalized Learning Approach

Personalized learning is instruction that offers specific curriculum and learning environments that meet each individual student’s needs. Students will approach the content in a variety of ways and paces based upon their mastery of each concept. The process is as follows:

- Students will take a pre-trimester assessment before each unit
- Once the assessment is scored, students will be placed into personalized learning groups for enrichment, review, mini-lesson and foundation skills
- Students will stay in that specific skill group for a few weeks depending on the skill
- The skill is taught and practiced and then students will complete an exit ticket
- Based on the score of the exit ticket students will stay in the same group or move on to another
- At the end of each unit the students will take a post- trimester assessment
- Once the assessment is scored, students will either remain in the same group to focus on the same skill with more practice or move on to another skill

Student Work

Charlotte Lab School uses an online portfolio system called SeeSaw which will enable students to independently showcase what they are learning in each one of their content areas. Both students and teachers will be able to view and assess progress and growth over time. In Math, students will take home their pre-trimester assessment tracking sheet along with their goals for the trimester. A blank test will be posted to SeeSaw allowing students to go back and practice the skills they missed at home. The pre- and post- trimester tests will be sent home after students have corrected their work and practiced the skills and strategies. In addition, each student will have a Math journal in class for the “Do Now” and an interactive notebook for follow-up activities; math journals and interactive notebooks remain at school at all times.

Homework and Home-School Connection

We encourage parents to review SeeSaw at home with students as well as review Math work in their binder. In addition, students will be provided enrichment activities, review materials, etc. on an as needed basis. This work which we call out-of-class work will not come home every week for each child and will vary depending on what your child is working on. The purpose of Math work is to ensure that students are practicing independently and this allows parents to connect with what your child is learning in Math as well.

Teachers will check-in with weekly comments and feedback in SeeSaw to ensure parent-teacher communication is active and relevant. If a child is not completing SeeSaw requirements or turning in the appropriate work provided by the teacher, parents will be contacted.

Parent-Teacher Communication

The best way to communicate general questions is through your student’s advisor because multiple teachers work with each student. If a specific Math question arises, please directly email the Math team and an answer will be provided within 48 hours.

Stephanie Hollands, 2nd grade Math lead (shollands@charlottelabschool.org)

Maria Pollara, 2nd grade Exceptional Children’s Teacher (mpollara@charlottelabschool.org)

Quest

Ms. Ritchie

Trimester #1: Kitchen Sink Chemistry (August 28-November 21)

The Challenge

We know that Lab students LOVE making slime, so how can we tap into students' natural curiosity and interest in experimenting in order to help them better understand basic chemistry? How can we help students experiment safely at home using basic household ingredients to make "cool stuff" while also exploring important science concepts? Through this Quest, students will have the opportunity to experiment and explore chemistry concepts and then create videos that will guide other kids through the process of conducting science "experiments" and labs at home, in their own kitchen sinks!

Course Description

In this 2nd Grade Quest, which is aligned with 2nd grade NC Essential Science Standards on the stages of matter, students will study solids, liquids and gases through a chemistry lens. Students will watch and conduct chemistry experiments as well as a variety of other hands on experiments to model phase changes. Students will participate in matter exploration labs as well as field trips from organizations around the uptown area emphasizing chemistry. Students will also learn about famous scientists and share what they found fascinating about a scientist of their choice. After understanding the content, students will design and present their own "how to" science video on a phase change or chemical reaction. Examples will be provided in class. The Quest will culminate in the students presenting their final "how to" videos to Lab students, parents, and Charlotte community members. Videos will also be made available throughout the trimester to share online with parents.

Course Objectives

In addition to the NC Essential Science Standards for Second Grade, students will work in this Quest to investigate and practice four of Tony Wagner's Survival Skills:

- Agility and Adaptability - adjusts to changes/transitions, good attitude, personally adapts to group dynamic to meet task at hand
- Initiative and Entrepreneurship - self directed, proactive and motivated, active group member in generating ideas/suggestions
- Effective Oral and Written Communication - listens & speaks during appropriate times, develops voice, demonstrates presentation skills, understands audience, writes/draws clearly and purposefully
- Curiosity and Imagination - generates ideas, brainstorms with group members, is open minded

Big Ideas / Targets	Teaching Points Students will...	Key Vocabulary
Overview of Chemistry	<ul style="list-style-type: none"> ● Develop love for chemistry and the power of Science 	atom, element, molecule, chemical reaction
Matter - solids, liquids, gases	<ul style="list-style-type: none"> ● Study the effects phase changes have on volume, weight, appearance and texture of substances ● Understand properties of matter and phase changes ● Compare and contrast features of solids, liquids and gases 	substance, energy, solid, liquid, gas, phase change
Final project	<ul style="list-style-type: none"> ● Effectively and carefully choose technology to present information with purpose ● Understand the process of creating videos that are explicit, sequential and teach an audience 	Sequence, steps of the planning process

	<ul style="list-style-type: none"> Actively engaged throughout the planning, construction, editing, presentation and reflections of the final "how to" video 	
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Trimester #2: Students as Curators (November 28 - March 2)

The Challenge

Did you know that Rudolph "Bud" Schiele developed an interest in nature and animals and became an Apprentice Curator at an early age? This early love led him to the eventual creation of the Schiele Museum in Gastonia. We know that many of our 2nd graders have a similar interest in nature and animals, so through this Quest, students will have the opportunity to also become Curators. Through research, students will learn about different NC animals, their life cycles, and their habitats. Students will then get to practice their geography skills as we make comparisons to animals all over the world! For instance, did you know that the red panda of Asia is actually a part of the raccoon family? Our class will learn this fact and more as we take our Curating skills across the globe in preparation for a Student Exhibit at the Schiele Museum.

Course Description

In this Quest, which is aligned with 2nd grade NC Essential Science Standards of comparing animal life cycles, students will study different kinds of animals and create infographics for Schiele Museum visitors to learn about local animal life cycles. Students will study the five main animal groups: birds, fish, mammals, insects, reptiles and amphibians and be able to compare and contrast life cycles. Student will be learn about the global regions from which local animals descend. After learning the content, students will decide how to present their findings to display in the museum. The Quest will culminate in the students presenting their final products as invited guests tour the museum.

Course Objectives

In addition to the NC Essential Science Standards for Second Grade, students will work in this Quest to investigate and practice four of Tony Wagner's Survival Skills:

- Collaboration Across Networks and Leading by Influence - works cooperatively with all classmates, helps to guide positive group process, leads by example and collaboration
- Effective Oral and Written Communication - listens & speaks during appropriate times, develops voice, demonstrates presentation skills, understands audience, writes/draws clearly and purposefully
- Accessing and Analyzing Information - describes same/different, asks if...then, finds answers, analyzes and gives feedback
- Curiosity and Imagination - generates ideas, brainstorms with group members, is open minded

Big Ideas / Targets	Teaching Points Students will...	Key Vocabulary
Animal Groups	<ul style="list-style-type: none"> Develop love for other living things Know names and characteristics of different animal groups. 	characteristic, habitat
Animal Life Cycles	<ul style="list-style-type: none"> Study other living organisms: their bodies, how they grow/change, their habitats, their basic needs, how they reproduce and continue cycle of life Compare and contrast characteristics of each animal Understand the process of a variety of animal life cycles and be able to compare and contrast 	life cycle, mammal, herbivore, carnivore, omnivore, environment, predator, prey
Global Regions	<ul style="list-style-type: none"> Compare and contrast features and life cycles of local animals 	compare, contrast, global, region

Final Project	<ul style="list-style-type: none"> Effectively and carefully choose technology to present information with purpose Actively engaged throughout the planning, construction, editing, presentation and reflections of the final product Identify key points of information about animals and create videos with QR codes for the museum 	sequence, steps of the planning process, QR code
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Trimester #3: Sound Garden & CLS 500 (March 6-June 6)

During Trimester 3 students will engage in two different Quests, designing a sound garden for Lab and building their own alternative energy powered race car for the CLS 500.

CREATING A LAB SOUNDGARDEN

The Challenge

We know that kids love making music and art and love to play, so why not combine them all? In this Quest, the second graders will create a sound garden from recycled materials for our playground. We will first learn about sound and music from local musicians in order to plan the types of instruments we want to make. Then, we will work with local artists to plan what our garden should look like - we want to make this a beautiful part of the Lab campus! Finally, students will perform a song of our choice to parents, students, and faculty!

Course Description

In this Quest, which is aligned to 2nd grade NC Essential Science Standards and NC Essential Social Studies Standards, students will work as a team to design an engaging and functional sound garden on school grounds. Students will be exposed to many ways to make and manipulate sound and learn about the importance of recycling. Together, this content will be the basis for students' team project to design a recycled sound garden to be incorporated into our new playground. Students will visit local sensory gardens, in addition to working with area museums, local artists, musicians, recycling experts and planners to achieve their final goal, before presenting their project to peers and adults. Maker Lab is part of Quest this year, so students will participate in a variety of maker-based activities to reinforce Quest concepts throughout the year.

Course Objectives

In addition to the NC Essential Science Standards for Second Grade, students will work in this Quest to investigate and practice four of Tony Wagner's Survival Skills:

- Collaboration Across Networks and Leading by Influence - works cooperatively with all classmates, helps to guide positive group process, leads by example and collaboration
- Effective Oral and Written Communication - listens & speaks during appropriate times, develops voice, demonstrates presentation skills, understands audience, writes/draws clearly and purposefully
- Accessing and Analyzing Information - describes same/different, asks if...then, finds answers, analyzes and gives feedback
- Curiosity and Imagination - generates ideas, brainstorms with group members, is open minded

Big Ideas / Targets	Teaching Points Students will...	Key Vocabulary
Understanding of Sound	<ul style="list-style-type: none"> Build appreciation for sound, how it is created and how it can be manipulated Develop a deeper understanding for how sound is created and how it can be changed depending on shape, composition, volume, design and contents of objects 	frequency, pitch, loudness, instrument, vibration, sound

Reduce, Reuse, Recycle	<ul style="list-style-type: none"> Develop an appreciation for how items from the environment can be reused and recycled 	reduce, reuse, recycle
Final Project	<ul style="list-style-type: none"> Create a soundgarden out of recycled materials 	soundgarden

THE LAB 500

The Challenge

Students will be able to bring their knowledge from the year together to work on this final quest - the Lab 500! Students will learn about weather and energy to plan an alternative energy powered race car. We will bring back our Chemistry knowledge from the first Quest in order to make powerful cars and compete for the win! Students will be forced to fail up (iterate, adapt) as they actively engage in the engineering process designing, building, testing and modifying their race cars. The final event will be a live viewing of the Lab 500 race!

Course Description

In this final quest students will explore the world of weather and energy. Students will start by observing and actively measuring the weather by building a weather station. Students will monitor our local weather for the duration of the quest. Students will explore the ways in which people, through engineering, are trying to harness the power of the weather for alternative energy sources. Ultimately students will design and build their own alternative energy powered race car to run in the Lab 500 at the end of the school year. Students will learn about the science of the weather and the importance of energy in our lives.

Course Objectives

In addition to the NC Essential Science Standards for Second Grade, students will work in this Quest to investigate and practice four of Tony Wagner's Survival Skills:

- Collaboration Across Networks and Leading by Influence - follows directions, is self regulated, works as a team member toward group goals
- Effective Oral and Written Communication - listens & speaks during appropriate times, develops voice, demonstrates presentation skills, understands audience, writes/draws clearly and purposefully
- Accessing and Analyzing Information - describes same/different, asks if...then, finds answers, analyzes and gives feedback
- Curiosity and Imagination - generates ideas, brainstorms with group members, is open minded

Big Ideas / Targets	Teaching Points Students will...	Key Vocabulary
Effects of Weather	<ul style="list-style-type: none"> Understand patterns of weather and factors that affect weather Summarize how energy from the sun serves as a source of light that warms the land, air and water Summarize weather conditions using qualitative and quantitative measures to describe: <ul style="list-style-type: none"> ○ Temperature ○ Wind direction ○ Wind speed ○ Precipitation Learn about the science of the weather and the importance of energy in our lives 	temperature, precipitation, air pressure, thermometer, meteorologist, climate, humidity, condensation, wind direction, wind speed
Understanding Weather patterns	<ul style="list-style-type: none"> Compare weather patterns that occur over time and relate observable patterns to time of day and time of year 	observe, record, predict, weather patterns, seasons

	<ul style="list-style-type: none"> Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons 	
Final Project	<ul style="list-style-type: none"> Harness the power of the weather for alternative energy sources Design and build their own alternative energy powered race car to run in the CLS 500 	alternative energy sources

Student Work

Students will post to SeeSaw (a web-based and mobile app) to share their current work and progress toward their personalized goals. Teachers will provide feedback, as well. Families are invited to also leave encouraging comments on their student's work on the SeeSaw app.

Homework and Home-School Connections

Homework will only consist of work that your student did not finish during the school day. There will be no formally assigned homework this year. Since the purpose of Quest is to foster curiosity in your child, we encourage activities that include experiments, building, outdoor exploration, and making. We will only be using items easily accessible in your home! We also hope that you will ask your child many questions about what they're learning and doing in Quest each day.

Parent-Teacher Communication

The best way to communicate general questions is through your student's advisor. However, if you have a Quest specific question, please email your child's Quest teacher directly and an answer will be provided within 48 hours.

Alexandria Ritchie, 2nd grade Quest teacher (aritchie@charlottelabschool.org)

World Languages & Cultural Studies
Novice Mid-High/2nd grade Spanish
 Guerrero

Approach to Language Teaching and Learning:

Twenty-first century schools must reflect the modern world and workplace through a commitment to global awareness, bilingualism, and diversity. The World Languages & Cultural Studies program at Lab is designed to give students authentic opportunities to engage in language learning and learn to interact positively across cultural barriers. The target language (Spanish) will be used as much as possible by both teachers and students during the World Language & Cultural Studies block. Lessons are carefully planned so that students can understand and enjoy the activities that will help them learn and explore the world.

Trimester #1 Timeline (August 28-November 21)

<u>Unit Topic</u>	<u>Student Goals</u>	<u>Vocabulary</u>
Personality	<ul style="list-style-type: none"> I can describe myself and others using positive adjectives. I can understand simple phrases about people's personalities. I can write short sentences to describe my personality. I can mention character trait words related to stories. I can respond to simple questions about character traits in people and myself. 	- Yo soy... (I am) - Él/ella es... (He/she is) - Tú eres... (You are) Personality adjectives: Amable (kind), responsable (responsible), amigable (friendly), gracioso(a) (funny), respetuoso(a) (respectful), valiente (brave), alegre (happy), curioso(a) (curious), organizado(a) (organized)
Home	<ul style="list-style-type: none"> I can describe the type of home I live in and describe some parts of a home. I can say where people and/or some objects are in a home. I can mention where some people live. I can understand simple phrases that describe homes through pictures I can recognize some similarities and differences between the size of homes 	-Yo vivo en (I live in...) - Partes de un hogar (Parts of the home) -Location phrases (ex. El sofá está en la sala. - The sofa is in the living room.) -Description phrases (ex. El edificio es grande. - The building is big.)

Trimester #2: Leisure Activities (November 28 - January 19), **Clothing** (January 22 - March 2)

Trimester #3: Needs, Wants, & Money (March 6 - April 27), **Life Cycles** (April 27 - June 6)

Assessments:

These tools will give teachers and students a variety of data to show progress on specific learning objectives.

<u>What is the assessment?</u>	<u>What does it measure?</u>	<u>How will it be used?</u>	<u>When will it be used?</u>
Performance Rubric	In the comprehension, conversation, and presentation, this rubric measures how well a student is able to communicate in the target language.	Students will participate in performance tasks to demonstrate their ability to use the target language in a real-world context. Teachers will use the rubric to give feedback and show progress throughout the year.	At the end of each unit (twice per trimester)
Fountas & Pinnell Reading Level Evaluation	This evaluation (which is also used to determine ELA Reading levels at Lab) collects data on a student's oral fluency, comprehension, and ability to make connections with a text.	Reading levels will be used to provide students with targeted practice to help them develop vocabulary, familiarity with sentence structures, and opportunities to practice decoding and interpreting meaning from a variety of texts.	Mid-year and End-of-year
Can Do Checklist	Students will be assigned to tasks that will allow them to prove that they can do the communicative tasks or demonstrate the cultural competencies listed for each unit above.	Students will record their own growth areas and performance on SeeSaw (which may also be evaluated by a teacher on the rubric provided above) and in a self-assessment.	Weekly, by unit
Target Language Tracker	Each time students use English or Spanish in class, they will tally the instance on a tracker card.	Students will set their own goals for how much they want to use the target language in each class period and track their growth over time.	Daily, as needed
Phonemic Awareness Tracker	This checklist will allow students to demonstrate the letter-sound associations of the Spanish alphabet and syllables.	Teachers will provide personalized activities for students based on the assessment so that they will develop appropriate patterns of pronunciation.	Biweekly, until all are mastered
High Frequency Words List	Much like the ELA Sight Words list, teachers will track students' understanding of common functional words and phrases.	Students will focus on the High Frequency words list appropriate for their reading level until they can confidently understand and use the words in context.	Biweekly
Personal Goals	Students will choose their own learning goals related to vocabulary, pronunciation, reading, writing, speaking, and listening.	This information will help students chose learning centers that will help them grow their language proficiency and global awareness, and their individual progress will be share through the online portfolio.	Weekly

Student Work

Charlotte Lab School uses an online portfolio system which enables students to independently showcase what they are learning in each one of their content areas. Both students and teachers are able to view and assess progress and growth over time. Families are invited view their students' photos and videos of work in Spanish and also to leave encouraging comments on their student's work as well.

Homework and Home-School Connection

Here are some other things you can do at home to reinforce the learning that is taking place at school:

- *Use web-based tools to practice along with your student. Log-in information will be provided by the end of the first Trimester.*
 - DuoLingo (free language learning app)
 - Quizlet (website and app for building vocabulary)
 - RAZkids (leveled books for listening and reading)
 - YouTube (list of songs and videos provided by the teacher)
- *Take note of target language use in your home and in the community.*
 - Ask your student to find words that they recognize or can guess
 - Look for opportunities that allow your child to notice other languages and cultures
- *Use SeeSaw to connect with your student about what they are learning.*

Parent-Teacher Communication

The best way to communicate general questions is through your student's advisor. If a specific World Language/Cultural Studies question arises, please email the WL/CS teacher and a response will be provided within 48 hours.

Natalia Guerrero, 2nd grade WL/CS Spanish Teacher (nquerrero@charlottelabschool.org)

World Languages & Cultural Studies
Novice Mid-High/2nd grade Chinese
Liao

World Languages Learning Approach

In World Languages each trimester, students will be exposed to the project-based approach. Students will work in differentiated groups throughout these mini-projects based on their individual needs. Instruction will be a combination of: whole class instruction, small group instruction, partner work and independent work. Differentiated groups will be determined through ongoing formal and informal assessments and will support their work in reading, writing, speaking and listening.

Trimester #1 Timeline (August 28-November 21)

Topic	Goals	NC Social Studies Essential Standards
Occupations	Students will learn how to say the occupations Vocabulary: doctor, teacher, actor, chef, police, athlete, artist Sentence: What do you want to be_____? I want to be_____.	Community
Sports	Students will learn how to say the sports Vocabulary: play, together, tennis, ping pong, basketball, baseball, hockey, and soccer Sentence: Let's play_____ together, ok?	Self
Playground	Students will learn how to say the games in the playground Vocabulary: see-saw, swing, slide, hide-and-seek, hopscotch, make friends Sentence: What do you like to play? I like to _____.	Civic and Government
Writing	Students will continue to practice writing Chinese Characters.	
Reading	Students will learn to recognize and read previously learned vocabulary/phrases/short passages	

Trimester #2 Timeline (November 28-March 2)

Topic	Goals	NC Social Studies Essential Standards
Go to the market/ shopping	Students will learn how to say food and to ask how much it is. Vocabulary: vegetables, meat, cookies, candy, Sentence: I want to buy_____. How much is it?	Economics
American Food	Students will learn how to say the American food. Vocabulary: hamburgers, fries, fried chicken, sandwich, coke, salad Sentence: I like to eat/drink_____	Culture

Feelings	Students will learn how to say their feelings and describe others' feelings. Vocabulary: Happy, sad, angry, cry, laugh Sentence: How are you ? I am very/little bit _____.He/She is _____.	Civic and Government
Writing	Students will continue to practice writing Chinese Characters.	
Reading	Students will learn to recognize and read previously learned vocabulary/phrases/short passages	

Trimester #3 Timeline (March 6-June 6)

Topic	Goals	NC Social Studies Essential Standards
Shapes	Students will learn how to say the shapes. Vocabulary: triangle, square, rectangle, oval, diamond, circle, star Sentence: What shape is this? This is_____.	
Continents	Students will learn how to say the 7 continents Vocabulary: North America, South America, Asia, Europe, Africa, Antarctica, Australia Sentence: This is_____.	Geography
Zoo animals	Students will learn how to say the animals in the zoo. Vocabulary: lion, tiger, bear, elephant, bear, giraffe, panda Sentence: I saw_____.	Environment
Places in community	Students will learn how to say places in the community. Vocabulary: school, movie theater, playground, grocery store, restaurant, mall Sentence: I went to_____.	Community
Writing	Students will continue to practice writing Chinese Characters.	
Reading	Students will learn to recognize and read previously learned vocabulary/phrases/short passages	

Student Work

Students have a Chinese Book in which they will collect most of their work, and a radical writing book in which they will practice writing radicals in class. Charlotte Lab School is also using an online portfolio system called SeeSaw which enables students to independently showcase what they are learning in each one of their content areas. Both students and teachers are able to view and assess progress and growth over time. In World Languages, students will post to SeeSaw weekly to share their current work and progress toward their personalized goals. Teachers will provide feedback weekly as well. Families are invited to also leave encouraging comments on their student's work as well.

Homework and Home-School Connection

Homework will only consist of conversational prompts and work that students did not finish during the school day. There will be no formally assigned homework this year. Research has been unable to prove that homework improves student performance. Rather, we ask that you spend your evenings doing other activities that correlate with student success - reading, writing, speaking with and listening to your child in Chinese. We will provide some weekly guidance for which topics to discuss at home.

Resources

North Carolina Social Studies Essential Standards
 NCSSFL-ACTFL Can-Do Statements Progress Indicators for Language Learners
 NCSSFL-ACTFL Proficiency Guide
 My First Chinese Words
 I Can Write

Parent-Teacher Communication

The best way to communicate general questions is through your student's advisor. If a specific World Language/Cultural Studies-Chinese question arises, please email the teacher(s) and a response will be provided within 48 hours.

Lee-Jung Liao, 2nd grade Chinese Teacher (lliao@charlottelabschool.org)