

ELEMENTARY SCHOOL QUEST COURSE CATALOG

QUEST NAME	COURSE DESCRIPTION	Overview	Survival Skill Focus (doc linked)
Kinder: Lab Scavenger Hunt	<p>In this Quest, students will fulfill goals and objectives set by NC Science and Social Studies Kindergarten Standards as they focus on Force & Motion and the understanding of the positions of objects, properties of motion and patterns. They will learn to describe various physical properties of objects and tell how they are relevant and useful. Kindergarteners will investigate how forces affect the motion of an object. Learning to describe their surroundings will be part of our objective in the creation of this science based scavenger hunt around the school and neighborhood.</p>		<p>Effective Oral & Written Communication: Students will communicate orally as well as in written form as they create and later prepare to present the end of trimester Quest project. They will participate in simple experimentation and later simple research to support their 3 trimester Quest projects.</p> <p>Collaboration: Students will be able to interact with group members to achieve a team outcome. They will share, be kind and positive toward one another in order to complete the task at hand.</p>
Kinder: Urban Gardening for a Healthy Community	<p>Students will work to create a school garden space to produce edible plants in order to promote healthy habits. Additionally, we will grow flowers to beautify our urban garden - linked with ELA knowledge units, students will visit a local farm and partake in a discovery place class about weather patterns.</p>	<p>We've learned all about how to eat healthy foods and care for our community but how can we teach others about this and put what we know into practice? Through participation in garden exploration, children will not only continue to learn about what living things need to survive, but they will also learn best practices to care for their own health as well as the health of the world around us.</p>	<p>Accessing and analyzing information: Student backs up ideas and observations with evidence Student is able to paraphrase and restate new information in their own words</p> <p>Collaboration: Student interacts with and relates to others and others' ideas</p>
1st: Rainy Day Recess Invention Convention	<p>This Quest aims to give 2nd grade students an introduction to the design process. A 21st century workplace calls for employees to empathize, think critically and collaborate to effectively solve problems. This Quest will allow students to apply creativity and imagination as they plan, develop, test and refine ideas to improve the indoor recess experience. Students will be exposed to professionals and experts in the field of design and engineering, in addition to being guided as a whole group through two full design cycles before having the opportunity to independently apply these steps. At each part of the guided and independent design cycles, students will be given opportunities to articulate their ideas, self assess and receive peer and teacher feedback.</p>	<p>Rainy day recesses are notoriously "boring", so what can students do to fix this problem? In this engineering Quest, 2nd graders are challenged to design games and test them out on younger peers to find solutions for those indoor recess dilemmas.</p>	<p>Critical Thinking and Problem Solving: Student tries different techniques/coping strategies to persist through frustrations, challenges, and ambiguity Student uses their own words to accurately explain a concept</p> <p>Agility and Adaptability: Student accepts materials, partners, groups, and tasks without frustration Student integrates others' ideas about their work</p>

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1st: Trash to Treasures	<p>In this Quest, students will deeply engage into creating a recycling campaign. Within this quest, students will learn what recycling is, ways to recycle, and the importance behind recycling. Students will also learn about goods and services, wants and needs. As a final product, students will create a “pop-up” shop to sell their treasure they made out of trash.</p>	<p>After learning about natural resources and renewable energy resources, students will create announcements to encourage our community to step up our recycling, reducing and reusing game</p> <p>After learning about the importance of recycling, reducing and reusing, students will design and create items to sell in a pop up shop to raise money for Lab’s Innovation Fund</p>	<p>Curiosity & Imagination: Student adds a twist on traditional ideas Student is open to new ideas and entertains multiple perspectives</p>
1st: Making a Case for Daylight Savings	<p>In this science, social studies and ELA infused Quest, students deeply explored 1st grade science content surrounding earth and space. Science standards included day and night, rotation of the planets around the sun, our moon and why daylight savings was implemented, from a historical standpoint. They then used this knowledge to engage in a literacy oriented Quest where they learned how to clearly communicate their opinions in both oral and written capacities. A final deliverable took the form of a debate, addressing whether students agreed or disagreed with the relevance of daylight savings today.</p>		<p>Accessing and Analyzing Information: Student analyzes and calmly shares their ideas and evidence for their ideas about others’ work</p> <p>Effective Oral and Written Communication: Students listen and respond during appropriate times in an appropriate manner Students use a writing template to clearly convey their opinion, with clear reasons.</p>

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1st: Urban Green Space - Where the Wildlife Wanders	In this life science infused Quest, students will deeply explore the 1st and 2nd grade content surrounding animal groups, life cycles, habitats and needs. Lab families will be invited to tour the Lab gardens and learn about urban wildlife that will take advantage of this newly developed green space. Students will learn about wildlife in North Carolina, from mountains to piedmont to coastal. They will then focus on urban wildlife in the piedmont and specifically what kinds of creatures we might find within the city of Charlotte. The survival skills of oral and written communication will be focused upon to assist students in clearly explaining their research to our garden visitors.	With non-fiction and nature being two high interest areas for 1st grades, this Quest combines the two in an ELA immersed exploration into local plants and animals. Students will use their new found non fiction reading and writing skills from their ELA classes to create and present their findings to others.	<p>Oral and Written Communication: I can speak clearly, hold eye contact and engage the audience as I share my research</p> <p>Accessing and analyzing information: I can use research and facts I learn in my Quest class to form my own oral presentation I can use a checklist to ensure my oral and written presentations include all that I have want to teach others</p>
2nd: Kitchen Sink Chemistry	In this Quest students will be introduced to the stages of matter and study solids, liquids and gases through a chemistry lens. Throughout the quest, students will be given the opportunity to hear from science and engineering experts to build and consolidate scientific knowledge in this field. Upon encompassing the content, students will design and present their own "how to" video on a phase change(s) of choice. The Quest will culminate in the students presenting their final "how to" videos to Lab students and parents within a private Youtube channel.	Framed as a tool to assist 5th graders study for their up and coming EOGs, 2nd graders will learn about phase changes, chemical changes and all the fun of chemistry as they create How To videos to assist their older peers	<p>Agility and Adaptability: Students adjust to changes and transitions Student personally adapts to group dynamic to accomplish the task at hand Student integrates others' ideas about their work</p>
2nd: Museum Curators/ NC Animal Field Guides	In this course, which is aligned with 2nd grade NC Essential Science Standards of comparing animal life cycles, students will study different kinds of animals and create QR code linked posters for Charlotte Nature 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.	Challenged to be museum curators, 2nd graders will study and focus in on animals found in the mountains, piedmont and coastal regions of NC. They will then create exhibit information posters and guides to present their knowledge to museum visitors at a local Natural History Museum	<p>Accessing and analyzing information: Use books and digital sources to research my chosen NC animal Draw from a variety of sources to develop main ideas and key details about my chosen NC animal Speak clearly, hold eye contact and engage the audience as I share my research</p>

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2nd: In My Shoes	A Walk In My Shoes will coincide with history-focused ELA knowledge units students will be given the opportunity to collaborate with the community, by highlighting important historical figures. Students will create timelines of a chosen historical figure, detailing important events in their lives and contributions they have made to society and the greater world. To celebrate their research, students will link with a local museum to act as curators, teaching those invited about their findings.	Linking with a local history museum, students are challenged with researching and creating interactive exhibits to tell the story of influential historical figures	<p>Curiosity & Imagination:</p> <p>Student investigates a question or topic further to gain a deeper understanding</p> <p>Student creates with authenticity and a personal touch</p>
2nd: Extreme Weather	<p>Students will focus on 2nd grade science standards linked with weather patterns to compare and track weather in our region, compared to other parts of the US and/or countries in the world (depending on where Lab has links to connect classrooms/experts).</p> <p>Discovery Place will help connect content knowledge to real life through delivering a weather class and the NASCAR Hall of Fame has previously been a great resource in connecting an NC born sport to weather around the country at different race tracks.</p>		<p>Critical Thinking and Initiative:</p> <p>Student uses their own words to accurately explain a concept.</p> <p>Student accurately interprets and evaluates presented information.</p> <p>Student continues to revise and improve ideas and work.</p>

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2nd: A Musical Extravaganza	In this Quest, which is aligned to 2nd grade NC Essential Science Standards of sound and materials and Social Studies NC Essential Standards based around recycling, students will to work as a team to design instruments and deliver a performance. Students will be exposed to many ways in which to make and manipulate sounds, and following this will be introduced to the importance of recycling. Together, this content will be the basis for students' team project of designing recycled instruments to create a class band (link with music teacher). Students will work with Discovery Place, local artists, musicians and recycling experts to achieve their final goal, before presenting their project to peers and adults.	Humans have been making instruments for thousands of years. In this sound based Quest, students will learn about sound, design, test, build and perform using homemade instruments, in collaboration with the LS music teacher	<p>Critical Thinking and Problem Solving: Student identifies problems independently Student seeks answers by asking questions, using available resources, and drawing on schema</p> <p>Agility and Adaptability: Student accepts materials, partners, groups, and tasks without frustration Student maintains focus and avoids distractions</p>
3rd: Lab Field Day	In this Quest, students will study force, motion, and energy transfer with the goal of creating field day games for Lab students to enjoy.	Without a large grassy area, Lab students are faced with the challenge of designing a fun field day for K-5 students to include an exciting time for all involved	<p>Agility & Adaptability: Student accepts materials, partners, groups, and tasks without frustration Student integrates others' ideas about their work Student shows patience and flexibility when experiencing issues or challenges</p>
3rd: What in the World?	Focusing on 3rd grade science standards surrounding landforms, will be given the opportunities to compare and contrast NC regions, landforms to those surrounding the Himalayan mountain range (or other contrasting landforms around the world where Lab has links to people living there). Students will learn to read maps and identify regional hazards in order to compare local geography with that of their country/region of focus.	How can we learn first hand about the similarities and differences of our NC terrain and that surrounding the world's highest mountain range, the Himalayas?	
3rd: Voting and Government	Students will be exposed to social studies standards as they create and go through a campaign and voting process in their class.		

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3rd: Biomes Mural	Students will focus on 3rd grade science standards to learn about, compare and contrast 3 different biomes. Students will then work in groups to design and create large wall art that can be hung up in our new building, showing knowledge and delivering asthetically appealing results. Students will collaborate with Discovery Place and local artists to achieve a high quality, accurate mural product.	Students will work to design and create biome murals around the school to beautify and school and relay their understanding of biomes around the world	
4th: The Perfect Cookie	Through developing the perfect chocolate chip cookie, students will learn about the 3 states of matter, chemical and physical changes.	Upon determining their ultimate scientific cookie recipe, each team will have the opportunity to create, brand, package, and market their cookie in a Charlotte Lab School fundraiser	
4th: How Old is Old?	the Earth and the history of our city. Students will begin with science knowledge in "How Old is Old?" and then move onto developing an installation teaching about the history of	Science Based Unit to support ajoining mini Quest	
4th: Uncovering Charlotte's History			
4th: Pop Up Food Court	In this Quest, called Pop-Up Food Court, students will explore how we gain energy and what foods are best for our bodies by developing a healthy recipe to share with the community. All recipes will be shared in a pop-up food court.	After learning about the importance of nutrition and a balanced diet combined with exercise, students are challenged to design and host a pop up food court offering an array of healthy snacks for peers and teachers	Initiative and Entrepreneurship Adaptability and Agility
4th: Lab Saves the Planet	This literacy based course rooted in recycling and caring for our Earth will prompt students to design and launch a campaign to promote ways in which we can look after our local and wider environment through creating sustainability and thoughtful choices in our daily lives.	After learning about ecosystems, students will create informational texts informing others of how they can positively impact their immediate environment for the better	

MIDDLE SCHOOL QUEST COURSE CATALOG

QUEST NAME	COURSE DESCRIPTION
<p>...Another Person's Treasure</p>	<p>Can you make something out of nothing? Do you like to be hands-on and build things? Students will survey our lunch waste, paper waste, and litter to inform them of available "trashed" resources. As a final product students will develop products like milk carton planters, paper jewelry, and kid's crafts that will be shared with their target audience.</p>
<p>Art of Reselling</p>	<p>Do you love sneakers and the culture? Would you call yourself a sneaker head. Come learn the art of being a sneaker reseller. Create your own sneaker business complete with a sneaker portfolio and pop up shop to display your art. Also learn the tricks of the trade to restore and clean old kicks so they look like new -- and might make you a few bucks in resell value!</p>
<p>Community Connectors</p>	<p>In this Quest we will focus on servicing the community through peer tutoring. Quest students will provide additional academic support to the 2nd grade students at the lower school. They will also exemplify the importance of listening and kindness by displaying ways to exercise The Lab Way at all times.</p>
<p>Crafting Community</p>	<p>Students will select a craft of their choice (yarn arts, embroidery, beading, weaving, painting by number, paper crafts, etc.). We will spend our time learning and practicing our craft and also exploring how society has used crafting as a way to build community. Students will engage in craft with a community partner and develop a class craft project as a way to connect with our local community.</p>
<p>Creative Braiding</p>	<p>In this Quest, students will explore the history and cultural relevance of hair braiding. Students will hear from experts on the topic and learn the proper technique for hair braiding. In the end, students will showcase their braiding skills using a portfolio of hairstyles created during the duration of the Quest.</p> <p><i>Students are expected to purchase a mannequin (\$20) for this Quest. Limited available to borrow.</i></p>
<p>Exploring Cultures Through Pastries and Desserts</p>	<p>Through pastry we can learn about civilizations around the world. Students will pick a country to explore their food culture and through this exploration students will learn hands on kitchen and food handling safety, how to read recipes, and the basics in baking. Students will take a tour of Charlotte's bakery offerings, and prepare several dessert items from around the world.</p> <p><i>Students will need to contribute supplies and ingredients weekly for this Quest!</i></p>

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QUEST NAME

COURSE DESCRIPTION

Get Stitches

In this quest students will learn all the **essentials of sewing**. Students will become **experienced tailors, seamers, menders, and repairers** of many types of fabrics. Once we build our skill our final product will be a **quilt each student hand made themselves**.

Students will need to purchase or bring fabric for this Quest!

HIIT Me!

Students in this Quest will learn about **human anatomy, sports physiology, and age-appropriate physical activity**. If you like to be on the move then join this Quest as you explore area recreation facilities like Revolution Park and **create High Intensity Interval Training (HIIT) routines** that you and your peers can test your strength and stamina with. In the end, students will **share their tailor-made workout routines via QR code on the Irwin Creek Greenway!**

Let Us Let the Lettuce Grow

In this Quest, students will be the gardeners, grafters, tenders, and pickers as they explore both **indoor and outdoor gardening**. They will work with **hydroponic gardening systems, box bed and square foot gardening, and possible construct an upcycled greenhouse**. Students will eat what they grow and also **host a pay-what-you-want farmer's basket** in Uptown Charlotte once the plants mature.

Lit 2 Life

In this Quest, we are bringing literature to life. You will **read short stories and excerpts from fiction books based in Charlotte!** We will then **visit the areas or locations that we read about**. In the final weeks, we will **write our own short stories based at Lab and combine them into a book** titled "Lit 2 Lab."

Students will either need to purchase our group read book or check it out from CMLibrary.

Maker's Market

Are you an artisan, artist, maker, or creative? Up the ante and work with other creatives to **establish your works for sale** and learn how to monetize a creative pursuit. You will take them time to **curate a collection of goods and pieces to be sold** at an art popup in Noda towards the end of the Quest. The creative will **keep all the profits** from the items they sale.

Perfectly Polished

Calling all aspiring nail technicians and nail artists! In this Quest, students will learn the full scope of **designing professional nails using acrylics, press-ons, and natural nails**. In learning the appropriate skills for designing nails, students will **hone their entrepreneurial spirit to manage their own nail business**. In the end, students will recruit and **design a set of nails for a paying client**.

This Quest requires students to purchase supplies!

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COURSE DESCRIPTION

School's Out for SUMMER!

In this Quest , students will research local **free and low-cost activities** that families with children ages 5-12 can participate in over the summer. Focussing primarily on enrichment-based activities that grow students in STEM, Humanities, or the Arts to **prevent the "summer slide" of learning**. Students will **take multiple field trips to test out the activities, gather relevant information/photos, then publish the list** for kids, by kids on the website Charlotte on the Cheap.

Splash Page!

Comics are a great visual story-telling medium for so many different purposes, from superheroes, to non-fiction, to biographies, and more. This quest will introduce you to the **process and techniques to plan, create and publish your own graphic story**.

Video Game Creators

In this Quest, students will **create a video game or animation** to share with others that teaches them something new. This can include basic math or reading skills to help students learn. A weekly competition will also take place to encourage students to continuously develop their **coding, design, and creation** skills.

What's Your Passion?!

(6th grade only)

Students will **explore what they are passionate about** and how that may translate into a **professional career that they will love**. The sky is truly the limit in this Quest! After thorough exploration and practice in their passion, students will present what they've learned to their family and peers.

HIGH SCHOOL QUEST COURSE CATALOG

QUEST NAME	COURSE DESCRIPTION
<p>Battle Bots!</p>	<p>In this quest we will design several lightweight battle bots to compete in local battle bots competitions. This quest will challenge you to learn new technology skills and apply them in ways to outmaneuver your opponent so be ready for a challenge!</p>
<p>The Book or The Movie?</p>	<p>Lab's take on a traditional "Film as Literature" course, students will read a popular "made for the movies" book then watch the film to compare the book copy to the movie script. Students will meet with filmmakers, cinematographers, and authors to learn about the interesting relationship between all stakeholders to take a popular book to the silver screen. In the end, students will hone their inner critic and host a HS Movie Night complete with their own Rotten Tomatoes critiques and a discussion about the age-old question: Which is better: the book or the movie?</p> <p><i>This Quest requires parent/guardian permission to watch and read PG-13/M movies and books.</i></p>
<p>Chess Champs</p>	<p>Channel your skillset as a chess aficionado to better hone your skills as you work and learn from Grand Masters. In learning the ropes of the chess – and perfecting your own strategy – you will also learn about managing a nonprofit organization that teaches chess to younger students. Taking your knowledge of chess paired with the skills you'll learn to instruct younger students, you will host and manage a middle school chess competition. You will recruit, train, and facilitate the competition to crown Lab's middle school chess champion!</p>
<p>Costume Creation Craze</p>	<p>In this quest, we will use our knowledge of upcycling, sewing and other techniques to make costumes for the Spring Musical – The Wizard of Oz</p>
<p>The Flex</p>	<p>In this Quest, students will learn the ropes of small business management. From taxes, to inventory, students will be the collective owners of a business to meet the needs of their target customers. In the end, students will host a pop-up for Lab's first ever student-led business: The Flex!</p>
<p>Genius Hour</p>	<p>Take a page out of Google's playbook and set aside time for an abbreviated independent study. Students will work independently under the guidance of a teacher to pursue a topic that's not traditionally taught in the public school setting. At the end, students will share their findings, new-found expertise, and information with the audience most appropriate for their topic.</p>

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<p>The Lab Voice</p>	<p>You each have unique interests, perspectives, and ideas, and in this quest we will turn them into your own creative writing using prose, poetry, and graphic comic strip design. We will learn the ropes of professional publishing from beginning to end, including: writing compelling stories, giving and using feedback, designing a beautiful layout and cover, and using publishing software. Together we will publish the 6th Edition of The Lab Voice, and sell copies via Amazon!</p>
<p>Maker's Market</p>	<p>Are you an artisan, artist, maker, or creative? Up the ante and work with other creatives to establish your works for sale and learn how to monetize a creative pursuit. You will take them time to curate a collection of goods and pieces to be sold at an art popup in Noda towards the end of the Quest. The creative will keep all the profits from the items they sale.</p>
<p>R3CYCL3</p>	<p>Want to see where the world's of sustainability, engineering & design, and science all collide? Students will investigate the problems of pollution, plastic waste and recycling. They will address the problems by running an education campaign, a plastic collection, and creating a product out of recycled plastic to use in classrooms in school. Students will learn how to engineer trashed or recycled goods into usefil items like clocks or other items!</p>
<p>RepurpUS'd: Met Gala Edition</p>	<p>Students will collaborate to a design specific fashion collection centered around a theme - similar to the Met Gala. Each team will select a designer, marketer, and photographer that will create one to two pieces for a seamless collection with all Quest teams. This theme specific quest will challenge students to curate out of the box runway fashion ideas. Final runway looks displayed at Fashion Show.</p>
<p>Youth and Law</p>	<p>Examine current issues in law and policy with a focus on the potential effects on certain subpopulations of vulnerable youth. The Quest will focus on education, school to prison pipeline, private(for profit) prisons, recidivism, rehabilitation quality, and the supreme court decision on capital punishment for juveniles. Students will analyze cross-section themes of poverty, economic justice, race, and youth voice. By the end of the Quest , students will have developed a better understanding of how incarceration, rehabilitation, and policy in youth law affect the lives of juveniles who become part of the system.</p>