

# ELO Design Challenge: Final Evaluation Report 2017-2019

Prepared by: Michelle C. Howell Smith, Ph.D. Jared Stevens, M.A.

Questions concerning this report can be addressed to: Michelle C. Howell Smith, Ph.D. Nebraska Academy for Methodology, Analytics & Psychometrics mhowellsmith@unl.edu 201 Louise Pound Hall University of Nebraska – Lincoln Lincoln, NE, 68588-0365



Nebraska Center for Research on Children, Youth, Families & Schools



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# Section I: Project Background Nebraska *ELO Design Challenge*

High-quality afterschool and summer programming serve an important role in Nebraska communities. They engage students emotionally, intellectually, and socially (National Research Council, 2015). They provide safe and caring supervision for children who might otherwise be unsupervised outside of school hours, they also discourage negative behaviors, such as aggression and drug and alcohol use (Vandell, Reisner, & Pierce, 2007). They also present an opportunity to reinforce and enrich school day learning, hence, afterschool and summer programming have the potential to help students meet their academic goals. Research has shown that students in afterschool programs attend school more often, get better grades and test scores, make gains in reading and math, and improve their work habits and classroom behavior (Afterschool Alliance, 2014). The need for these types of programs is even more profound for students from low income families who typically lose two to three months in reading achievement and two months of math skills during the summer months (Alexander, Entwisle, & Steffel Olson, 2007). Yet despite these benefits, only 18% of Nebraska children participate in an afterschool program and only 19% of Nebraska families indicate that at least one child attended a summer enrichment program, although the demand for such programs is higher than our state's current capacity (Afterschool Alliance, 2014).

Beatrice Public Schools received funding from the Nebraska Department of Education's Innovation Grant Phase I Developmental Grant fund to support an Expanded Learning Opportunity Design Challenge (ELO Design Challenge). The project is led by Beyond School Bells (BSB), statewide public-private partnership within the Nebraska Children and Families Foundation, with support from Nebraska Extension, educational advocates, and community stakeholders. The ELO Design Challenge is a statewide partnership to not only begin to close the gap between the demand for and access to high-quality afterschool and summer programing by creating five new programs in Nebraska communities, but also to serve as a prototype that would allow other Nebraska communities to develop economically viable models of summer and afterschool programming supporting K-8 students and school success. The short-term goal of the ELO Design Challenge is to develop ELO programming powered by community partnerships that align with the Nebraska State Board of Education position statement S5-Expanded Learning Opportunities (2017) and supports the tenets of the Nebraska Department of Education's Accountability for a Quality Education System, Today and Tomorrow (AQuESTT; 2014), the Nebraska Department of Education's Career Readiness Standards (2011), and the Nebraska Department of Education's STEM (Science, Technology, Engineering and Math) Approach (2016). The long-term goal of the ELO Design Challenge is the creation of new models of ELO programming and enhancement of existing programs by providing K-8 students across Nebraska with additional hands-on, project-based learning opportunities enhancing student success.

Five communities, currently considered "Afterschool Deserts" and without existing afterschool programs, were selected to participate in the *ELO Design Challenge*:

1. Auburn Public Schools – 866 students, 39% Free and Reduced-Price Lunch



- 2. Beatrice Public Schools 2,150 students, 49% Free and Reduced-Price Lunch
- 3. Boone Central Public Schools 600 students, 25% Free and Reduced-Price Lunch
- 4. Centura Public Schools- 490 students, 35% Free and Reduced-Price Lunch
- 5. Grand Island Public Schools 9,550 students, 65% Free and Reduced-Price Lunch

Additionally, materials developed through *ELO Design Challenge* activities have also been piloted in communities participating in BSB's Statewide Coalition of ELO systems (e.g., Omaha, Lincoln), which constitute a large majority of Nebraska's highest need areas.

# **Section II: Evaluation Activities**

Faculty and graduate research assistants from the Nebraska Academy for Methodology, Analytics and Psychometrics (MAP Academy), housed at the Nebraska Center for Research on Children, Students, Families, and Schools (CYFS) at the University of Nebraska-Lincoln, conducted the independent evaluation.

# **Evaluation Design**

As reflected in the overall *ELO Design Challenge* logic model (see Appendix A), there were three planned phases for the *ELO Design Challenge* development, implementation, and testing:

- Phase I- Inputs (i.e., listen/observe/design and ideate/prototype)
- Phase II- Activities (i.e., implement, listen/observe/redesign)
- Phase III- Outputs (i.e., finalize/dissemination)

The five communities participating in the *ELO Design* Challenge varied from each other in terms of the specific educational aspects they wanted to focus on [e.g., Science, Technology, Engineering, and Mathematics (STEM)], methods for implementing activities (i.e., afterschool, pop-up events), duration of programming (i.e., a few days after school, a two-week period), previous experience (i.e., previous summer school programming, no programming), staffing model (i.e., full time staff members, part-time), and timeframe for programming (i.e., August start date, January start date). Given the variation across contexts, MAP Academy staff selected a process-oriented approach to capture the progress in the five participating communities. That is, rather than having a single evaluation comprised of five communities, we decided to implement a multiple case study approach where we complete five evaluations, one for each community. This approach is the best way to highlight the specific goals of each community and progress towards those goals, given context specific resources and infrastructure for implementing ELO Design Challenge activities. MAP Academy staff helped each community outline their specific goals to develop five logic models, one for each community (see Appendix B). Logic models were used in conjunction with overall evaluation questions to evaluate community-specific progress as well as progress towards the ELO Design Challenge goals. Overall ELO Design Challenge evaluation questions focus more broadly on replication, scalability, and sustainability as they relate to the resources and activities of the different ELO programs. Together this combination of community specific and broad grant focused evaluation guestions helped address evaluation needs from the multiple stakeholders involved in ELO Design Challenge activities.



# **Evaluation Questions, Data Sources, and Procedures**

Given the different stages of ELO implementation across the five communities, data sources varied by community. Across communities, MAP Academy staff collected various data sources (e.g., photographs, lesson plans, flyers, website information, evaluation forms) provided by each of the five communities to document their activities. In-person observations were also conducted at each of the five communities.

Table 1 outlines the initial evaluation questions MAP Academy developed to capture the *ELO Design Challenge*'s effectiveness. These evaluation questions were guided by the overall ELO Design Challenge logic model (see Appendix A) and data sources include both qualitative and quantitative methods.

**Table 1:** Initial evaluation questions and data sources.

Focus area: <i>ELO Design Challenge</i> Programs and Materials	Sources
<ol> <li>To what extent are the developed <i>ELO Design Challenge</i> programs and materials aligned with: a) factors identified by key stakeholders (students, existing staff, education and community leaders); and b) ELO Quality Standards, Nebraska Career Readiness Standards, and NDE STEM approaches?</li> <li>To what extent do the developed <i>ELO Design Challenge</i> programs and materials promote student engagement and success in a variety of ELO settings?</li> <li>To what extent can the developed programs and materials be implemented in an approach suitable for multiple contexts (e.g., afterschool and summer)?</li> </ol>	<ul> <li>Interviews/Focus groups</li> <li>Observation</li> <li>Document analysis</li> <li>Survey data</li> </ul>
Focus area: Design Based Research (DBIR) Pilot Testing	
4. To what extent are findings from the DBIR pilot testing activities used to inform: a) updated programs and materials; and b) activities to encourage student participation and engagement?	<ul> <li>Interviews/Focus Groups</li> <li>Observation</li> <li>Document analysis</li> </ul>
Focus area: ELO Design Challenge Program	
<ul> <li>5. To what extent does the <i>ELO Design Challenge</i> program support: a) innovative data collection methods; b) development of new ELO programs; c) enhancement of existing ELO programs; d) strategies for developing new approaches for ELO staffing; e) financial strategies to support the growth of ELO programs; f) collaboration among partners?</li> <li>6. What factors impode or facilitate programs toward <i>ELO</i>.</li> </ul>	<ul> <li>Interviews/Focus groups</li> <li>Document analysis</li> <li>Survey data</li> </ul>
6. What factors impede or facilitate progress toward <i>ELO</i> <i>Design Challenge</i> goals?	
<ul> <li>7. What progress has been made toward "scaling up" activities and strategies and to what extent does the project serve as a model for other groups or partnerships?</li> </ul>	



Leadership at each of the communities were interviewed in the summer/fall of 2017, spring of 2018, fall of 2018, and fall 2019 using a common interview protocol. Each site was visited, and observational data was collected at least two separate occasions during the grant period. Observations and interviews were also conducted by MAP Academy staff during the 2017 and 2018 spring kick off meetings. Additional data sources (e.g., observations, interviews) were collected by MAP Academy staff at various pilot activities in Lincoln throughout the 2017-2018 school year.

MAP Academy staff worked with each of the five communities to identify relevant sources of evidence to add to their case descriptions and the larger "Toolbox" of examples/guides for the ELO system (see Appendix C). In some cases, MAP Academy staff helped communities develop surveys and evaluation protocols for use with their students, parents, and/or staff.

Table 2 demonstrates the alignment of the *ELO Design Challenge* evaluation elements with the Nebraska State Board of Education position statement S5-Expanded Learning Opportunities (2017) and supports the tenets of the Nebraska Department of Education's Accountability for a Quality Education System, Today and Tomorrow (AQuESTT; 2014), Nebraska Department of Education's Career Readiness Standards (2011), and the Nebraska Department of Education's STEM (Science, Technology, Engineering and Math) Approach (2016).



# Table 2: Nebraska *ELO Design Challenge* Evaluation Elements Alignment

Evaluation Elements – Program Level	ELO Position Statement	AQuESTT	Career Readiness Standards	STEM Approach
School Partnerships	Intentional programming aligned with the school day program	Educational Opportunities & Access	Applies appropriate academic skills	Collaborative school- based experiences
Administration & Management	Administration with sound management and well-developed systems	Educator Effectiveness		
Prepared Staff	Diverse, prepared staff including certificated educators	Educator Effectiveness		
Assessment	Ongoing assessment and improvement	Assessment		
Transitions	Participation, access and support during transitions	Transitions		
Family Engagement	Family engagement	Positive Partnerships, Relationships, & Success		Collaborative family- based experiences
Community Partnerships	Community-school partnerships and resource sharing	Positive Partnerships, Relationships, & Success	Contributes to employer and community success	Collaborative community-based and work-based experiences



# Table 2: Nebraska ELO Design Challenge Evaluation Elements Alignment (cont.)

Evaluation Elements – Student Level	ELO Position Statement	AQuESTT	Career Readiness Standards	STEM Approach
Engaged, Hands-On Learning	Engaged learning			Engagement in hands- on, authentic, and contextual learning experiences
Career Awareness & Exploration	College/career awareness and readiness	College, Career, & Civic Ready	Manages personal career development	
Technology		College, Career, & Civic Ready	Utilizes technology; Applies appropriate technical skills	
Critical Thinking & Problem Solving			Uses critical thinking; Makes sense of problems and perseveres in solving them	Critical Thinking
Innovation & Creativity			Demonstrates innovation and creativity	Creativity
Health & Wellness	Safety, health, and wellness		Attends to personal and financial well-being	
Communication			Communicates effectively and appropriately	Communication
Student Leadership			Models ethical leadership and effective management	Collaboration
Collaboration & Teamwork			Works productively in teams and demonstrates cultural competency	Collaboration



# **Evaluation Development Activities**

## Logic Model Development

MAP Academy staff believe it is important for each location to determine their evaluation criteria (i.e., goals) since each ELO location is unique. Therefore, we interviewed the superintendents, principals and program directors in the *ELO Design Challenge* communities in the fall of 2017 to develop individualized logic models that reflect the unique needs and resources of each community. These key stakeholders were asked to outline the goals of their ELO program. Following our initial interviews, we created logic models for each site (see Appendix B). Stakeholders were provided with a copy of the completed logic model for review and feedback. Additional components were added as needed throughout program implementation.

# **Career Survey Development**

The MAP Academy evaluation team developed and piloted a measure for use in ELO programs related to careers. The initial version of the instrument included items based on the SYWTBA program and the Nebraska Career Readiness Standards. In the fall of 2017, the MAP Academy team piloted two versions of the measure at Arnold Elementary; one had post-only format questions and the other had post as well as retrospective-pre questions. Based on feedback from stakeholders, the assessment was revised to be shorter and primarily aligned to the Nebraska Career Readiness Standards. In particular, the MAP Academy team worked to decrease the number of questions and make questions more broadly applicable to multiple programs.

In the spring of 2018, the MAP Academy team piloted the shorter version of the assessment using the post/retrospective-pre format also at Arnold Elementary. During this pilot, the MAP Academy team tested multiple formats for asking retrospective-pre questions with students (see examples below). The MAP Academy team also conducted brief cognitive interviews to evaluate the appropriateness of retrospective questions with younger students. Overall, the MAP Academy team found that the retrospective questions worked well with students in this program, especially when the retrospective question followed immediately after the typical post-survey question. Some items did not perform as intended, so additional testing is needed to evaluate these items and/or develop new items.



#### Example retrospective format 1 (grouped by question)

#### Problem Solving

Think about how you feel **<u>RIGHT NOW</u>** because of your experiences in your afterschool program.

After this program, do you like to be given a problem to solve?

- Yes
- □ Sort of □ No

NOW, think back to how you felt **<u>BEFORE</u>** you started your afterschool program.

Before this program, did you like to be given a problem to solve?

Yes
Sort of
No

#### **Trying New Things**

Think about how you feel **RIGHT NOW** because of your experiences in your afterschool program.

After this program, do you like to try new things? ☐ Yes ☐ Sort of ☐ No

# Example retrospective format 2 (grouped by time)

#### Learning About You NOW

Think about how you feel RIGHT NOW because of your experiences in your afterschool program.

- After this program, do you like to be given a problem to solve?
   Yes
  - □ Sort of □ No
- 2. After this program, do you like to try new things?
  - Sort of
  - 🗆 No
- 3. After this program, do you think it is important to be kind?
  - □ Yes
  - Sort of
  - 🗆 No

#### Learning About You THEN

Think back to how you felt **<u>BEFORE</u>** you started your afterschool program.

Before this program, did you like to be given a problem to solve?

Yes
Sort of
No

Before this program, did you like to try new things?

Yes
Sort of
No



# Section III: Program Development

This section of the report provides brief descriptions of the program development activities conducted throughout the *ELO Design Challenge*.



# Mobile Think Make Create (TMC) Laboratories

Beyond School Bells (BSB) developed mobile Think Make Create laboratories (heretofore referred to as mobile TMC labs) for the five communities included in the *ELO Design Challenge*. A TMC lab is 6x12 foot trailer ELO programs can use to hold and move materials required for programing. Designed to maximize storage and portability, these mobile "labs" facilitate learning opportunities for use at ELO program sites and/or community-based sites. Mobile labs are designed to spark creativity, innovation, and design, by providing a "low-cost entry point for Nebraska students to tinker, explore, and problem-

solve, while helping to promote long-term sustainability for rural ELO programs" (BSB; http://beyondschoolbells.org/mobile-maker-space/about-tmc-labs.html). The BSB website also outlines the goal of the mobile TMC labs to serve as a core feature of Nebraska ELO programs by fostering the tinkering, hands-on learning, and inquiry needed to develop the next generation of creative problem solvers in Nebraska.



Materials included in the TMC lab are customized according to each community's needs, but the most common items found in the trailer often include K'nex, Legos, electronics supplies, tools, arts and crafts supplies, gardening tools, STEM manipulatives (e.g., marble maze, play-dough), and STEM activities and kits (BSB; http://beyondschoolbells.org/mobilemaker-space/whats-inside.html). To help communities manage their mobile TMC labs, BSB and their ELO fellows developed a short video demonstrating set up and take down steps for the trailer (<u>https://www.youtube.com/watch?v=-</u> kwu8p7rDY0&feature=youtu.be).

Beatrice was the first site to receive their trailer in summer of 2017. The last site to receive their trailer was Auburn, who received their trailer in late fall 2017. Each community took a unique approach to how they used their TMC labs. For example, Grand Island uses their TMC lab in two-week residencies at each of their elementary schools to provide STEM enrichment programming. Other sites, such as Boone Central, largely keep the TMC lab stationary and use the supplies and programs at a single site.





#### **Pilot Sites**

### Park Middle School

Pilot events were held during summer 2017 in the afternoons during Boys and Girls Club (BGC) activities at Park Middle School in Lincoln, Nebraska. Students attending BGC activities ranged in age from late elementary to early high school. MAP Academy staff observed early pilot testing of Mission to Mars (M2M) program and TMC lab makerspace activities. Some of the TMC lab activities observed included, but were not limited to, a circuit flower garden, marble drop design challenge, bridge building design challenge, and Lego and K'nex building activities. An extension specialist led an activity using an interactive sand table where students had the opportunity to learn about elevation, depth, and typography using the interactive sand table.

# **Arnold Elementary**

MAP Academy staff also observed several pilot activities during summer 2017 at Arnold Elementary School for students participating in a summer Maker club. Students at Arnold ranged from kindergarten to third grade, with primarily first and second graders. MAP Academy staff observed students participating in activities such as Mission to Mars (M2M) and stations with specific Design Challenges (e.g., marble drop design challenge, sand table typography, K'nex, Legos, spaghetti and marshmallow tower design challenge). MAP Academy staff also observed a "Junior Jobs Club" at Arnold throughout fall 2017 and spring 2018.

# **Dawes Middle School**

MAP Academy staff observed pilot activities between students from Dawes Middle School and a local retirement community (Sumner Place) in summer 2018. Students participated in maker activities on teams with senior citizens at the retirement community. MAP Academy staff discussed the experience with students, seniors, and facilitators from Dawes Middle School. Students and seniors reported enjoying the collaboration and ability to meet new people. Seniors were especially excited about the different maker activities, as some had never had a chance to experiment with the materials used that day. Facilitators were excited to provide students with leadership opportunities (i.e., leading activities), communication experience with older adults, and exposing students to potential career options.

# **General Pilot Feedback**

MAP Academy staff were able to debrief with the leadership team staff (e.g., Beyond School Bells staff, Nebraska Extension) following each observation to review approaches and activities that worked well with students. Across the initial observations, MAP Academy staff noticed the lack of hands-on and minds-on activities. That is, students were generally involved with activities (i.e., hands-on), but there were often gaps in connecting the activity to larger learning goals (i.e., hands-on and minds-on). The BSB and Nebraska Extension staff were then able to adjust the activities based on our feedback.



# **Programming Development**

## **Mission to Mars**

Mission to Mars (M2M) is a program that presents students with different design challenges for living on Mars. MAP Academy staff observed pilots of this activity at both Park Middle School' summer Boys and Girls Club (grades 3-8) and Arnold Elementary School's summer makerspace club (grades K-3).

During the initial test phase of M2M, MAP Academy staff observed students struggling with understanding the directions, using the materials, and engaging with the activity. These observations were mirrored by comments from the participants regarding the clarity of the instructions, types of materials, and activity objectives. MAP Academy staff were able to

debrief with BSB and Nebraska Extension staff on the implementation of the M2M program. Students needed more direction in terms of project objectives, help navigating the reading materials, and wanted examples. In response to this feedback, BSB made modifications to the materials and directions for M2M before rolling out the program to the *ELO Design Challenge* communities.

Centura and Grand Island made additional modifications to the M2M program to make it more accessible to students of different ages or to fit their time frame and program structure.

Grand Island also uses M2M as an afterschool club. Jason Wesseman from GIPS led the program, while a certified teacher, who previously served as a NASA ambassador through Strategic Air Command, made



additional modifications to the M2M program based on their professional experience and background with science and science teaching. They graciously shared their modifications and recommendations for future implementation with Max Cuppens from BSB, who originally developed the program. BSB has also included the ELO fellows (described below) in conversations on additional enhancements to this program.

# So You Wanna Be A...

MAP Academy Staff visited Arnold Elementary School several times during the 2017-2018 school year to observe the pilot of the BSB program called "So you want be a…" (SYWTBA) at their Junior Jobs Club. The SYWTBA program includes five career explorations units. Each unit includes a series of activities that introduce students to different jobs in each career field. The units include the following career fields:

- 1. Business
- 2. Health Sciences
- 3. Agriculture, Food, and Natural Resources
- 4. Communication and Information Systems
- 5. Education and Human Sciences



On Average, 15 students ranging from third to fifth grade participated in the Junior Jobs Club, which met twice per week throughout the semester. There were two sessions of the club—one during fall 2017 that covered two career fields and another in spring 2018 that covered three. While the program was designed to be carried out across an entire academic year, participants were different across sessions, except for one student who participated for the full year.

MAP Academy staff observed that the facilitator, Dayna Krannawitter, integrated additional activities with the SYWTBA program. During an interview at the end of the year, Dayna reported roughly 65% of her program came from the SYWTBA program, while everything else was of her own creation or freely available online career resources. As an example of activities, Dayna and students took several field trips where they toured local businesses that were part of the career field being covered in a unit. Dayna highlighted how much students enjoyed these trips.

The club also added a weekly makerspace project on top of the SYWTBA program that either had something to do with the career unit or a 21<sup>st</sup> century skill needed for that career field. During an interview in the spring, students that participated in the entire year of programing shared that one of his favorite activities was the makerspace they did during the Agriculture, Food, and Natural Resources unit because they built a vertical garden that was placed in the school cafeteria.

Dayna used a great deal of activities included in the SYWTBA program. She particularly liked activities where students were asked to brainstorm different types of jobs that were part of the career field she was highlighting at the time. MAP Academy staff saw this activity used during several different in-person observations. Visits from community members at the school were also very popular with the students.

Although the SYWTBA program provided a solid foundation for the Junior Jobs club, Dayna experienced several challenges, such as the volume of material to cover. Even with an entire year and several days of programing each week, she was not able to cover the entire program. For instance, she cut the projects associated with each career unit that were supposed to give students an experience with what it would be like to work in a specific industry. Dayna believed these projects were too hard for younger students and would take too much time. She also mentioned her staff, two paid college students, had difficulties leading the program at times. Dayna also thought the program would benefit from the inclusion of a highquality career interest inventory so facilitators can focus on career units that match students' areas of interest. MAP Academy staff shared this feedback with Joshua Jones, the creator of the SYWTBA program. He reported similar findings from other afterschool programs and is currently in the process of creating an updated edition based on these findings.

# Marble Maze

The marble maze design challenge was piloted at both Arnold and Park during the summer of 2017 with students ranging from second to eighth grade. The activity involves mounting a series of slides, funnels, and other materials to a peg board so that a marble will have the slowest descent through the maze. During these pilots, the MAP Academy team



observed evidence of excitement and enthusiasm as students worked through the marble design challenge. However, team members also noticed that younger students (i.e. second and third graders) struggled with the learning concepts in the activity. The MAP Academy team recommended adding an introduction and some general guidance for the activity, especially with younger students.

# Section IV: Leveraging the Innovation Grant Funds

One of the outcomes of the investment in the *ELO Design Challenge* project was the opportunities it created for Beyond School Bells to obtain separate funding that provided additional support to the *ELO Design Challenge* communities as well as other communities in Nebraska. These funds supported additional TMC Labs in additional communities throughout the state, enhanced programming at each *ELO Design Challenge* site, and supported program development for activities that can be used at any ELO program.

# TMC Labs

After delivering the initial 5 TMC Labs to the *ELO Design Challenge* communities, other ELO programs started taking note. Beyond School Bells was able to leverage the design plans from this project to build and deliver 20 TMC labs to the following 12 additional Nebraska communities: Chadron, Kearney, Kimball, LaVista, Lexington, Lincoln, North Platte, Omaha, Oshkosh, Schuyler, Scottsbluff, and South Sioux City. Thus, the original investment of the *ELO Design Challenge* funds in 5 TMC labs was extended with other funding for a total of 25 TMC Labs in 17 communities across the state. The design plans for the TMC Labs have also been licensed to three other states (Wyoming, South Dakota, and Louisiana) for use in their ELO programs.

# ELO Design Challenge Program Enhancement

Across the *ELO Design Challenge* grant period, Beyond School Bells was able to raise an additional \$250,000 to enhance the programming in the *ELO Design Challenge* communities. These funds were leveraged to provide a community garden project and community innovation projects at each site, as well as funding additional makerspace materials and a summer transition program at Grand Island.

# **Community Gardens**

Beyond School Bells was able to secure additional \$50,000 in funding for was a community garden project for each ELO community (\$10,000 per community). Greg Fripp, the executive director of Whispering Roots (<u>http://whisperingroots.org/</u>), provided support for the community garden projects. Whispering Roots uses cutting edge technology and urban agriculture to grow healthy food and expose children to great tasting nutritious food options through hands-on experiential learning and growing activities. Greg conducted planning sessions with each community to customize their garden program. Some of the updates regarding community gardens include:

- Auburn's leadership discussed creating raised beds, sending seedlings home for students to plant later, and collaborating with local community members (e.g., master gardeners) for gardening activities.
  - Auburn has also indicated they wrote a grant for a greenhouse, to go along with the community gardens



- Beatrice's community garden effort has been led by one of the site supervisors, who is a "master gardener" and they have put together two gardens, one for K-2, and one for grades 3-5
- Boone Central collaborated with Future Farmers of America (FFA), local master gardeners, and others to build themed gardens at a local nursing home (see Boone Central case descriptive for more detail).
  - 10 garden beds have been built out of cedar wood, and the science teacher, school nurse, and a retired teacher all helped with the design of what will go in the gardens
  - The gardens were planted during the first week of the summer program; the flowerbeds were amazing, but the vegetables and fruit were not as successful
  - Students in the afterschool program generally water the gardens during the week
- Centura worked with FFA to run a gardening club and adding additional gardening units to the program.
  - Centura currently has gardens in eight classrooms and one for the afterschool program; the afterschool program will oversee collecting harvest and have their own little farmer's market
- Grand Island has four schools participating in the community gardens, one middle school and three elementary schools
  - An inside garden was put in at the middle school, while outside gardens are going in at the elementary schools over Christmas break
  - Grand Island has expressed interest in collaborating with community partners and local clubs, like FFA

# **Community Innovations**

Beyond School Bells secured an additional \$100,000 to provide each *ELO Design Challenge* site \$20,000 to fund innovative community programs.

# Additional Makerspace Materials

Beyond School Bells was able to secure \$50,000 in additional funding so that each of the 14 elementary schools in Grand Island could have their own makerspace materials in addition to the annual two-week residency of the TMC Lab. This allowed teachers to provide on-going makerspace activities throughout the school year.

# Additional Summer Programming Support

Beyond School Bells was able to secure \$50,000 in additional funding so to support a middle school transition program in Grand Island. The program, called Jump Start, helped transition 5<sup>th</sup> graders into 6<sup>th</sup> grade at Grand Island middle schools. Students were introduced to their teachers, learned their way around the school, and had a preview of new experiences they would have once they reached middle school. Examples of activities included a scavenger hunt to help them learn their way around the school, teaching mindfulness strategies to help students deal with new middle school responsibilities, and team-building for the new groups of students that they would have classes with for the coming year.



# **Additional Programming Development**

## **UNL Honor's Program**

Beyond School Bells was able to partner with the UNL Honor's Program which offers paid, experiential learning opportunities for Honor's Program students who lead a semesterlong afterschool club. Programs develop by Honor's Students are then made available online for other ELO programs to use. So far, this partnership has developed 32 programs that have been downloaded 767 times from <u>go.unl.edu/hpclubrepository</u>. Programs and authors include:

- 1. <u>"How It Works" After-School Club</u>, Katharina Dvorak
- 2. <u>3-D Mapping | Topography</u>, Dana Hoppe
- 3. Adventure Book Club, Rose Wehrman
- 4. Adventure Book Club: Charlie and the Chocolate Factory, Rose Wehrman
- 5. Art Club, Elizabeth Griggs
- 6. Arts Around the World, Katja Roberts
- 7. Computer Science Club, Jack Rowen and Lara Quiring
- 8. Creative He(arts) Club, Lizbeth D. Chavez and Karen Martinez
- 9. Drumline Club, Jared Syed Noetzel and Paul Umshler
- 10. Engineering Explorers Club, Mia P. Sharpnack and Adam D. Schneider
- 11. Exploring Engineering Club, Samantha Corey and Stephen Yaghmour
- 12. Franish Club, Exploring the French and Spanish Language, Chloe Molnar and Daniela Asplin
- 13. Full STEM Ahead, Shawn Knowlton and Megan Elbel
- 14. Girls Who Code 3rd-5th, Khristina Polivanov
- 15. <u>Health and Nutrition</u>, Sydney Williams and Lauren Larson
- 16. <u>Healthy Habits After-School Club</u>, Taylor Schendt
- 17. Healthy Hedgehogs After School Program, Sophie Johnson
- 18. Knit Kit: Create, Craft, and Code, Alison Cloet
- 19. Living World, Celeste Kenworthy and Aurora Kenworthy
- 20. Mad Scientist Club | Experiments, Nora Husein
- 21. Mad Scientists Club, Olivia Taylor
- 22. Makerspace Club, Carolyn Brady
- 23. Mind Craft, Dana Hoppe, Alison Cloet, Mickey Tran, and Caleb Kowalsk
- 24. Museum Exploration Club, Aurora Kenworthy
- 25. Mythology Club, Lauren Dubas
- 26. Nebraska's Wildlife Club, Alexandrea E. Otto
- 27. Putting the I in Science, Naomi Kirkvold
- 28. Space Venture, Mickey Tran
- 29. STEM Opportunities, Huey-Xian Kelly Wong, Madeleine Rauhauser, and Annie Morgan Nelson
- 30. The Future is Now Science Club, Shane Stan
- 31. The Great Escape, Caleb Kowalsk
- 32. Tour the World Club, Joy Karges



# **ELO Design Fellows**

In the spring of 2018 Beyond School Bells secured separate funding to engage college students (ELO Design Fellows) in the ELO grant project. Four fellows were chosen with skills in areas such as computer science, fashion design, videography, mechanical engineering, and art. The general purpose of the ELO Design Fellows was to develop program and materials, create training videos, and assist with other design activities. ELO Fellow have completed training videos for the TLC labs and additional program ideas.

# **Design Intensives**

During the summer and fall semester of 2019 Beyond School Bells hosted several "Design Intensive" sessions with a total of 24 college students from the University of Nebraska Lincoln's Honors Program, Wayne State College, and other universities to develop additional programming for ELO programs. The design intensive sessions yielded programming in the areas of the environment, engineering, wind energy, and updates to "So You Wanna Be A...". An additional "Design Sprint" was held in conjunction with the University of Nebraska-Lincoln, Duncan Aviation, and Lincoln Public Schools CLCs to develop an ELO program on aviation. These materials will be available through the Beyond School Bells ELO Toolbox.



# **Section V: Case Descriptions**

This section of the report provides case descriptions for each of the five communities included in the *ELO Design Challenge*. Case descriptions provide a general overview of each site's program, goals, staffing model, programming highlights, sustainability plans and lessons learned.

# Auburn

# General Program Overview/Background

Auburn officially started their program, the "DOGS Academy" named after their school mascot, the Bulldog, in January 2018. In the fall of 2017, directors met with Jeff Cole from Beyond School Bells to explore existing ELO programs across the state and then visited two afterschool programs (Crete and York) to bring more ideas to their program. Program directors performed a needs assessment with parents of school-aged children and daycare providers. The parent survey revealed most families were currently relying on care from family members both afterschool and during the summer. The needs assessment found most parents believed a reasonable amount to pay for afterschool care (per month per child) was \$75 or less. Of the 72 parents who completed the survey (30% return rate), 59 (82%) indicated they would enroll their children in the afterschool program. The survey also found parents were especially interested in programming centered on academic help/tutoring, arts, and recreation/sports. Another survey was sent to local daycares. Of daycares that responded, 80% indicated there was a need in the community for school-aged afterschool care. During an interview with MAP Academy staff in fall 2017, program directors mentioned daycares in Auburn are overpopulated with pre-school aged children and do not have the capacity to provide care for the limited hours needed for school-aged children.

By mid-September 2017, the directors compiled the data, developed an action plan, and presented it to their steering committee. From mid-September to late October, program directors were tasked with putting the action plans in place and making sure everything was ready to go for the program. In November, directors were sent out "on the recruiting trail" to get students enrolled in the program and get the community involved in the program. Program directors estimated the January start data would lead to lower enrollment than if they had started in the fall but thought a smaller cohort of students would provide them with an opportunity to work out some kinks and test out different activities. Spring attendance ranged from 27 to 42 students per day with an average daily attendance rate of about 34 students per day. The summer 2018 program started with approximately 20 students attending each week but grew to just under 100 attendees each week. The average attendance for the afterschool program during the 2018-2019 school year was 47. Auburn did not offer any programming during the summer 2019. The fall 2019 attendance has been averaging 53, with 75 total students registered for the program. One goal identified in Auburn's logic model was to increase the number of students participating in the afterschool program. They have increased their efforts to promote the program with advertisements in the local newspaper and a distributed a parent/student survey to gauge interest in a variety of different afterschool clubs and activities to all families at the school. Enrollment has increased at the afterschool program from 47 to 75, providing evidence that their efforts are working. Table 1 summaries the program enrollment numbers for the Auburn ELO program.



# Auburn Table 1. ELO Program Enrollment Summary

Fall 2017	Spring 2018	Summer 2018	Fall 2018	Spring 2019	Summer 2019	Fall 2019
N/A	34	20-100	47	47	N/A	75

# **Program Goals**

The Auburn ELO team initially identified the following goals for their program:

- Increase parent involvement in the ELO program so they can see the value of the ELO program beyond just providing afterschool care
- Work with the Chamber of Commerce to build relationships with local business to help support the ELO program
- Contact the library, city recreation, boy scouts, girl scouts, etc. for potential collaborations
- Connect with Extension for support with programming development
- Continue to refine the program offerings to meet the interests of students (perhaps a K-3 afterschool program and clubs for 4<sup>th</sup> – 8<sup>th</sup> grade)

Additionally, the Auburn ELO team wanted to provide programming in three specific areas, including:

- Academic and Enrichment students have opportunity to finish homework, also get expanded opportunities they do not get in the classroom
- Community Outreach –community gardens, doing things in town, working with business partners (career or community service related)
- Fine Arts there are lots of existing opportunities for students to be active in sports, but not as much for the students interested in the fine arts, so this is a real need for the community

The Auburn ELO team revised their goals after the first full year of the program and shared them in their parent/student handbook. These goals include:

- Improve overall student success and learning performance in one or more academic areas through academic support and enrichment activities
- Increase student social benefits and positive behavioral changes
- Increase active and meaningful family and community engagement in supporting students' education
- Obtain state license for child care
- Promote DOGS Academy in the community through social media, newspaper articles, community service projects, and providing care during impromptu non-school days (state athletic tournaments)
- Support transitions from early childhood education to kindergarten

# Staffing

One of the goals for the Auburn program was to hire high-quality staff, including educators and paraprofessionals, while also hiring Peru St. College students as program staff. Auburn initially had difficulties hiring directors for their afterschool program. Two directors, Brittany Jacoby and Megan Cochran, were hired in fall 2017. Brittany was responsible for the



6<sup>th</sup> - 8<sup>th</sup> grade program and Megan for the 2<sup>nd</sup> - 5<sup>th</sup> grade program. One of the initial directors moved away from Auburn in late fall, so Auburn hired a Peru St. College student, Kaitlyn Tennant, for the vacant position. Although Kaitlyn provided engaging programs for students, during the spring interview she commented that it was difficult to juggle school schedules and manage staff cohesion. In late spring 2018, two new directors were hired to take over the program; Michelle Snyder, a school nurse, and Chicory Gerdes, a school paraprofessional. Auburn also partnered with Peru St. College, hiring 6 pre-education majors to staff their program. The superintendent shared that the start to the fall 2018 semester went much better with the new program directors and additional staff members. Prior to the 2019-2020 school year, Auburn has an interim superintendent who in turn hired Tyson Wessels as the afterschool program director. Tyson hired some new staff members and got some additional volunteers to help at the program. The partnership with Peru State College has proven to be an important component of Auburn's staffing model.

# Programming

Observation, interview, and document evidence have demonstrated support for the alignment between Auburn's programming and materials and factors identified by stakeholders (e.g., students, staff), ELO Quality standards, and Nebraska STEM approaches.

Afterschool Program. MAP Academy staff had the opportunity to observe the day the TMC lab was delivered to Auburn in late fall of 2017. MAP Academy staff, along with Jeff Cole of Beyond School bells, met the program director at the time, Brittany Cochran, and the superintendent and helped provide information about the grant. Jeff Cole also provided an explanation of the TMC lab and all it has to offer, including a description of the materials included, how the mobile lab might be used, and how to properly store it. Auburn staff also indicated that their program would be starting in spring of 2018.

For the first year and a half of the program (spring 2018, fall 2018, and spring 2019) the general schedule for the program was that students come in afterschool and have snack for about 15 minutes. Then, based on the expertise of program director and school nurse, Michelle, the students would do a wellness activity based on the CATCH program (Coordinated Approach to Child Health). The wellness was followed by STEM programming. The programming part runs from 3:30-5:00; students had free time to pick their own activities (i.e. Legos, K'nex, coloring, games etc.) after 5:00, until their parent/guardian pick them up.

In fall of 2019, the programming focus shifted away from the CATCH program, although some CATCH activities are still used. This year the program features an enrichment program with UNL/4-H extension and some clubs (e.g. art and music clubs) that currently meet once per month. In terms of STEM programming, Tyson expressed that the program is basically *"starting with a blank canvas"*. He was unfamiliar with the TMC lab activities and materials, so Jeff Cole arranged for someone from Beyond School Bells to go down to Auburn to re-orient them on the TMC lab and available makerspace activities.

One programming goal identified within the logic model was increased partnerships with the community in afterschool programming. Because of all the changes within the afterschool program and staff and school district leadership, these partnerships have been slow to



develop. Tyson has created partnerships with 4-H, who helps lead programming on health, wellness, the environment, and careers. Tyson also created a partnership by collaborating with a world-class cellist who has ties to the Auburn community. She is starting a nonprofit music company and wanted to meet with youth at the afterschool program and get them excited about music, so she visited the music club to perform. Local banks have expressed interest in working with the middle school program on personal finance and program directors are working on developing community service activities for the program.

On the day MAP Academy staff observed in fall 2019, 53 youth were in attendance. First, youth got a snack and then had some outdoor free time for approximately 20 minutes. Youth were then separated by grade level for homework and/or academic time; students who did not have homework got to read quietly or get read to by a staff member. This was followed by station activities for about 45 minutes. Stations included free building of Lego designs, an activity where youth were read a story about recycling/reusing and then got to create their own inventions out of recycled materials, and making blankets for the neighborhood closet. All activities were hands-on, and both staff members and students exhibited positive attitudes they all seemed excited to be participating in the various activities. Auburn Table 2 summarizes Auburn's afterschool program offerings over the course of the *ELO Design Challenge* grant.

*Summer Program.* Auburn hosted their seventh annual "Wellness Camp" in June 2018. The program, which meets three days a week for four weeks was free for participating students. Program activities included pool safety, water aerobics, nutrition classes, bicycle safety, sun safety, and firework safety. Additionally, some of the CATCH programming was incorporated into the Wellness Camp. Auburn did not offer a summer program in 2019. In conversations with the current program director, Tyson Wessels, he indicated they anticipate offering a summer program in 2020. Auburn Table 3 summarizes Auburn's summer program offerings.

# **Sustainability Plans**

Auburn's leadership identified a need to developing a sliding scale for fees in their logic model. At the time of this report, payment structures are still under discussion. Parents of elementary-aged students seem to be comfortable with the current fee structure as it is significantly less than paying for a full-time slot at a local day care business. However, staff struggle to help parents of middle school students see the value of the program since they can have their children walk home on their own for no cost. *"We had difficulties getting students. We don't charge a lot, but what we found that if you are K-3, parents are fine with that because we are cheaper than the daycares. But once you hit 4<sup>th</sup>-8<sup>th</sup> grade, I can send my home for free, so why would I pay for something?"* We encourage Auburn to continue to develop their payment structure by potentially reaching out to other communities to understand how they recruit and retain older students. Tyson noted that he has received good feedback so far from parents on the convenience of the afterschool program.

Additionally, the Auburn afterschool program has an affiliated community foundation that gave a large gift for the afterschool programs. During interviews with leadership, there was discussion for pursuing plans to leverage that gift to get a student engagement grant through



the Nebraska Community Foundation. Auburn received a 21<sup>st</sup> Century Community Learning Center (CCLC) grant for fall 2019, which will provide them with five years of financial support as their program continues to stabilize and grow.

Tyson created a parent/student handbook for the afterschool program, which contains information about the afterschool program, including admission and tuition procedures, schedule and programming information, and behavior management procedures. Documenting these policies and procedures is an important step in ensuring program continuity across inevitable staffing changes.

	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Spring 2018 Programming									
CATCH Programming	Х					Х	Х		
STEM Activities (K'nex, Legos etc.)	Х	х	Х	Х	Х				х
Fall 2018 Programming									
CATCH Programming	Х					х	Х		
STEM Activities (K'nex, Legos etc.)	Х	х	Х	Х	Х				х
Spring 2019 Programming									
CATCH Programming	Х					Х	Х		
STEM Activities (K'nex, Legos etc.)	Х	Х	Х	Х	Х				х
Fall 2019 Programming									
Music Club	Х				Х		Х		Х
Art Club	Х				Х				Х
4-H Enrichment Program	Х	Х				Х	Х	Х	Х
STEM Activities (K'nex, Legos etc.)	Х	Х	Х	Х	Х				Х

Auburn Table 2. ELO Program Afterschool Programming Summary



# Auburn Table 3. ELO Program Summer Programming Summary

	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Summer 2018 Programming									
Wellness Camp (water aerobics, nutrition classes, bicycle, sun, and firework safety)	x			x		x	х		

Note: Auburn did not offer a summer program in 2019



# **Beatrice**

# **General Program Overview/Background**

Funding for Beatrice's afterschool program and summer school programs comes from two sources: a federal 21<sup>st</sup> Century Community Learning Center (CCLC) grant from the Nebraska Department of Education and the *ELO Design Challenge* grant. The two funding sources "work in conjunction to help the district develop curriculum for the afterschool program" (BLAST pamphlet). Because research shows engaged students do better in school and are more prepared for a successful future, Beatrice believes developing and implementing a hands-on, students-centered programming is an essential element in an afterschool program. The goal of the Beatrice ELO program is to give students the opportunity to socialize with friends, learn and build social skills in a positive manner, have positive influences, and enjoy more positive, fun experiences with education. Three elementary schools participate in the *ELO Design Challenge*.

According to Doris Martin, the afterschool program coordinator, enrollment in the afterschool program began with about 60 students in the fall of 2017 and grew to about 130 by the spring of 2018. In fall 2018 they had about 114 students enrolled in their program. Of those enrolled, about 25-30 students consistently attended BLAST programming at each of the three available elementary schools. During the fall 2018 interview, Doris reported that the proportion of paid students attending the program is up; previously about 12% of students paid, and now about 30% of students that attend pay. She also said that she receives about one call per week from a parent in the community, asking about the afterschool program. She highlighted how the infusion of community partners has led to increased interest among parents in the afterschool program. For fall 2019, there were approximately 133 students enrolled.

When probed as to why their afterschool program has increased enrollment each year, they discussed the importance of partnering with each school, and explained how they used some of the ELO funding for a STEM makerspace unit that can be used in both the classroom and afterschool program. They believe if they can get students to see what makerspace clubs and afterschool programming is like via the makerspace unit during the school day, it might encourage more students to attend. As Jackie indicated, if they can "get students seeing what [the makerspace activities] are like during the school day, it might encourage them to come to the afterschool program." Moreover, Beatrice has increased the number and variety of clubs/activities offered, allowing for more student choice in activities. Beatrice Table 1 summaries the general program enrollment numbers for the Beatrice ELO program.

Beathee Table			nic Ganniary			
Fall 2017	Spring	Summer	Fall 2018	Spring	Summer	Fall 2019
	2018	2018		2019	2019	
60	130	300	114	114	330	133

# Beatrice Table 1. ELO Program Enrollment Summary



# **Program Goals**

Doris Martin and Jackie Nielson, Beatrice program directors, participated in the development of the Beatrice Logic Model (see Appendix B). Goals identified in the logic model include:

- An adequately staffed afterschool program that is highly engaging, enjoyable, and has a connection to the community
- A 'toolbox' for a programming that has a variety of activities, units, and clubs, enabling student choice
- A program that gives students the opportunity to socialize with friends, learn and build social skills in a positive manner, have positive influences, and have more positive, fun experiences with education
- Increased number of students, especially those at risk, having access to the afterschool and summer programs
- Collaboration and connection of education with families and the community, enabling partnerships that are continually promoted to help paint a better picture of Beatrice

# Staffing

Doris Martin, a former High School Journalism teacher, coordinates the afterschool programs. She oversees programs at three public elementary schools in Beatrice (Lincoln, Paddock Lane, and Stoddard). Jackie Nielsen, Director of Curriculum, Instruction, Assessment, and Professional Development, is the director for the summer program. All three of the sites for the afterschool program are licensed by the Nebraska Department of Health and Human Services and all employees had background checks completed prior to working. Afterschool programming is primarily staffed with paraprofessionals.

While there are still difficulties in identifying/adapting resources to the afterschool environment, Doris' dedicated position has enabled the district to focus their efforts on developing quality programming in both the afterschool and summer programs. Doris, with the help of teachers, paras, and parent volunteers, has developed a programming binder (i.e. toolbox) that has a variety of activities and clubs, which enables a plethora of student choice. The binder is organized into units, surrounding a topic (e.g. agriculture, fall), and contained tested activities that have been successful in students programming. The binder has been an excellent resource for all site directors in creating high-quality ELO programming. Additionally, Doris created a staff handbook, which contains all the resources and information a staff member might need, including general program information and various staff policies.

Site supervisors for the different elementary school programs are paraprofessionals during the regular school day, so they are often at school from 8:30am until 6:00pm. Hence their availability to participate in professional development is limited. Although professional development opportunities in the form of Click2SciencePD (C2S PD) and Tools of the Trade have been offered to the staff, these types of activities are difficult to coordinate within their schedules. Doris found value in the C2S PD, noting that they learned several examples of hands on STEM activities.



Doris expressed interest in surveying her staff to better understand their experience and comfort with STEM materials. She is also interested in providing them with more resources for STEM activities available for use in the afterschool environment. Doris noted it takes time to figure out where the best STEM elementary resources are and how to use them. She mentioned site supervisors were less familiar with leading programs but knew the student audience well. She worked with the supervisors to adapt programs to audience needs, noting, *"You can read [programs] and it sounds very good, but when it takes eight hours to implement it is not very useful."* Doris has plans for exploring additional PD opportunities in the future, particularly blended opportunities that provide on-line and in-person options.

In conversations conducted in fall 2019, Doris Martin noted they now have 15 total staff members at the three sites, including individuals who are teachers, paraprofessionals, and college students. Doris explained the three site supervisors at each of the three elementary schools, all paraprofessionals, have been with the program since it began three years ago. Doris believes this is a real strength because "each year we can continue to grow on what we accomplished the previous years."

Staffing for the summer program relies on volunteers from the public schools. Teachers and paraprofessionals who are interested sign up to lead a session of their choosing, and then develop and execute a program plan over the course of the 4-week program. While this summer program relies on volunteers, it has been very successful the past 2 years and seems to be sustainable moving forward.

# Programing

Observation, interview, and document evidence have demonstrated support for the alignment between Beatrice's programming and materials and factors identified by stakeholders (e.g., students, staff), ELO Quality standards, and Nebraska STEM approaches. Activities viewed by MAP Academy staff during site visits were engaging for students and promoted hands on learning. Document and interview evidence support the development of school-community partnerships, family engagement, and age-appropriate programming aligned with the school day. Beatrice has clearly been successful in their efforts to make sure students have access to the comprehensive instructional opportunities offered in their ELO programs.

**Summer Program.** Prior to receiving funding from the *ELO Design Challenge*, Beatrice was already running a very successful summer program, called 'Best Possible Summer.' Best Possible Summer evolved from a remedial-based summer program geared towards students who were behind. District leadership noticed the students were not very excited and it was not serving the purpose for which it was designed. Four years ago, stakeholders at Beatrice decided to shift the focus to be hands-on learning activities to get as many students involved in the summer school program as possible. *"There is always a focus on the key elements of reading, mathematics, science and writing, but we are doing it in a way students are excited about learning and getting the chance to see how learning is applied across many different things" (Jackie Nielson, Beatrice Public Schools, Director of Curriculum, Instruction, Assessment, and Professional Development). The shift in focus paid off, as the enrollment jumped from 75 students to over 300 students participating in over 35 different activities. The* 



summer program offers a variety of hands-on activities for K-5 students throughout the month of June. Activities include, but are not limited to, sports and games, arts and crafts, STEM activities, cooking and nutrition, music, animals, and reading. The morning program runs Monday-Thursday from 8:30 am to 11:30 am and the afternoon session runs from 12:00-4:00. Cost is \$25 per week, but if students attend 12 total days, they get refunded their registration fee. Free and reduced lunch students can apply for fee waivers. All students begin their day at Paddock Lane Elementary and transportation is provided to other locations as needed.

The programming for the summer program is created in a much different manner than the afterschool activities. For summer, teachers and paraprofessionals receive an email in January, asking if they would be interested in developing a course. Courses are then compiled into a summer 'guide,' and students are sent home with a flyer and guide before registration starts in the spring. Teachers are paid for their time designing the course in the spring and teaching summer sessions across the four weeks. *"It is up to the teachers to decide what to do...they build it and make all the decisions."* 

MAP Academy staff visited Beatrice's summer program in June of 2017. The MAP team was able to observe several different courses (e.g., cooking, sewing) and met with the elementary school principal at the host school. The principal provided a background of the summer program and described some of the success stories she had witnessed through students' engagement in the activities. The principal was very supportive of the program and believed it had been very beneficial for students who might not have access to these types of activities.

Programming for summer 2018 and 2019 were very similar to previous years of Best Possible Summer. The 2018 summer program took place in the afternoon of summer school, and included activities like backyard science lab, deep sea adventure, several sport clubs, reading, and design a zoo. The 2019 summer program took place in the mornings (8:30 am – 11:30 am), with approximately 320-330 students attending, as well as in the afternoon (12:00 pm – 4:00 pm), with approximately 150-200 students attending. The program continued to be very hands-on and application based, *"experiences rather than sit and get,"* and included activities like pirate science, coding and STEM in the real world, a variety of sports, arts, reading, and music clubs, and exploring space. Beatrice Table 2 summarizes Beatrice's summer program offerings.

Afterschool Program. The Best Summer Ever program provided a model for developing programming that is engaging, enjoyable, and connected to the community. Doris and Jackie have been able to build on this existing model to infuse these aspects to create a high-quality afterschool program. There have been challenges finding high-quality programming resources, because it can be difficult to identify resources and/or adapt resources to the afterschool environment. Yet, the Beatrice team has been working to meet their short-term outcomes by focusing efforts to develop quality programming both during the school year and over holiday break. Beatrice was able to leverage Doris' dedicated position with the district to help them develop their toolbox of programming.



The afterschool program at Beatrice is called BLAST (Beatrice Learning After School Time). The initial afterschool program was designed with the help of a classroom teacher. Doris was able to build on this initial program and modify it to better suit the afterschool environment. A programming binder was created detailing different units as well as activities and games to go along with the units. Staff members across the three elementary schools (Lincoln, Paddock Lane, and Stoddard) have copies of the binder and generally follow the same program with some slight variation across sites.

Although the program director described that they "were scrambling" at times their first fall, the holiday break gave site supervisors and other paraprofessionals time to devote to program development. According to Jackie, the programming resulting from this holiday writing session was very hands on and engaging for students. Doris highlighted that site supervisors and paraprofessionals were better prepared to determine what works best in the afterschool environment after a semester of experience working with the afterschool program. The results were *"really good, hands on activities where students learn at the same time."* Jackie highlighted their rich programming covering topics such as science, the human body, agriculture, outside, community, academics, and creating. Jackie was excited about the variety of programs— *"these students are having great opportunities!"* 

MAP Academy staff visited Beatrice's afterschool program in October of 2017. MAP Academy staff observed the afterschool program at all three elementary schools and interviewed students, frontline staff, Doris, and Jackie about the program. Across the three schools, students were learning about agriculture and farming. At one school students were broken into groups and rotated between stations. One station included a 'popcorn taste test,' where facilitators provided different types of popcorn (microwaved, movie theatre, the high school, a local stand, and from the grocery store); students were given a small amount of each of the different varieties, and then took part in a discussion about the similarities/differences between types of popcorn. One of the other stations examined different types of seeds and had students discuss the similarities/differences. One of the other schools had students in a large room working on the 'popcorn taste test' and another school had a craft activity where they were designing scarecrows.

In the spring 2018 interview, Jackie highlighted the diversity of the programming and activities offered to students as one of the success stories of their program. Both Doris and Jackie mentioned challenges with finding and developing programming that is appropriate for the afterschool setting (i.e., affordable, accessible for a variety of students, and reusable). Doris mentioned some materials purchased in the fall were not appropriate for the goals of the program. Jackie highlighted knowing where to look for cost effective resources is a challenge. Finding storage for all the program materials is another challenge due to competition for storage space and access to only one TMC lab for all three locations.

Programming for fall 2018 continued the same model as previous school years, with the addition of more club-based activities such as 2-week long 4-H clubs at two of the schools and a sign-language club hosted at one of the schools. Working Wednesday is a notable new program for Beatrice. Taking advantage of the early release time every Wednesday, Doris developed this innovative career exploration program to fill that extended time. The program



relies on community partners leading a session for three weeks in a row, one at each of the elementary schools. Meanwhile, Extension Educators and program staff lead activities related to the same theme. The fourth week of the month features a field trip related to the topic. Doris piloted the program in the spring of 2018. During the summer of 2018, Doris hosted a lunch with local agencies, businesses, and Extension Educators. She had hoped to line up a few sessions for the fall semester, thinking it would be difficult for community partners to commit to leading a session three weeks in a row. However, the community participants were so enthusiastic, they planned out the entire year of programming. Each month has a theme, and the themes build throughout the year. Examples of Working Wednesday programs include the fire department leading a unit on water pressure and how fire hydrants work, the Water Superintendent leading a program on the Beatrice water system and how water gets to their faucets, and Beatrice Concrete leading a unit on how concrete is made and how the trucks that carry concrete work. The program will culminate in the spring with a local tow truck company bringing a wrecked car to each school and the fire department using the "Jaws of Life".

Another new activity for the 2018-2019 school year was the gardening initiative. While there was some initial hesitancy and uncertainty regarding gardening and the grow towers in schools, it grew to become a real success within the district. The district received funding to create a grow tower in one elementary school. After some discussion, they decided to create an initial, outdoor grow tower at one elementary school so that it was wheelchair accessible for special needs students within the school. After the other elementary schools saw the grow tower and observed how successful it was, they decided to build their own grow towers within their schools. Now, students at each elementary school in Beatrice have access to the grow towers, and clubs have been created so they can use the food they grow.

Programming for fall 2019 continued with a similar model as previous years. The afterschool program has continued Working Wednesdays, with the 2019 school year having an agriculture focus; the previous school year had a focus on city/businesses in town. The working Wednesday program included local farmers, an individual from the Homestead National Monument who did a lesson on early agriculture, a seed implement dealer, a local Co-op, someone who came in with Clydesdales, and a principal who is also a farmer who did a session on pickups and how they are used in farming.

In fall 2019, a site visit was conducted during a Working Wednesday activity. Individuals from Roehr's Machinery, a local company, were in to provide a demonstration of water irrigation on farms. They presented a short PowerPoint over what irrigation is and how center-pivot irrigation systems work. Then, students got to go outside to observe how different kinds of center-pivot irrigations operate. Students were extremely excited to see the machinery in action and learn about how irrigation works. (And they didn't seem to mind getting wet!)

As stated in the BLAST pamphlet and Beatrice's logic model, community partners are an important element in the afterschool program. Several partnerships have already been established across the Beatrice community. One of those partners includes the Beatrice Humane Society, where students have learned about companion animals. TEAMMATES mentors have met with their mentees during the afterschool program, providing more students with the opportunity of mentoring. Additionally, several partners have agreed to help with the



program, including Beatrice Community Hospital and Health Center, Beatrice Educational Foundation Board of Directors, Beatrice Fire and Rescue, Beatrice High School National Honor Society, Beatrice Family YMCA, Beatrice NOON Kiwanis club, Beatrice Police Department, Beatrice Public Library, First National Bank of Omaha, Friend of the Homestead National Monument of America, and Nebraska Extension in Gage county.

When asked to provide an example of a program activity with a community component, Doris shared a story of a Working Wednesday pilot project. The topic for the pilot was "the body". Ambulances and emergency medical technicians (EMTs) came to the different afterschool locations. During their visit, students could get inside the ambulance and the EMTs talked about their career, the human body, and demonstrated what they do when someone has a heart attack.

Doris and Jackie are aware some parents and other community members may not realize the extent to which learning is occurring in their program and may instead view the program as 'babysitting' or 'daycare.' As such, one of the continued goals of Beatrice's ELO programs is to continue to increase awareness among families and the community about the value of high-quality ELO experiences. This awareness helps to build support and participation in the programs. Progress has been made in this area during the start of 2018, as increased community partners via Working Wednesdays has led to more excitement among parents and community members about the afterschool program.

When asked how their program has been so successful collaborating with members of the community, Doris replied, *"just ask."* Doris believes once organizations start to get involved, they will be amazed at how much can be done by joining forces with local students. Simple word of mouth and their on-line Facebook presence helps to advertise the partnerships with local organizations. Jackie noted the community is aware of the value of high-quality ELO programs and is more than willing to respond due to Doris's work getting the word out.

Throughout the years of the grant, Beatrice has continued to increase their connection with the community. Evidence comes from the Working Wednesday program conducted in the afterschool program, and additional partnerships with local businesses/organizations. Beatrice has received increased community support and seem to be moving away from the 'babysitting' stereotype of afterschool programs by community members. Beatrice Table 3 summarizes Beatrice's afterschool program offerings.

# **Sustainability Plans**

It is important to note there are infrastructure aspects of the Beatrice program that facilitate efforts towards sustaining the *ELO Design Challenge* goals. Beatrice's status as a federal 21<sup>st</sup> Century Community Learning Center (CCLC) provides financial support for their program that are not available to communities without this funding. However, several other efforts by Beatrice's leadership team provide evidence that they are working towards sustainability of the program. One example of this idea is Beatrice hiring a dedicated point person, Doris Martin, for their afterschool program across the three sites. The position has not only enabled the district to focus their efforts on developing quality programming in both the afterschool and summer programs, but it has also allowed the district to work on other aspects



regarding the program, like creating community partnerships and working towards sustainability of the program.

Furthermore, Beatrice's leadership team has put forth a ton of effort to establish community partnerships for their ELO programs. Examples of community partnerships include: the Beatrice Humane Society, TEAMMATES mentoring program, Beatrice Community Hospital and Health Center, Beatrice Educational Foundation Board of Directors, Beatrice Fire and Rescue, Beatrice High School National Honor Society, Beatrice Family YMCA, Beatrice NOON Kiwanis club, Beatrice Police Department, Beatrice Public Library, First National Bank of Omaha, Friend of the Homestead National Monument of America, and Nebraska Extension in Gage county. These partnerships are crucial to the sustainability of Beatrice ELO programs, as the business/organizations create programming and lead a session for three weeks in a row, one at each of the elementary schools. This allows the district to save a lot of money on programming costs, all the while exposing students to various, exciting, hands-on topics and activities.

	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
A Bug's Life	Х			Х	Х		Х		Х
A Glimpse of the Authors	Х			Х	Х		Х		
Art Makes You Smart	Х			Х	Х				Х
Babysitters' Club	Х	Х		Х		Х	Х		
Basketball	Х					Х	Х		Х
Bats Eat Bugs	Х				Х				Х
Be a Detective	Х			Х	Х		Х		Х
Charlie and the Chocolate Factory	Х			Х					
Charlotte's Web	Х		Х	Х	Х		Х		Х
Clay Creations	Х				Х				Х
Coding & STEM in the Real World	Х	Х	Х	Х	Х				
Dancing Through Summer	Х				Х	Х			Х
Discover Agriculture	Х			Х	Х	Х			
Dive into Reading	Х			Х			Х		
Do You Think It Will Fly?	Х		Х	Х	Х				
Doodle, Draw and Write	Х			Х	Х				
Dr. Seuss	Х				Х		Х		Х
Drawing & Storytelling Through Comics	x			x	x		х		

Beatrice Table 3. ELO Program Summer Programming Summary



	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Escape Room Challenge	Х		Х	Х	Х				х
Explore The World	Х			Х					Х
Exploring Space	Х		Х	Х	Х				
Extreme Weather	Х	Х	Х	Х					
Fairy Tale STEM	Х		Х	Х	Х				Х
Fairy Tales & Fables	Х			Х	Х				
Fancy Nancy Fun	Х			Х	Х	Х			
Football	Х			Х		Х			Х
Future Olympians	Х					Х			
Game Show Mania	Х			Х	Х				
Games Galore	Х			Х	Х				Х
Glamour Girls	Х				Х				
¿Habla Español?	Х						Х		х
Hands-On	Х			Х	Х	Х			
It's a Jungle Out There	Х			Х					
Keeping the Rhythm	Х					Х	Х		
Kids in the Kitchen!	Х			Х	Х	Х			
Little House on the Prairie	Х			Х			Х		
Living at the Spa	Х				Х				
Math-artists	Х								Х
Math Maniacs	Х			Х	Х				
Mathnasium	Х			Х	Х	Х			
Military Fun & Learning	Х	Х		Х			Х	Х	Х
Ocean Animals	Х			Х	Х				
Our World through Music	Х						Х		
Out of this World	Х			Х	Х				
Outdoor Fun	Х					Х			
Pinkalicious Week	Х				Х				
Pirate Science	Х		х	Х	Х				
Platform 9- <sup>3</sup> / <sub>4</sub> Hogwarts Express	Х			Х	Х				
Rainbow of Colors	Х			Х	Х				
Random Acts of Kindness	Х						Х		Х
Somewhere Over the Rainbow	Х		х	Х	Х				
Spy Training	Х			Х	Х		Х		Х
STEM Challenges	Х		Х	Х	Х				



	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
The Art of Stories	Х		Х	Х	Х		Х		
The Art Studio	Х				Х				
The Design Challenge	Х		Х	Х	Х				Х
The 5 Senses!	Х			Х			Х		х
The Pizzeria Challenge	Х			Х	Х				
Track and Field	Х					Х			
Underwater Adventure	Х			Х	Х				
Walking with Dinosaurs	Х			Х					
We All Scream for Ice Cream	Х								
WearTech	Х			Х	Х				
Wrestling	Х					Х			
Young Chefs Academy					Х	х			



# Beatrice Table 3. ELO Program Afterschool Programming Summary

Deathee Table 5. LEO I Togram Alters						J			
	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Fall 2017 Programming									
BLAST – Going to the Moon									
(Space unit)	Х		Х	Х	Х				Х
Fall Unit	Х								Х
Around the World	Х						Х		Х
Spring 2018 Programming									
Weather Unit	Х		Х	Х					
Winter Olympics	Х					Х			Х
Learning about my Body (i.e. Leg, arm, teeth)	х	х	х	х		х			
Fall 2018 Programming									
4-H Club (health, wellness, careers)	Х					Х	Х	Х	Х
Sign Language Club	Х						Х		Х
Animals Unit	Х				Х				
Working Wednesdays (Rural/agriculture focus)	х	х	х	х	х		х		x
Holiday unit	Х						Х		Х
Spring 2019 Programming									
Space Unit	Х		Х	Х	Х				Х
Learning about my Brain	Х								
Working Wednesdays (Rural/agriculture focus)	х	х	х	х	х		х		x
Dinosaurs and fossils	х		х		х				
Fall 2019 Programming					~				
Working Wednesdays (Urban/city	x	х	x	х	х		х		х
focus)									
Project Wild	X	Х		Х			X		X
Gratitude Unit	X						Х		X
STEM at Christmas	Х		Х	Х	Х				Х



# **Boone Central**

## **General Program Overview/Background**

Boone Central's Cardinal Kids Club (CKC) is an afterschool and summer extended learning program developed through a partnership between Boone Central Schools and the Boone County Foundation Fund. These two entities are working in partnership to create a community driven model that capitalizes on resources available within Albion and surrounding areas. According to their handbook, the CKC is designed to provide "affordable, quality care for children during out-of-school hours." The handbook also outlines, "CKC programming is designed to provide all students with hands-on, engaging opportunities that enhance the school day, are driven by school-community partnerships, and encourage critical thinking and creative problem solving in our children."

Prior to the start of the afterschool program, a survey was sent out to the community to identify if there was a need for afterschool care and a steering committee was formed with stakeholders and members of the community. The steering committee includes the program director (Mollie Morrow), superintendent of Boone Central Schools, an elementary school principal and teacher, a high school career academy teacher, a local business owner, and a Boone County Foundation Fund member. The initial goals of the steering committee were to:

- 1) Identify current community needs (i.e. need for service projects)
- 2) Establish programming strands based on the needs and resources within the community
- 3) Come up with a mission statement and goals for the first school year for the afterschool program

At the start of the 2017 school year, there were 32 students signed up for the first year of the afterschool program. Part-time care was implemented in January 2018, which added five additional students. Costs for the program were \$30 per week and scholarships were available based on qualification for free/reduced lunch. Lessons learned from scholarship experiences in 2017-2018 were used to modify the structure for scholarships for the 2018-2019 school year. The scholarship program is now a sliding scale based on the student's free/reduced lunch designation.

For the summer program, approximately 20 students attended per week the first year of the program (summer, 2018), with many students participating for the entire nine weeks of the program. The 2019 summer program had 32 total students enrolled in the program, with 29 of them part-time attendees (meaning they don't come each day the entire time), and 3 full time.

The use of scholarships for at-risk and low-income students has led to an increase in attendance for each year of the program, one of Boone Central's short-term goals. The 2017-18 school year had a total of 37 students enrolled in the afterschool program, while the 2018-19 school year had 38, and the 2019-20 school year has 46. Similar growth was seen in the summer program, with just 20 students enrolled in the 2018 summer program, but 32 enrolled in the 2019 summer program. Some of the increased attendance may be due to the partnership with the Catholic school down the street. This was another goal identified in their logic model; 'expansion of the ELO program to other schools within Boone County.' Boone



Central Table 1 summarizes the general program enrollment numbers for the Boone Central ELO program.

Fall 2017 Spring 2018		Summer 2018			Summer 2019	Fall 2019				
32	37	20	38	38	32	47				

Boone Central Table 1.	FI O Program	Enrollment Summary
		Enrollinon Countinuity

## Logic Model

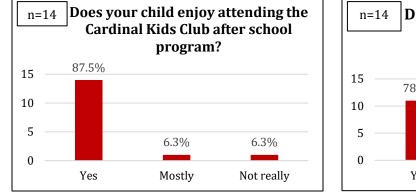
Original plans for the steering committee included hosting a school/foundation kick-off event to introduce the TMC lab and the CKC afterschool program, determining studentsinterest, addressing community needs, and identifying students who are not attending the CKC afterschool program but would benefit from that programming. The long-term vision of the program includes:

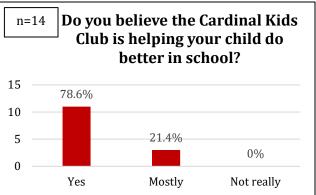
- 1) Expanding the program to include all students interested in programming, especially those considered "at risk"
- 2) Providing care in summer months
- 3) The development of K-5 programming based on the community's needs and resources
- 4) Building strong community partnerships
- 5) Being a model for other schools/communities across the state
- 6) Increased student achievement scores, with specific attention to the needs identified by the school's improvement plan
- 7) Developing a model for afterschool program that is sustainable on student fees at multiple sites within Boone County

8)

Mollie Morrow, program director, participated in the development of the Boone Central Logic Model (see Appendix B) as described above. The subsequent sections provide brief descriptions of the goals outlined for the logic model and provide evidence on the progress made towards these goals.

To better understand perceptions of CKC, MAP Academy staff helped Mollie develop a parent perception survey. Participants included parents of students enrolled in CKC and those not enrolled in CKC. Parents of students not currently enrolled were surveyed to understand potential areas that may interest in the future (e.g., summer programming). Surveys were administered to parents in December of 2018. Of enrolled parents, the survey was completed







by 16 parents; 14 of the 16 (87.5%) said their child enjoys attending the CKC afterschool program, and 15 of the 16 (93.8%) said their child has positive and encouraging interactions with the CKC staff. Parents of enrolled children also provided feedback on the current activities the program offers. They reported that their children overwhelmingly enjoyed the activities that are currently being offered (art classes, building design challenges, cooking and nutrition, fitness classes, games, outdoor play, read and feed, robotics, STEM design challenges, science experiments, and wearable technology). Finally, parents were asked several questions about their opinions about the CKC. All parents (16 out of 16) answered either 'Yes' or 'Mostly' on if they feel welcomed and invited when they visit and/or come to pick up their child from the CKC. Additionally, all 16 parents reported seeing the value in the types of programs offered in CKC. We have highlighted the parent survey, but a student survey was also given to understand students' experiences and perceptions of the program.

Information collected from parents through Mollie's evaluation efforts suggest students are benefiting from CKC participation. Student reflections also provide positive evidence of their support. Additional efforts will need to explicitly ask students about interest in school because of CKC to directly address this aspect of the logic model. Data collected suggest a general interest in CKC, which is part of students' overall school experience.

Boone Central also had a goal to increase students' achievement scores, and this goal seems to have some evidence of support, as achievement scores on the Nebraska Student-Centered Assessment System (NSCAS) are increasing, as shown in the table below. While direct links between the afterschool program and the school's achievement scores are difficult to establish, the fact scores have made such a dramatic increase is a good sign.

Boone Central Table 2. NSCAS: Percent proficient (combined results for all grades tested) by subject

Year	ELA	Math	Science
2017-2018	58%	52%	71%
2018-2019	69%	69%	82%

Note: Results include students who participated in the NSCAS general and alternate assessments

## Staffing

Mollie Morrow is the full-time program director for the Boone Central ELO Cardinal Kids Club (CKC) afterschool program. As program director, Mollie oversees planning and implementing CKC programming and meeting all the goals of the *ELO Design Challenge*. Staci Sandman was hired as site director. In this role, she is responsible for day-to-day operations of the program. Four high school students were also hired as regular staff members. Additional high school students were hired to provide 'subs' for the regular staff members. In an interview with MAP Academy staff, Mollie noted high school students are very busy, so it is important there be a pool of potential high school students to draw from. Since CKC is a partnership between the Boone County Foundation Fund and Boone County Schools, roles and expectations were clearly laid out for the two parties. Specifically, the Boone County Foundation Fund is responsible for:



- Providing scholarships for families in need that don't qualify for childcare subsidy
- Supporting potential participation in Big Give for program materials.

Boone County Schools is responsible for:

- Employment of the Program Director
- On-going supply needs after grant is complete
- Employment of Site Director and on-site staff
- Planning, ordering, and storing the snacks
- Collecting fees from families
- Communicating student absences to the Site Director
- Carrying liability insurance required for the program
- Basic custodial services for CKC area
- Basic use of copying and laminating as needed by the Site and Program Directors
- Storage area for CKC materials
- Distribution of parent registration information
- Use of commons area and playground
- Facilitating communication between school and CKC staff

For summer programming, the CKC had one teacher from the public school and two teachers from the Catholic school lead the programming. Additionally, several college students were hired to assist with staffing.

The staffing model for Boone Central's CKC has continued evolving throughout the length of the grant. Mollie updated information in the staff handbook for the 2019-2020 school year, which continues to be a valuable resource for staff members. Mollie also explained that she has relied on the evaluation forms for feedback and improvement within the program. Boone Central has continued to rely on high school staff members for their program. Mollie explained her high school staff has appropriately taken constructive feedback and implemented things they have learned from staff trainings. Mollie has been particularly impressed with the ability of staff members to get students excited about the activities. She believes that not only the afterschool is benefitting, but the high school students are benefitting a huge deal, as well. She has seen growth in their ability to lead programming, work with one another, and interact with students.

The challenge of developing a sustainable staffing model is one that Mollie and others are still evaluating as there are multiple elements to consider in the development of a sustainable model. Mollie has developed several materials that specifically outline tasks and expectations of staff (e.g., staff handbooks, evaluations, job description), which provide a strong foundation for developing a sustainable model for staffing.

One of Boone Central's goals identified in the logic model was the development of an adequate staffing model that is sustainable on student fees. Mollie's work on this goal has been impressive, hiring a site director as well as developing a pool of high school helpers. The staff handbook containing personnel standards, safety guidelines, behavior management, daily schedules, expectations, and tips for summer success, as well as the staff evaluation forms, are that of a mature program, and certainly contribute to a sustainable program.



One of the goals of the Boone Central steering committee was that "staff will be evaluated, and goals set for each staff member to work on." In response to this goal, Mollie developed a staff handbook for the program, which includes personnel standards, safety guidelines, behavior management, daily schedule and expectations, field trip expectations, and tips for summer success. Mollie also created evaluation forms for the site director (staff members evaluate site director) and staff members (site director evaluates staff members), which are used to provide evidence of educator effectiveness. Samples of these documents are provided in the Toolbox (see Appendix C).

## Programming

Observation, interview, and document evidence have demonstrated support for the alignment between Boone Central's programming and materials and factors identified by stakeholders (e.g., students, staff), ELO Quality standards, and Nebraska STEM approaches. Activities viewed by MAP Academy staff during site visits were high-quality, engaging for students and promoted hands-on, minds-on learning. Document and interview evidence support the development of school-community partnerships, family engagement, and age-appropriate programming – both afterschool and via a summer program - aligned with the school day. Evidence supports policies for opening doors for at risk and low-income students to participate in CKC using scholarships. Other short-term goals listed in the logic model include increased interest in school, available programming related to community needs, and development of a sustainable staffing model. Although Boone Central started their ELO program in 2017, their program offerings, staff handbooks, community connections, and evaluation approaches are those of a more mature program. It is evident from the data sources that extensive thought and planning have gone into the CKC program.

*Afterschool Programming.* From 3:30-6:00pm, students participating in CKC receive a snack, homework help and have opportunities to engage in a variety of learning activities. Boone Central's programming goal was to develop a K-5 program based on the school's improvement plan, community needs, and resources. Programs and materials also needed to be applicable for use with summer and new ELO programs. These goals, as well as feedback from stakeholders and the steering committee members, helped shaped the initial programming. Initial topics included physical activity, technology/engineering, garden/horticulture, entrepreneurship, creative arts, health, and creation/tinkering.

A wide variety of activities were offered to students during the 2017-2018 school year. CKC activities included art classes, building challenges, cooking and nutrition, fitness classes, board games, outdoor play, reading, robotics, STEM design challenges, science experiments, and experimentation with wearable technology. When asked to reflect on the activities, the program director explained, *"I really saw our curriculum, or at least the planning of it develop over the course of the year. I think that we became more intentional about what we were planning, but also by second semester, we tried to implement more "club" activities so that students were broken into smaller groups and had some consistency with what they were doing. The students really liked to know what was coming, rather than show up and be surprised with what was in store for the day."* 



Mollie shared several lesson plans with MAP Academy staff to demonstrate the depth and variety of program offerings. For instance, there was an activity called "Candy Pumpkin Catapult" where students used engineering design process to design, build, test, and evaluate a catapult that launches a candy pumpkin. At the start of this activity, students were introduced to the history of catapults and given real world connections to the present day. Next, they split into groups to brainstorm and design models before building. After building, they had opportunities to test and improve on their models before sharing their catapults with the whole group. Another lesson plan shared with the MAP Academy staff outlined a science experiment where students made predictions, observed, and discussed how different liquids effected M&M's. MAP Academy staff also received plans that outlined directions and guidance for making dream catchers and a Lego egg roller activity where students work to build a small machine that rolls an egg in a circle.

A local newspaper article highlighted some of the STEM activities in CKC. Specifically, 4-H representative, Sonya Glup, led a group of K-2 students in building and testing wind-powered boats. Sonya also led a group of students in grades 3-5 in activities using wearable technology. Students used LED lights, copper wire, and batteries to create a light-up bowtie and badge.

MAP Academy staff visited the CKC program in fall 2017. The visit began with a meeting with Mollie Morrow, the program director. Mollie provided a tour of the school and the program meeting spaces. On the day MAP Academy staff visited there were two clubs meeting in addition to the regular afterschool program. In one of the clubs, about 13 students listened to a brief lesson on the Ogallala Aquifer, learned how it provides drinking water to Albion, and were broken up into small groups to conduct online research about water use. Another club had about eight students working on an art project exploring the concepts of realism and abstraction by recreating a still-life. The 13 students in the main afterschool program were involved in a variety of activities of their choice. Activities included but were not limited to spelling practice, building structures out of straws, coloring, and building paper airplanes for later testing.

Beginning in the 2018-2019 school year, the Cardinal Kids Club moved into the former Free Mason building located across the street from the elementary school. The dedicated space allows for programming that doesn't have to be completed and cleaned up the same day. The program still uses space in the school for programming when needed.

Another site visit was conducted in the fall of 2019 to observe the afterschool program. On the day MAP Academy staff observed, 33 students were in attendance. First, half the students received a snack and had homework/academic time, while the other half had recess/free time; the groups then switched after approximately 20 minutes. Next, students in grades K-1<sup>st</sup> grade participated in an animal injury Lego design challenge, while students in grades 2<sup>nd</sup>-5<sup>th</sup> grade got a choice in activity; they could either create cardboard arcade games or decorate for Funder's Day. Throughout the observation, students seemed very excited to be participating in the various hands-on activities and you could really feel the sense of community that Mollie, and other staff members, have created at their afterschool program. Table 9 summarizes Boone Central's afterschool program offerings.



**Summer Programming.** According to the CKC summer handbook, the first year of the summer CKC program (2018) operated from May 29<sup>th</sup> through August 3<sup>rd</sup> from 7:45 a.m. to 5:30 p.m. everyday. Each week had a different theme. Teachers led enrichment programming from 9-11 a.m. During this time, staff actively participated and assisted the teacher as needed. After lunch, students participated in a literacy block where students were expected to play a literacy game or read. Afternoon activities included visits to the swimming pool, library, park, and community garden. Additional field trips were also offered on Fridays. According to Mollie, approximately 20 students attended per week, with many students participating in the entire nine weeks of the program.

For summer programming, scholarships were provided to individuals who met the requirements for financial assistance and completed relevant paperwork. To help cover the cost of scholarships, the program received a \$5,000 donation from the Boone County Foundation Fund and a \$5000 matching grant from the Nebraska Communities Foundation.

Boone Central continued their summer program in 2019 with the same structure as the previous summer. The program operated full days (7:45 a.m. - 5:50 p.m.), every day for 9weeks, with each week having a different theme. In the mornings, students were separated into two groups, with the K-1<sup>st</sup> group led by college and high school staff, and the 2<sup>nd</sup>-5<sup>th</sup> grade group led by the site director. Programming included activities such as gardening, pottery lessons with a retired art teacher, 'apron stories' over movie and film production with a retired teacher and making dog and cat toys for the local animal shelter. The summer program also offered a variety of field trips for students, including trips to the local nursing home each Wednesday, a tour of the local theatre (including a private showing of the movie 'Aladdin'), and a visit to the local airport. Additionally, Mollie obtained a partnership with the Boone County Historical Society, and each day for a week, students had the opportunity to do exciting things such as learning how to churn butter, washing clothes the old-fashioned way, digging for artifacts, and hearing stories about what life was like on the prairie. Mollie expressed the idea that this was an excellent partnership, and the students were so enthralled with the activities and information they learned each day; Mollie is hoping this partnership will continue in future years. Boone Central Table 4 summarizes Boone Central's summer program offerings.

## Sustainability Plans

Conversations conducted with Mollie in fall 2019 indicate that Boone Central is constantly working towards sustainability of their program. Mollie shared the great news that the Albion Education Foundation committed to giving \$25,000 for the next 4 years. The program also receives \$1,000 per year from the Free Masons who turned the money from the sale of their building to the school district into an endowment for the Cardinal Kids Club. They have applied for several other grants within the local community (e.g. a student enhancement grant for \$7,500 from the Nebraska Community Foundation, a \$7,500 matching grant from the Boone County Foundation Fund, and a \$5,000 child benefit grant from Valero Renewables).

A central component of Boone Central's sustainability plan is developing key partnerships within the community. At first, the focus of community partnerships was "to tell Boone Central's 'story' simply by running a program that is competent, offers engaging and intentional programming, assists students with social skill development as well as academic



development, and assists working families." She believes students in the program are part of the "selling" of the program to the community. *"Students sell it because they go home and talk about what they have done and learned.*" Mollie highlighted her goal of using CKC's first year to create an awareness of the program. She has visited and talked about the program to a local Philanthropic Educational Organization (PEO) group, the assisted living facility, the education foundation and some other key individuals. Mollie is aware more solid partnerships will need to be formed to be more sustainable, but the first year was primarily about awareness.

Outside of Boone Central Schools and the Boone County Foundation Fund, the biggest community partnerships have been with local assisted living and nursing home facilities at the Good Samaritan Society. In May 2017, Boone Central FFA students designed and built 10 raised garden beds. Students had to design beds in a way that residents could access them even if they are in a wheelchair. Upon completion, the beds were placed at the nursing home and assisted-living facilities. The program director prepared the beds for planting and a local greenhouse helped with the soil, vegetables, and flowers that would go in the beds. During the first week of the CKC summer program, elementary school students helped to plant the garden beds. Beds will be maintained during the summer through a collaborative effort between Good Samaritan and CKC students.

The fall of 2018 began with a significant community partnership for the CKC. Boone Central Schools was able to purchase the local Free Mason building, located across the street from the elementary school. The school district decided to dedicate space in the building for the afterschool program, which has had a positive impact on the program. Now the students can work on longer-term projects without worrying about how to store them during the school day. The gift has generated excitement in the school and community about the afterschool program.

Program director Mollie Morrow has put forth a lot of effort to increase partnerships for Boone Central's CKC throughout the length of the grant. Afterschool and summer programs offered a variety of field trips for students, including trips to the local nursing home each Wednesday, a tour of the local theatre (including a private showing of the movie 'Aladdin'), and a visit to the local airport, all evidence to help support Mollie's efforts. Additionally, Mollie obtained a partnership with the Boone County Historical Society, and each day for a week, students had the opportunity to do exciting things such as learning how to churn butter, washing clothes the old-fashioned way, digging for artifacts, and hearing stories about what life was like on the prairie. Mollie expressed the idea that this was an excellent partnership, and the students were so enthralled with the activities and information they learned each day; Mollie is hoping this partnership will continue in future years.



## Boone Central Table 3. ELO Program Afterschool Programming Summary

	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
	Han	Can	Tec	Criti	lnno	Неа	Con	Stuc	Coll
Fall 2017 Programming									
Art Club	х				х				
Building Challenges	Х			Х	Х				х
Cooking and Nutrition	Х	Х							
Fitness Classes	Х					Х			
Board Games	Х			Х					
Spring 2018 Programming									
Robotics	Х	Х	Х		х				
Science Experiments	Х	Х		Х					Х
Fairytale STEM	Х		Х	Х	Х				
Light-up Circuits	Х		Х	Х	Х				Х
Mission to Mars	Х		Х	Х	Х		Х		Х
Makey Makey	Х		Х	Х	Х				Х
Art Club	Х				Х				
Lego Club	Х			Х	Х				Х
Snack Club	Х					Х			
Fall 2018 Programming									
STEM Challenges (Legos, Knex etc.)	х		х	х	х				х
Nebraska Extension/4-H Programming (health, wellness, careers, etc.)	x	х				x	x		x
Robotics	Х	Х	Х		Х				
Computer Deconstruction	Х		Х	Х	Х				
Grossology	Х								Х
Embroidery	Х				Х				
Upcycling Club	Х			Х	Х				
Musical Creations	Х						Х		х
Simplebots	Х		Х	Х	Х				



	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Spring 2019 Programming									
Outdoor Adventures	Х					х			
Gardening	Х					Х			
Physical Activity and Sports	Х					Х	Х		Х
Young Detectives Club	Х			Х			Х		Х
Drawing Club	Х				Х				
Culture Club	Х						Х		Х
Science Club	Х		Х	Х	Х				
Spa Day Club	Х					Х			
Fall 2019 Programming									
Comic Book Club	Х			Х			Х		
Ooey-Gooey Club	Х								
Genius Hour/Passion Project	Х	Х	Х	Х	Х	х	Х	Х	Х
String Art	Х								
Mason Jar Science	Х			Х					
Cardboard Arcades	Х			Х	Х		Х	Х	Х
Community Brochure		Х	Х		Х		Х	Х	х



## Boone Central Table 4. ELO Program Summer Programming Summary

Doone Central Table 4. LLO Trogran			rogic		y oun	innar y		1	
	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Summer 2018 Programming									
Literacy Club	Х			Х			Х		Х
Community Gardens	Х					Х			Х
STEM Club (i.e. building and									
testing wind-powered boats,	Х		х	х	Х	х			
wearable technology)									
Arts And Crafts	Х				Х		Х		
Vacation Bible School	Х								
Mazes And Machines	Х		Х	Х	Х				
4 <sup>th</sup> Of July Celebrations	Х						Х		Х
Games and Sports	Х					Х	Х		Х
Science	Х		Х	Х	Х				
Summer 2019 Programming									
Nature Exploration (Community garden with nursing home and assisted living facilities)	x				x	x			
Arts and Crafts (pottery lessons with retired teacher)	x				x		x		
Boone County Historical Society (churning butter, washing clothes old-fashioned, digging for artifacts etc.)	x		x	x	x		x		x
Movie/Film Production (including a trip to the local Gateway Theater)	х			x	x				x
Aviation/Space Travel (including a field trip to the local airport	x		x	x	x				
Animals	Х								
Make-It Messy	Х				х				
Games and Sports	Х					Х	Х		Х
Community Gardens	Х					х			х
Vacation Bible School	Х								



# Centura

## **General Program Overview/Background**

The Centura afterschool program is a K-6 program offered at Centura Elementary School. Centura Public Schools is unique in that it is a small, rural district that draws students from several surrounding communities: Boelus, Cairo, and Dannebrog. Most students take the bus to school each day, so that parents don't have to drive out of their way. The afterschool program is viewed as a convenience for families, as it provides care for their children until the normal workday is complete. However, because buses are only available immediately afterschool, parents of children in the program have to drive out of their way to pick them up.

On a typical day, the afterschool program serves an average of 20 students. Although there are some older (e.g., 5<sup>th</sup>) students in the program, most students are in kindergarten through third grade. The afterschool program is offered each day school is in session and consists of various week-long units of structured programming centered on a central topic. Topics for programming and clubs were selected based on a needs assessment conducted with students and parents. The program director is Rozlynn Dibbern who was previously an elementary school teacher and is currently a substitute teacher during the school-day.

Throughout the length of the afterschool program, attendance has averaged approximately 20 -25 students. For the 2019-2020 school year, Rozlynn explained they have 20 students enrolled, with most of them being K-2<sup>nd</sup> graders, along with one 3<sup>rd</sup> grader and one 5<sup>th</sup> grader. Centura Table 1 summaries the general program enrollment numbers for the Centura ELO program.

Fall 2017 Spring		Summer	Fall 2018	Spring	Summer	Fall 2019				
	2018	2018		2019	2019					
20	20	20	25	25	N/A	20				

## Centura Table 1. ELO Program Enrollment Summary

## Logic Model

Cory Bohling, principal of Centura Elementary School, and Rozlynn Dibbern, program director, participated in the development of the Centura Logic Model (see Appendix B). Goals identified in the logic model include:

- Available K-6 programming that can be used in the afterschool that is based on the community's needs and the resources that are engaging to students
- Developing a staffing model that is financially sustainable off ELO programs student fees
- Developing a participation fee system
- Establishing community partnerships to help sustain the program and replenish consumable materials
- Increasing the number of students participating in the program

The subsequent sections help provide evidence on the progress made towards these goals throughout the length of the grant.



## Staffing

Centura's ELO program started in early October 2017. Cory Bohling, the principal of Centura Elementary School, reported he had a great deal of trouble initially hiring and keeping a program director. He hired two program directors but these individuals both quit shortly after being hired due to being overwhelmed by the role. Eventually he hired the current director, Rozlynn Dibbern, and the program started shortly after her hiring. Rozlynn has a bachelor's degree in elementary education and four years of teaching experience in Omaha and Lexington. Prior to her role as director, she had been a substitute teaching in the area and continues to substitute during the main school day.

The ELO program is coordinated by a joint effort between Cory and Rozlynn. Rozlynn is responsible for the day-to-day planning and execution of the program. Cory provides input on the program units, structure of the program, and hiring. Rozlynn is supported by four staff members—two paraprofessionals, a parent, and a teacher. An additional four high school students ranging from sophomores to seniors have been hired to provide further support. The high school students generally work about two times per week and went through a brief interview process prior to hiring. While the high school students support the programming provided by adults, it has been difficult to coordinate their schedules. The high school students Rozlynn employs are often involved in their own afterschool activities, so she must develop the program schedule around the high school students' other obligations. Additional concerns about the limited training and work experience of some of the high school students led Rozlynn to provide more explicit expectations for the high school students and additional training.

In spring 2018, MAP Academy staff worked with Rozlynn to develop a staff survey for administration on Google forms. Staff survey results demonstrated an overall positive experience with the program and identified potential improvements for the program such as the inclusion of more hands-on activities and increasing the number of units covered in a year. The staff survey is included in the Toolbox (see Appendix C.)

The afterschool program is 'breaking in' some new staff members for the 2019 school year. While some staff members are returning, they also have a new parent volunteer, a few new paras, a few high school helpers, and a college student who is completing her practicum.

Rozlynn noted that it is helpful to have a site director who has a background in education – otherwise, they might have difficulties creating hands-on, minds-on programming and adjusting programs to be age appropriate. (e.g. scaling back So You Wanna Be A... and Mission to Mars). Rozlynn's experience as a classroom educator is evident in the planning and execution of the programming. A MAP Academy staff member who is a former special education teacher applauded Rozlynn's efforts to adapt programming for different age and maturity levels. These efforts are found throughout her program but were especially apparent with the Mission to Mars (M2M) and So You Want to Be A.... activities. M2M has several elements better suited for an older student audience, but Rozlynn was able to adapt the material for use with younger students. This type of adaptation process can be challenging and time consuming, but it is very important for the success of programming if students are at varying age levels. Additionally, Rozlynn has helped create TMC/makerspace units and totes



for teachers who wanted to use hands-on, makerspace activities within the classroom, which has led to increased interest in the afterschool program within the school.

## Programming

Observation, interview, and document evidence have demonstrated support for the alignment between Centura's programming and materials and factors identified by stakeholders (e.g., students, staff), ELO Quality standards, and Nebraska STEM approaches, and demonstrate progress towards the goals outlined in Centura's logic model. Great strides have been made to develop a rich program with multiple offerings for students, as described below.

Afterschool Program. Rozlynn is primarily responsible for creating program opportunities and leading daily activities for the afterschool program. On a typical day, there are three staff members and a high school student available to lead activities. Generally, one of the adults leads the activity and the high school staff are there to support, but high school students have led some activities.

ELO programming consists of program units taking place over all five days of the school week. Units last about a week and students have about 45 minutes to participate in the activities. Weekly lesson plans are provided to the staff outlining activities. To get students more engaged, activities are organized so there is a K-5 leader and a helper. Some of the topics covered included nutrition, baking, reduce/reuse/recycle, space, agriculture, five senses, germs, technology, winter Olympics, farms, and healthy bodies. In the fall 2018 interview with Rozlynn she gave a few brief descriptions of the activities. For instance, some activities conducted with the nutrition unit included exploring different food groups and 'MyPlate' with older students. Younger students cut pictures out of magazines and sorted them into different food groups. Additionally, all students had the opportunity to make healthy snacks like smoothies and banana treats. Another example was a science experiment with germs, which involved handling bread with dirty and clean hands to compare outcomes across the different conditions.

One of the fall activities at Centura included a Mission to Mars (M2M) unit using the programming materials provided by Beyond School Bells. Most of the students who participated in the M2M unit were younger, so some aspects of the original program had to be modified for the age level of the students. Students built a variety of structures for housing, water, and energy necessary for life on Mars using shoeboxes and other common household items. Final products were displayed at the front of the school for parents. The program director even had a local architect visit to see the structures. Based on this experience, Rozlynn is considering only offering the M2M activity for older students.

In the spring there was a winter Olympics unit where students learned about the different countries participating in the Olympics and some of the winter events. Students built bobsleds out of toilet paper rolls and competed against each other to see whose bobsled was fastest. Another spring activity was a farm unit. Rozlynn was able to recruit local farmers to bring their animals to the afterschool program. Farmers brought animals and discussed the state fair and opportunities in 4-H. Rozlynn has also used materials from the TMC lab for programming such as the K'nex and Legos.



The Centura afterschool program has grown to include clubs based around specific activities. These clubs often only take place once per week for several weeks. Some examples of these programs include Lego Club, Sewing Club, and Mancala Club. Rozlynn notes the clubs have been popular as they offer a chance to engage students that might not have otherwise been involved in the afterschool program.

When asked to reflect on the program activities, Rozlynn noted there are challenges developing activities. She used resources like Pinterest and Teachers Pay Teachers but admitted planning can be tricky. Most importantly, she stressed it was sometimes difficult to stay on top of the program units to make sure activities were always ready. Although she worked hard this year to come up with a variety of activities, she does not want to simply recycle activities for this up-coming year. *"I may have several of the same students, so I don't want them to get bored."* 

For fall 2018, the afterschool program at Centura continued with the model of one or two week-long units of structured programming with approximately 20-25 students attending per day. Sometimes, the program has virtual field trips to go along with the programming. In previous conversations, Corey and Rozlynn had indicated they wanted to add clubs in addition to the regular structured programming. They polled students in the school to see what they would be interested in doing. Starting in fall 2018, more clubs have been offered at the school, featuring topics such as chess, Legos, cooking, and sewing.

For the 2019-2020 school year, the afterschool program is continuing with weeklong or two-week long units of structured programming centered around a central topic. Topics for 2019 include a health unit, featuring an individual from Nebraska Extension who uses a blacklight to teach a lesson on handwashing; a Famous STEAMIST unit, featuring activities centered on Albert Einstein, Leonardo Da Vinci, Marie Curie, and Vincent Van Gogh; a fall unit with a pumpkin and ghost hand-sewing project and a spiderweb craft; a pumpkin unit with activities over the life cycle of a pumpkin, carving pumpkins, and making pumpkin pie snacks, and a Halloween unit, where students got the opportunity to make ghost cookies, popcorn hands, witches brew, and Halloween masks. Upcoming units include a unit on Bloxels, a hands-on, brains-on video game creator; a Thanksgiving unit where students get to disguise a turkey and design a Thanksgiving flip book, including stories on pilgrims, the Mayflower, and the Squanto; and Holidays around the world, featuring crafts, snacks, and activities centered on holidays in different countries.

Additionally, Rozlynn has helped create TMC/makerspace units and totes for teachers who wanted to use hands-on, makerspace activities within the classroom. Rozlynn explained that this has led to increased interest in the afterschool program within the school. The school is also offering craft and cooking clubs, which were each two weeks long meeting twice per week, and a chess club, which takes place once/week for four weeks.

A site visit was conducted at Centura's afterschool program in fall 2019. Students were participating in a 'pumpkin catapult Olympics' activity. Basically, students got to create a catapult using popsicle sticks, rubber bands, and a plastic spoon. Then, they got to test out their catapults via six different stations. Stations included: launching the pumpkin as far as you



can and measuring the distance; hitting the target; launching the pumpkin over a stack of books; launching the pumpkin into stacked cups, knocking over as many as you can; trying to launch the pumpkin into a bucket; and trying to launch the pumpkin through a hoop held up by their partner. Students worked together with a partner and had to try out the different stations and record their launches onto the activity sheet. At the end, Rozlynn had awards for students who did the best on the various stations. Centura Table 2 summarizes Centura's afterschool program offerings.

During the 2018 spring ELO Kick Off meeting, Cory and Rozlynn discussed ways they hope to increase community involvement in terms of financially sustaining the program (e.g. replenishing consumable materials). Several individuals from the local community and Grand Island have volunteered time to come to the afterschool program. Members of the Grand Island community have been included in outreach because the Centura community is close to Grand Island and some professionals are only located in Grand Island. During the Mission2Mars unit, an architect from the local business Astro Building came to talk about his job as well as see the final M2M projects. A dietitian from the Grand Island HyVee gave a presentation related to nutrition during the Healthy Bodies unit. Local parents and farmers brought farm animals to school during the farm unit. Additionally, a local community member with a large greenhouse gave a presentation about gardening and plants. Rozlynn noted there are challenges with recruiting local community members because it is a small community and she is a new member.

Rozlynn's efforts to enhance community ties, one goal identified in conversations conducted in spring 2018, has paid off, as programming in fall 2019 includes increased community partnerships. For example, an individual from Nebraska Extension has been in to do a health lesson on baking, and additional efforts are scheduled for later in the semester, including a pollinator from Nebraska Extension, an individual who will come in to provide a handwashing demonstration with a black light, and a field trip to the University of Nebraska State Museum (Morrill Hall) in Lincoln. Additional partnerships include the Omaha Zoo, including a virtual field trip, the Nebraska Game and Parks Commission, and the Grand Island Area Clean Community System. MAP academy staff encourage these types of efforts, and the hope is that the ELO program in Centura will continue to expand efforts for creating community connections.

*Summer Program*. For the first year of the summer program (summer, 2018), the ELO program worked with a local community partner to provide programing. Summer programs consisted of week-long clubs centered on a specific theme. Some of the summer options included Lemonade Days (an entrepreneurial program where students run their own lemonade stand), craft sessions, a theatre camp, basic cooking classes, and a 4-day science camp. Students were able to sign up for the clubs week-to-week, based on their interest. In an interview with Cory in fall 2018, he explained that the summer program was well-attended for their community, with about 10-20 students per session. The geographical location of the school (five miles from each of the three communities they draw students from) makes the summer program inconvenient for families, as the district is not able to provide bussing.



Centura chose not to offer a summer program in 2019 for several reasons. First, the geographic location of the schools makes it relatively inconvenient for families, especially because the program is only offered for a few hours each morning and not the full day. Additionally, because of funding concerns, the district is unable to provide bussing for students for the summer program. Instead, Centura chose to focus their efforts and funding on the afterschool program. Centura Table 3 summarizes Centura's summer program offerings.

### Sustainability Plans

Like other communities, Centura is challenged with considering sustainability while also trying to establish their program. The logic model outlined a goal of developing a staffing model that is financially sustainable off program fees. While employing high school students helps to keep costs down, Centura initially struggled implementing a fee system to fully support the program. In an interview with Cory, the Centura Elementary School principal, he explained the original plan was to institute a sliding scale fee based on free and reduced lunch eligibility in the second year. "[The fee structure is] something that we will have to do eventually...but I'm not sure how to do that without killing our enrollment (Cory, Centura Elementary School Principal). In MAP Academy conversations conducted in fall 2019, Rozlynn provided an update that the afterschool program now has a participation fee system. The program costs \$90 per student for the whole year, or \$10 per month, with scholarships available for those who might need assistance. Because of sustainability concerns, Rozlynn explained they wanted the cost to remain the same in future years. Combined with Centura's use of high school students as staff members, this staffing model seems to be sustainable in future years of the program, but increased community partnerships and an increase in the number of students participating in the program (other goals outlined in the logic model) would also help with these efforts.



## Centura Table 2. ELO Program Afterschool Programming Summary

	1	g.				,			
	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
Fall 2017 Programming									
Nutrition Club	Х			х		х			
Baking Club	х			Х					
Reduce/Reuse/Recycle	х			Х	Х				
Space Club	х			Х					
Five Senses	Х			Х			Х		Х
Winter Olympics	х			х		Х			
Spring 2018 Programming									
Space Club	х			Х					
Five Senses	х			Х			Х		Х
Winter Olympics	х			Х		Х			
Fall 2018 Programming									
Mission 2 Mars	х			Х	Х				Х
So You Want To Be A	х	Х		Х					Х
Chess Club	х			Х			Х		
Mancala Club	х			Х			Х		
Spring 2019 Programming									
Lego Club	х			Х	Х				
Cooking Club	х			Х					
Sewing Club	х			Х					
Fall 2019 Programming									
Healthy Bodies	Х			Х		Х			
Famous STEAMIST	Х	Х	Х	Х					
Halloween (STEM activities)	Х		х	Х	Х		Х		
Bloxels	Х		х	х	Х				х
Thanksgiving	Х			Х					Х
Holidays Around the World	Х			Х					Х



## Centura Table 3. ELO Program Summer Programming Summary

Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
x	х		х					
Х			Х	Х				Х
Х			Х			Х		Х
Х			Х	Х	Х			
Х		Х	Х	Х				Х
	X X X X X	X         X           X         X           X         X           X         X           X         X           X         X           X         X	X     X       X     X       X     X       X     X       X     X       X     X	X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X	X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X	X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X       X     X     X	X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X	X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X       X     X     X     X

Note: Centura did not offer a summer program in 2019



# **Grand Island**

## General Program Overview/Background

Grand Island took a unique approach to addressing the *ELO Design Challenge*. In contrast to the other communities, Grand Island does not run a traditional afterschool program. Rather, Grand Island developed a rotating program primarily linked to their mobile TMC lab. After piloting activities during summer 2017, the TMC lab rotated to each elementary school for a two-week period. The lab was in residence at the non-Title I schools in fall 2017 and Title I schools in spring 2018. When the lab visits a school, teachers can use supplies to enrich their school-day classroom content. Additionally, afterschool pop-up events provide opportunities for extended learning outside the typical school day. There is no cost for students to participate in the afterschool pop-up activities. In 2017-2018, the TMC lab was used at 19 schools/events with more than 2,400 students, including summer activities. In 2018-2019, the TMC lab was used at 13 schools/events with more than 1,200 students. Grand Island Table 1 summaries the general program attendance numbers for the Grand Island's ELO program.

Grand Isla	nd Table 1.	ELO Prog	gram Atteno	dance Summary	
•					-

Summer	Fall 2017	Spring	Summer	Fall 2018	Spring	Summer	Fall 2019
2017		2018	2018		2019	2019	
926	755	720	52	433	496	366	643

Note: Fall 2019 attendance includes attendance until late November

MAP Academy staff were able to observe pop-up activities in the summer and fall of 2017. And again, in the spring of 2019. Additionally, staff interviewed the program director, Jason Weseman, several times throughout the 2017-2019 school years. Staff also interviewed Grand Island's Chief of Innovation and Engagement, Jennifer Worthington, in spring 2018 and again in fall 2018.

## Logic Model

Jason Weseman, program director, participated in the development of the Grand Island Logic Model (see Appendix B). Goals identified in the logic model include:

- Increasing student interest in STEM
- Developing community partnerships to increase sustainability of the TMC lab traveling ELO program
- Available K-5 activities, and eventually K-8 activities, for the TMC lab that can be used in the classroom as well as in the afterschool program to support STEM learning
- Available model to sustainably staff pop-up TMC events with community partners

## Staffing

Grand Island's program director, Jason Weseman, is a 5<sup>th</sup> grade teacher at one of the local elementary schools. According to Jason, one of the main reasons he was picked for the coordinator position was his interest in technology and makerspaces. Jason is paid hourly for his time working on TMC lab related activities. Jason facilitates the overall structure of the TMC lab, but each site has a specific contact person who serves as the site coordinator for the two-week period. While Jason is responsible for scheduling the TMC lab visits, providing some



programming, managing the program sharing website, and moving the TMC lab from one school to another. Programming at each school is supported by volunteers including teachers, parents, paraeducators, a secretary, and a licensed practical nurse (LPN).

Summer and fall activities in 2017 served to provide a trial run for figuring out staffing logistics related to the TMC lab activities. Jason planned the schedule so the TMC lab would visit Non-Title I schools first so he would have a better understanding of what supports the Title I schools might need.

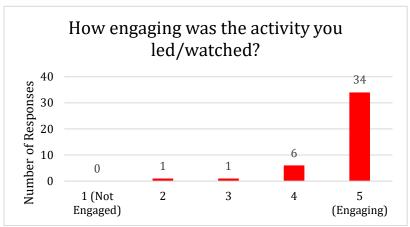
Summer 2018 activities included Power Camp, which was led by Alicia Glaser, an elementary school music teacher. Jennifer Worthington noted activities such as Power Camp and makerspace events rely a great deal on teacher support, both paid and volunteer. In an interview with MAP Academy staff, she emphasized this is an important component for the sustainability of the programs. In order to sustain these quality efforts, Grand Island will need to adopt a model that will rely on a higher percentage of community volunteers with oversight by paid staff.

In conversations in fall 2019, Jason also provided an update on staffing. He explained that the leadership team at Grand Island believed they had a sustainable plan for staffing, including using existing grant funding and applying for more in the future. The district would also rely on teachers/parents to volunteer to help at the programs, which has proven to be a successful model up to this point.

The Google site developed by Jason facilitates administrative aspects of the TMC lab and program sharing. The website serves as a repository for K-5 program activities for use with the TMC lab as well as the classroom. These activities support learning in STEM/STEAM areas. Programs are easily accessible and both teachers and students can add to the collection of materials. Jason revealed in conversations conducted in fall 2019 that he rearranged resources on the website to better accommodate teachers in the classroom. Activities are now arranged by subject/standards (i.e. these makerspace activities go with this math concept), rather than being arranged by STEAM concepts.

Additionally, data from volunteers provide evidence about the level of student engagement they witness while helping with the TMC lab activities. When the volunteers were asked what could be improved about the lab activities, the most common response was a larger selection of activities and more time with the TMC, suggesting an overall satisfaction with the TMC lab activities.





Jason also held a makerspace training in summer 2019 with 90 K-8<sup>th</sup> teachers, specialists, and paras attending. The training had a variety of breakout sessions including robotics, engineering, and gardening, among others. The training was intended for teachers who plan to use makerspace activities in the classroom, as well as to provide training on activities that might be used in the TMC lab rotations or afterschool clubs. There are currently six schools with afterschool clubs centered around TMC/makerspace activities, reaching students from kindergarten through 8<sup>th</sup> grade. The district has plans to expand afterschool clubs to additional schools, which was one of the mid-term goals identified in the logic model.

## Programming

Observation, interview, and document evidence have demonstrated support for the alignment between Grand Island's programming and materials and factors identified by stakeholders (e.g., students, staff), ELO Quality standards, and Nebraska STEM approaches, and demonstrate progress towards the goals outlined in Centura's logic model. Great strides have been made to develop a rich program with multiple offerings for students, as described below.

Afterschool Extended Learning Opportunities. The program director, Jason Weseman, was primarily responsible for collecting initial programming and activities for use with the mobile TMC lab. These materials were compiled on a Google site available to all Grand Island public school employees and the evaluation team (https://sites.google.com/gips.org/gimakerspace/home). The Toolbox provides information about Grand Island's Google site (see Appendix C). The Google site serves as a repository of activities involving science, technology, engineering, arts, and mathematics (STEAM). Free build task cards are also available on the resource page. Although Jason provided initial materials, the website's resource page encourages teachers and students to upload their own ideas as well. Jason's goal with the rotating laboratory structure and Google site is to encourage others to share ideas/projects from each school. In addition to program ideas, the website provides a rotation schedule for the lab, planning documents for teachers, list of available materials, photos of activities, general guidance for preparing to use the mobile TMC lab, instructions for how to involve students, options for publishing and showcasing activities, and directions for wrapping up the lab for the next users.



Activities provided on the website use a combination of permanent and consumable materials. Permanent materials available in the TMC lab include but are not limited to Legos, K'nex, Ozobots, Ipads, Marble Maze, Snap circuits and hand tools. To add to the provided materials, Jason obtained permission to use science lab materials from a previous school district curriculum in the TMC lab.

Examples of consumable materials available in the TMC lab include but are not limited to crayons, yarn, string, fabric, pool noodles, water bottles, and wood materials. Given the variety of materials and the number of different sites the lab traveled to over the summer/school year, there were concerns throughout the semester about waste and depletion of consumable materials. For instance, Jason gave an example of conducting a pop-up event at the library where attendees went through almost 300 cardboard tubes during their trial/error design process. Jason highlighted this is the goal of maker activities—encouraging trial/error/design—but it depletes resources quickly and you need to have a plan for restocking. *"You are limited to your storage, so sustainability and restocking of materials is something to consider."* Some of the ways Jason and others in the district have worked to keep the lab stocked is by asking for help from schools and parents (e.g., water bottle collection) and buying in bulk. Jason has set up a form on the Google site that allows him to monitor supplies, so he knows when to re-order some of his bulk materials.

MAP Academy staff were able to visit an elementary school in the fall of 2017 to observe TMC lab afterschool activities. At this site, there were several stations available for students to rotate to during afterschool time. Example stations included an art activity, robot mouse, building blocks, and a sink/float activity. Each activity station was staffed with teachers, paraeducators, and/or volunteers. MAP Academy staff were able to watch students learn about programming using a robot mouse that had to be given "directions" down a path to reach a piece of cheese. Students had to program each step the mouse needed to take to get it to the cheese (goal). In another activity, students recorded how many pennies they could put on tinfoil before it would sink. Students recorded the number of pennies they were able to put on the foil and educators provided opportunities to reflect on aspects such as how to stack their materials (i.e., distribution of the pennies on the materials) and why some approaches were more successful than others.

In an interview with Jason, MAP Academy staff asked him to reflect on his use of the rotating laboratory for delivering STEM/STEAM programming and its effectiveness. Jason explained he chose this delivery method because he thought it would be the best way to, *"give exposure to all of our students at the elementary level."* He mentioned a goal of the district was to see more STEM instruction and students taking on the mindset of trial/error. He thought the rotating structure of the laboratory provided a way to increase awareness of maker activities, which in turn would get more students and teachers engaged in the process. *"Some of our biggest challenges are getting students and teachers to 'see' what the STEM trial and error process is."* 

Jason reflected he has seen students get passionate about the making process and hoped that passion would drive the desire for more learning experiences. He believes students can be the ones to enact change by showing their passion and desire to their teachers. His



goal is to create a spark for both students and teachers to extend the learning beyond the twoweek TMC lab visit. Jason is also hopeful businesses will see this passion and want to partner with schools to provide a real-world context to some of the activities.

Grand Island received an expansion grant that allowed them to create a basic makerspace lab in each elementary school. (One school declined adding an in-school lab.) These makerspace labs are used both during the school day, and for the before/afterschool program. The expansion grant also required the schools who added the makerspace lab to attend a training by Nebraska Extension, which has been really helpful for the program leaders in Grand Island.

Equity in disbursing the expansion grant funds was a concern. Some of the schools in Grand Island community are very large, with over 500 students, while others only have about 100 students. Each school received the same amount of grant money (\$2,500) to fund the makerspace lab in their school, and that amount of money doesn't go as far in the larger schools in terms of purchasing consumable supplies.

In addition to the afterschool TMC lab activities, a Mission to Mars (M2M) club was started at Walnut Middle school in spring 2018. The club was six weeks long and delivered twice a week for an hour and fifteen minutes. Club members used the M2M program developed by Beyond School Bells (BSB). A certified teacher, who also served as a NASA ambassador through Strategic Air Command, led the club. This aspect is particularly important because the club leader was able to infuse much of her experience and knowledge of available NASA resources into the club. Club participants devoted time to understanding some of the challenges of living on Mars, discussing the concepts of scale, planning, building their structures, and presenting on their design process.

A site visit was conducted in spring 2019 with three members of MAP academy staff. A variety of activities were offered, including Lego designs, making a bouncy ball, paper sculptures, penny boats, a sink/hover/float activity, ozobots, and strawbees. Activities were organized in stations, and students were allowed to freely move around the stations at their choosing. Students definitely enjoyed the activities, all of which were hands-on.

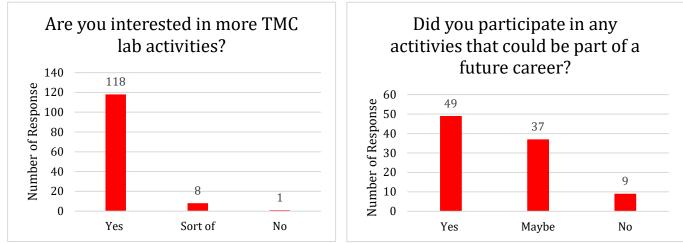
Conversations in the fall of 2019 revealed that, because of success in previous years, Grand Island is continuing with the same model as in years past for the 2019-2020 school year, with the TMC lab traveling to a new school every 2 weeks. Jason also explained that teachers are still using the basic makerspace labs (created by funding from the expansion grant) within classrooms and in before/afterschool programs at each school. There are now six schools in Grand Island that have a before/afterschool program, independent of the *ELO Design Challenge* grant.

Grand Island has also been conducting activities to target their mid-term goal of growing the program to include  $6^{th} - 8^{th}$  graders by expanding activities to include afterschool clubs. One of these clubs was developed around Mission to Mars (M2M), a Beyond School Bells (BSB) program. In an interview with Jason about the implementation of the program, he highlighted this club targeted older students because there were aspects of the M2M program



that made it a better fit for older students (e.g., concepts of scaling). He explained students worked their way slowly through the BSB materials with the help of their leader to make sure they understood the goals of the club (i.e., design living quarters for Mars) and the concepts of scale. These were two aspects students struggled with at the beginning of club. The implementation of this program at Walnut Middle School provided important feedback, which was shared with leaders at BSB to enhance further iterations of the M2M program. Jason plans to increase evaluation efforts related to M2M this next year to better understand the points at which students struggle in the program, so modifications can be made to improve understanding.

Although Jason and Jennifer discussed some of the challenges, they have had with getting community partnerships, they are looking for opportunities to bring the TMC lab to community events. One partnership has been created with Nebraska Extension/4-H, who has helped with makerspace projects and provided support for the aquaponic gardening systems. Another partnership was created with the Clean Community Foundation in Grand Island, who have been very supportive in ELO programming, providing recyclable materials and leading sessions with makerspace activities. Grand Island Table 2 summarizes Grand Island's afterschool program offerings.



Jason has collected evaluation evidence supporting success of some of the logic model outcomes he and the Grand Island leadership outlined for their *ELO Design Challenge* efforts. Students and teachers/volunteers who attend afterschool maker events are given a feedback survey following their participation with the mobile lab. Keeping in mind interested students chose to participate in the afterschool activities (demonstrating baseline interest), survey data indicate these students are interested in more TMC activities beyond their initial exposure (see data below). Thus, survey data provide evidence to suggest exposure to mobile TMC laboratory program/materials helps increase interest in STEM activities, which is a short-term goal of the Grand Island program (see logic model; Appendix B).

*Summer Extended Learning Opportunities.* Grand Island's TMC lab was active in summer 2017 and continued to be active in summer 2018. Shortly after receiving their TMC lab in summer 2017, Jason worked with the public library as well as other organizations to coordinate several pop-up events. These pop-up events were available to everyone within the



Grand Island community but were primarily attended by local summer camp programs such as the YMCA. Initial pop-up events in summer 2017 provided an opportunity to pilot some of the activities used during the 2017-2018 school year. MAP Academy staff were able to observe one of the pop-up events at the local library in summer 2017. MAP Academy staff observed students participating in two main stations—using cardboard to build a structure and creating cars with water bottles.

Summer 2018 activities included continued makerspace activities with students at the public library and afternoon activities for students enrolled in Power Camp. Power Camp (http://www.theindependent.com/news/local/students-able-to-experience-variety-of-subjects-at-gips-power/article\_c6e54aec-7503-11e8-afef-7391ac564233.html) activities were held from noon to 4:00 pm Monday through Thursday and were open to students in second through fifth grade who attend Title I schools. Students participated in a variety of activities related to careers, community awareness, science, robotics, coding, and art. Jason also conducted a mobile makerspace activity during "Pop with a Cop" in summer 2018 and will use that experience as a template for other events.

Summer 2019 activities included continued makerspace activities with students at various summer school programs (e.g. Gates, Walnut). Makerspace activities were well attended, with approximately 366 students attending the various summer programs, and a variety of activities offered, including, but not limited to free building stations (i.e. Legos, Strawbees, Makedo cardboard construction), snap circuits, and a variety of technology activities. Table 17 summarizes Grand Island's summer program offerings.

## **Sustainability Plans**

Grand Island's sustainability plan largely relies on volunteer staffing for TMC lab events. Given that the TMC lab residencies are only two weeks at each elementary school, school personnel including teachers and paraprofessionals, as well as parents, have been willing to help facilitate events for the short duration. School and community volunteers have also helped with pop-up TMC lab events outside of the school-based programs (i.e. at the library, state fair). As of fall 2019, Jason indicated that the district had some existing funding, including title IV money, and would pursue additional grants in the future to provide paid staff support and replace consumable supplies. The district is interested in applying for local area foundation grants to support their ELO programming efforts.



Grand Island Table 2	ELO Program Afterschool	Programming Summary
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	Hands-On Learning	Career Awareness	Technology	Critical Thinking	Innovation	Health & Wellness	Communication	Student Leadership	Collaboration
2017-2019 Afterschool									
Programming Mobile Makerspace Lab (2 weeks									
at each elementary school)	х	х	х	х	х		х		х
Permanent Makerspace Club (at 6 elementary schools)	x	х	х	х	х		х		х
Mission to Mars Club	Х		Х	Х	Х		Х		Х
Coding Club	Х	Х	Х	Х	Х				
Run Club						Х			Х
Character Council				Х			Х	Х	Х



## **Section VI: Answering the Evaluation Questions**

Throughout the past two and a half years the evaluation team has had the privilege of observing programs and interviewing individuals who are leading efforts to provide high-quality extended learning opportunities in Nebraska. During the first year the MAP Academy staff identified the goals of the five communities and worked to understand the context of each program. For the second year, MAP Academy staff built on relationships formed with each community to enhance their evaluation efforts. During the final half year, MAP Academy staff have noted the progress each site has made towards their goals and identified key successes and lessons learned that could help other Nebraska communities (and beyond) build their own extended learning opportunities for students.

## Focus area: ELO Design Challenge Programs and Materials

1.a. To what extent are the developed ELO Design Challenge programs and materials aligned with factors identified by key stakeholders (students, existing staff, education and community leaders)?

*ELO Design Challenge* programs and materials are strongly aligned with factors identified by key stakeholders. Several of the participating school districts conduced needs assessments within their community. For example, Auburn conducted a needs assessment with parents to gather information about potential fee structures as well as program content interests. They also surveyed local day cares to understand their capacity to provide care for school-aged children. Boone Central also conducted a community needs assessment, and also created a steering committee including the program director, superintendent, principal, elementary teacher, a high school career academy teacher, a local business owner, and a Boone County Foundation Fund member. These activities ensured that the ELO programs developed were responsive to parent and community needs.

# 1.b. To what extent are the developed ELO Design Challenge programs and materials aligned with ELO Quality Standards, Nebraska Career Readiness Standards, and NDE STEM approaches?

*ELO Design Challenge* programs and materials are strongly aligned with factors identified by Nebraska State Board of Education position statement S5-Expanded Learning Opportunities (2017) and supports the tenets of the Nebraska Department of Education's Accountability for a Quality Education System, Today and Tomorrow (AQuESTT; 2014), Nebraska Department of Education's Career Readiness Standards (2011), and the Nebraska Department of Education's STEM (Science, Technology, Engineering and Math) Approach (2016). A cross walk of these four standards and approaches is provided in Table 2 in this report. Application of these elements are noted in tables 2 and 3 within each school district's case study. In nearly every case, *ELO Design Challenge* programs offered activities that addressed the elements identified in each of these important guiding documents. In some cases, school districts made intention choices to focus on particular topic areas, thus not all elements were addressed. For example, Grand Island's programming centered on using the TMC Lab at each elementary school for two weeks; thus their program did not directly address the health and wellness or student leadership dimension. However, of all of the participating sites, Grand Island had the furthest reach in terms of STEM programming.



# 2. To what extent do the developed ELO Design Challenge programs and materials promote student engagement and success in a variety of ELO settings?

The developed *ELO Design Challenge* programs and materials strongly promote student engagement and success in a variety of ELO settings. Staff from the MAP Academy visited each participating ELO site on at least two occasions; once near the beginning of the grant and once near the end, including afterschool and summer programs. In all cases we observed highly engaging activities. Each site clearly had its own unique context for their programming. However, regardless of that context, students participated in what we refer to as "hands-on, minds-on" programming. That is not to say that every element of each observation was a highly engaging activity. Each site had their own routines for tasks such as snacks, homework, etc. However, the focus at each site was on engaging students in fun, informal learning that aligned school curriculum.

# 3. To what extent can the developed ELO Design Challenge programs and materials be implemented in an approach suitable for multiple contexts (e.g., afterschool and summer)?

The developed *ELO Design Challenge* programs and materials can be implemented in multiple contexts. There was a diversity of contexts across the five *ELO Design Challenge* sites. Beatrice had an existing, successful summer enrichment program that formed their foundation of their afterschool programming. Auburn had previously offered a "Wellness Camp" that offered morning activities three days per week in the month of June. The remaining three sites had no existing programming. Boone Central developed a vibrant afterschool program and a full-time, 9-week summer enrichment program. Centura and Auburn both offered afterschool programming and one partial summer of programming during the grant period. Grand Island focused on their TMC Lab residencies with a few short-term or pop-up summer events. Thus, each community implemented their program to best meet their needs.

## Focus area: Design Based Research (DBIR) Pilot Testing

4. To what extent are findings from the DBIR pilot testing activities used to a) inform updated programs and materials; and b) to inform activities to encourage student participation and engagement?

The findings from the DBIR pilot testing activities were used to inform updated programs and materials. During the initial activity development stages of the grant, staff from the MAP Academy were active observers of pilot events. All MAP Academy staff involved in this evaluation were certified to conduct Dimensions of Success (DoS) observations, which a research-based measure of quality in informal STEM learning activities. Based on the DoS criteria, MAP Academy staff provided feedback to both Beyond School Bells and Nebraska Extension staff, who were then able to incorporate that feedback into the continued development of activities. The end result was a menu of tested age appropriate, "hands-on, minds-on" activities for ELO programs to use.

## Focus area: ELO Design Challenge Program

# 5.a. To what extent does the ELO Design Challenge program support innovative data collection methods?

The *ELO Design Challenge* program supported innovative data collection methods. As described in the case study descriptions above, throughout this grant, each site developed data collection methods that were unique to their context. Both Auburn and Boone Central



conducted needs assessments with parents and community members. Centura, with support from the MAP Academy, developed a staff survey. Grand Island developed a survey to collect both activity leader and student feedback on their programming. Centura conducted a needs assessment with students and parents. The MAP Academy also developed a retrospective pre/post assessment for the "So You Wanna Be A..." career development program with one of the pilot sites in Lincoln. Although some of the *ELO Design Challenge* sites used elements of that program, no sites used it as a formal full year program as it was designed. Therefore, the retrospective pre/post assessment was not ultimately used.

# 5.b. To what extent does the ELO Design Challenge program support development of new ELO programs?

The *ELO Design Challenge* program strongly supported development of new ELO programs. Directly, the funds from his grant supported the development of five new ELO programs in Auburn, Beatrice, Boone Central, Centura, and Grand Island as detailed in the above case descriptions. None of these school districts had any afterschool programming prior to this grant, although two districts did have existing summer enrichment programs.

# 5.c. To what extent does the ELO Design Challenge program support enhancement of existing ELO programs?

The *ELO Design Challenge* program strongly supported enhancement of existing ELO programs. Several ELO sites in Lincoln benefitted by hosting programming pilots, which gave them access to the new activity materials that were being developed as part of this grant. The TMC Labs developed as part of this grant were provided using other funding sources to XX additional ELO programs across the state of Nebraska. The *ELO Design Challenge* Toolbox, which will be launching in January, will provide free access to any Nebraska ELO site to the materials developed through the grant and other mechanisms. Hence, all Nebraska school districts have the opportunity to benefit from the investment of the Innovation grant funds.

# 5.d. To what extent does the ELO Design Challenge program support strategies for developing new approaches for ELO staffing?

The *ELO Design Challenge* program strongly supported strategies for developing new approaches for ELO staffing. Each community had a unique staffing model. Auburn capitalized on its proximity to Peru State College and formed a partnership with the College of Education to hire staff for its afterschool program. Boone Central and Centura both recruited local high school students as program staff. Beatrice relied largely on hiring paraeducators as staff for their afterschool programs. Grand Island's program staff draws largely on teacher volunteers, with some parent volunteer support, to staff afterschool activities during the TMC Lab residency. Each approach fits the unique contextual needs of each program.

# 5.e. To what extent does the ELO Design Challenge program support financial strategies to support the growth of ELO programs?

The *ELO Design Challenge* program strongly supported financial strategies to support the growth of ELO programs. The funding provided by the *ELO Design Challenge* grant provided the initial investment to start these five ELO programs. Beyond School Bells was able to leverage the investment from the grant to secure additional funding to provide a gardening component at each site, additional makerspace materials, and the development of additional



programming. Two sites, Beatrice and Auburn, obtained 21<sup>st</sup> Century Community Learning Center grants, that provide extended support and enhancement during the ELO program development. Two sites, Auburn and Boone Central, secured financial support from their local community foundation. Grand Island received support from Clean Community Foundation in the form of free recyclables to use in their TMC programming. Each site made thoughtful decisions about their fee structure, surveying parents to determine what they were willing to pay, and offering need-based scholarships ensure accessibility for all students. Communities already have their eyes focused on future sustainability thanks to the efforts of Anna Wishart, Director of Partnerships from Beyond School Bells, and Janny Crotty, Assistant Director of Advancement for the Nebraska Community Foundation provided additional support to each of the ELO Design Challenge sites in developing a long-term sustainability plan.

Although each community has a plan for sustaining the ELO programs created by the Innovation grant funds, we would be remiss if we did not emphasis the importance of having access to not only start-up funds, but also the infrastructure and support network provided by the ELO Design Challenge for other school districts that do not have a viable ELO program currently in place. While 21<sup>st</sup> CCLC grants support the development and expansion of many ELO programs, not all schools meet their funding criterial of having at least one school building benefiting from Title 1, Part A funds and at least 40.00% of the students participated in free or reduced-cost meals.

# 5.f. To what extent does the ELO Design Challenge program support collaboration among partners?

The *ELO Design Challenge* program strongly supported collaboration among partners. Beyond School Bells provided the necessary infrastructure to facilitate collaboration among the five sites and with other ELO programs and resources. Regular meetings and professional development trainings provided opportunities for program leaders to share success stories and ask for help in addressing challenges. These opportunities provided a framework for "just-intime" learning for program directors.

## 6.a. What factors impede progress toward ELO Design Challenge goals?

We identified two factors that posed challenges impeded progress toward *ELO Design Challenge* goals: program leadership and staffing concerns, and transportation limitations. While not all of the sites experienced program leadership turn-over, for the one that did, it caused significant set-backs. Auburn delayed the start of their ELO program from fall 2017 to spring 2018 due to challenges and hiring and retaining a program director. Two school staff were hired as co-director for the afterschool program in late spring 2018 and they served throughout summer 2018 and the 2018-2019 school year. Leadership changes at the district level postponed the summer 2019 summer program and a new program director was hired for the 2019-2020 school year. While these staffing set-backs caused delays and postponements to portions of Auburn's ELO programming, they are well-positioned to continue to grow their program with the recourses developed through the *ELO Design Challenge*. Concerns about staff turn-over were expressed by nearly every site, particularly for sites that employ high school and college students. While students were noted as being high energy and caring staff, their diverse schedules and other commitments require flexibility in their work availability. School-related staff, such as paras, substitute teachers, and retired teachers seem to provide



a more consistent staff pool. However, these types of staff are not always and option, or necessarily interested, in working in afterschool or summer programs. Licensing requirements for staff was a concern for the two of *ELO Design Challenge* sites that had 21<sup>st</sup> Century Community Learning Center grants (Beatrice and Auburn). Staff at these sites are required to have criminal background checks, which requires travel to Lincoln for fingerprinting by the State Patrol. This placed an additional burden on program directors when recruiting potential staff and arranging their start dates.

Transportation limitations was a universal concern for the *ELO Design Challenge* sites. In all cases, the parents of students participating in afterschool programs were responsible for transportation of their child given that school bussing was only available immediately after school dismissed. For Grand Island, this was not as large of a concern because the TMC Lab was only in residence at any given school for a two-week period. During that time, the afterschool programming was often limited to particular grade levels on a given day. Hence, parents may only have had to pick up their child once or twice during the TMC Lab residency. However, for the remaining four sites with a daily afterschool program, parents had to choose between the convenience of their child being bussed home or participating in the afterschool program. While it is likely impractical to provide a bussing option for students participating in afterschool programs, the burden of parent transportation limits the full participation of students.

## 6.a. What factors facilitate progress toward ELO Design Challenge goals?

There were a number of factors that facilitated progress toward ELO Design Challenge goals: Program leadership, program staff, school collaboration, community partnerships, adequate funding, high-quality, age-appropriate programming content, and strategic mentors.

**Program Leadership**: Perhaps the single most important factor in facilitating the *ELO Design Challenge* goals was the quality of each site's program leadership. Leading an ELO program requires energy, ingenuity, resourcefulness, patience, cooperation, and passion. The program leader sets the tone; they are the "face" of the program to parents, school staff, and the community alike. Parents evaluate the quality of the ELO program based on interactions with the program leader. Teachers and community leaders participate in and support the program based on interactions with the program leader. Selecting and retaining a strong leader for an ELO program is an investment in its overall success.

Several of our communities have strong, committed leaders whose time is primarily devoted to developing their ELO programs (e.g., Beatrice, Boone Central, and Centura) and it has allowed programs to flourish in multiple ways. Other programs have struggled to maintain consistent staff (e.g., Auburn) and these struggles have slowed down progress at times. Grand Island does not have a full-time afterschool program, so they found a balance with a creative thinking teacher who developed a unique model for residencies with their mobile TMC lab and enlisting help of staff across multiple schools.

**Program Staff**: Program staff were another key element in facilitating the *ELO Design Challenge* goals. While they take their cue from the program leader, program staff are the front line responsible for the students' experiences. When program staff are excited and engaged, students become excited and engaged; it is contagious. But their role is far broader than



simply engaging the students. They develop positive, meaningful relationships with students that allows them to both challenge their students to learn and grow, but also support them in that process. They role model appropriate behaviors for students. They make learning fun. Selecting and training appropriate program staff is key to the smooth and successful operation of ELO programs. Beatrice has been successful in recruiting paras to work in their BLAST program. Auburn has developed relationships with Peru State College to recruit staff for their DOGS Academy. The Cardinal Kids Club at Boone Central and the Centura ELO program hires high school students to staff their programs. Grand Island has been creative in staffing the mobile TMC Labs by providing a small stipend for a lead teacher at each school for the programs. All of these unique staffing models work in their respective communities.

**School Collaboration**: ELO programs do not exist in a vacuum; they literally exist in a symbiotic relationship with a school. When this relationship is embraced by both the school and the ELO program, it serves as a strong foundation from which ELO programs can flourish. Collaboration entails more than simply passing out a flyer and providing space for an ELO program. Schools that actively provide academic support materials, such as spelling lists and extra copies of homework assignments, make it easier for program staff to provide academic assistance to students. Schools that value the contributions of ELO programs encourage teachers and staff to be involved in ELO programs. In return, ELO programs provide additional support and positive relationships for students who might not otherwise receive it. As noted at Boone Central, their overall NSCAS improved markedly after the implementation of the Cardinal Kids Club.

**Community Partnerships**: Strong community partnerships also facilitated progress towards the *ELO Design Challenge* goals. Each ELO program has a unique context in which it operates – the community. Being aware of the community needs and resources allowed program leaders to develop diverse and creative partnerships within the community. In some instances, communities supported ELO programs by providing guest speakers or activity leaders for clubs or other types of programming, such as the Working Wednesday program in Beatrice. In other instances, communities supported ELO programs helped to off-set the demand for community-based child cared which in turn increased the availability of pre-school programming as noted in Auburn and Boone Central. ELO programs also provided options on non-school days for families who may have been comfortable with their child being home unsupervised after school, but not when school was out for the full day.

Adequate Funding: While 21<sup>st</sup> CCLC grants have supported the development of many ELO programs, not all Nebraska communities are eligible for these grants, thus the strategic investment by the Nebraska Department of Education in the *ELO Design Challenge* provided necessary start-up funds for four communities, and enriched programming for a fifth community that had a concurrent 21<sup>st</sup> CCLC grant. Start-up funds are critical to providing momentum for creating an ELO program in communities that do not qualify for 21<sup>st</sup> CCLC support. Funding and resources are also essential elements in the sustainability of ELO programs. For example, the dedicated space in the former Free Masons building and the



endowment with the Boone County Foundation help to ensure the sustainability of the Cardinal Kids Club at Boone Central.

**High-Quality, Age-Appropriate Programming Content**: The promise and the opportunity for ELO programs to enhance student learning is clearly dependent upon providing high-quality, engaging experiences that do not appear to the student as "learning". Thus, access to programming content that is both fun and age-appropriate facilitated progress towards the *ELO Design Challenge* goals. Beyond School Bells and Nebraska Extension developed and provided a variety of programs to the participating sites. Program leaders also sought out other sources for ELO activities. Regardless of the source of the content, program leaders often had to adapt the activities to make them more relevant and developmentally appropriate for their students. While there will always be an element of customization needed with afterschool programs, programs developed and tested through the *ELO Design Challenge* are available to other programs through the online ELO Toolkit.

**Strategic Mentors**: The mentoring and support provided to the *ELO Design Challenge* communities by Beyond Schools Bells was often cited as an invaluable resource by program leaders in developing their ELO programs. Beyond School Bells was the driving force in networking *the ELO Design Challenge* communities with each other as well as other ELO programs across the state. They connected program leaders with high-quality and relevant resources throughout their development process, thus streamlining the process. Clearly each community had challenges along the way, but the guidance and expertise of Beyond School Bells helped them navigate those challenges towards positive outcomes.



# 7. What progress has been made toward "scaling up" activities and strategies and to what extent does the project serve as a model for other groups or partnerships?

The ELO Design Challenge grantees have been proactive in documenting their experiences in developing high-quality extended learning opportunities in their communities. The administrative materials and programming curriculum developed as part of this grant, as well as advice and lessons learned, are available in the online "ELO Toolkit" (available at https://sites.google.com/view/elotoolkit/toolkit-home) for schools to develop or improve afterschool and summer programming, While still under development, this toolkit will serve as a hub to efficiently connect schools and ELO staff with curated administrative and programming resources and examples. A list of the toolkit contents is provided in Appendix C. In addition to the toolkit, program leaders in the five communities are a willing resource to answer questions or share ideas to other communities that want to develop or improve their afterschool and summer programming. Further, Beyond School Bells has built and delivered 20 TMC labs to 12 Nebraska communities beyond those participating in the ELO Design Challenge, thereby enhancing those communities ELO programs. Additionally, Beyond School Bells is working with Nebraska Extension to develop hybrid delivery models that would partner local rural facilitators with an on-line or telepresence robot college student to co-lead STEM programming thus increasing rural communities' access to high-quality ELO STEM content.



## References

- Afterschool Alliance (2014). America after 3PM. Retrieved from http://www.afterschoolalliance.org/aa3pm/
- Alexander, K. L., Entwisle, D. R., & Steffel Olson, L. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72, 167–180.
- National Research Council. (2015). Identifying and supporting productive STEM programs in out-of-school settings. Committee on Successful Out-of-School STEM Learning. Board on Science Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.
- Nebraska Department of Education (2011) Career Readiness Standards. Retrieved from https://www.education.ne.gov/nce/careerreadinessstandards/
- Nebraska Department of Education (2014). Accountability for a Quality Education System, Today and Tomorrow. Retrieved from <u>https://aquestt.com/</u>.
- Nebraska Department of Education (2016). STEM (Science, Technology, Engineering and Math) Approach. Retrieved from <u>https://www.education.ne.gov/stem/</u>
- Nebraska State Board of Education (2017). S-5 Expanded Learning Opportunities Position Statement. Retrieved from <u>https://www.education.ne.gov/policyreference/s5/</u>.
- Vandell, D. L., Reisner, E.R., Pierce, K.M. (2007). Outcomes linked to high-quality afterschool programs: Longitudinal findings from the study of promising afterschool programs. *Policy Studies Associates, Inc.* Retrieved from <a href="https://files.eric.ed.gov/fulltext/ED499113.pdf">https://files.eric.ed.gov/fulltext/ED499113.pdf</a>



## Appendix A: ELO Design Challenge Logic Models

**Need:** Across our state, more Nebraska students need engaging, high-quality ELO experiences.

**Goal(s):** To design hands-on, sustainable, affordable, data-driven ELO programs, powered by school-community partnerships, that support *AQuESTT* tenets, help meet district goals, enhance student learning and growth and are scalable across Nebraska.

Inputs	Activities	Outputs				
<ul> <li>In order to accomplish our goals, we will need the following resources:</li> <li>1. Key stakeholder input:</li> <li>Student Groups (grades 4-8), Surveys and interviews with existing ELO program staff, partners, parents &amp; District and state leadership</li> <li>Build and initiate stakeholder groups in pilot communities</li> <li>Model for an ELO focused on three core elements – programming, financing and data</li> <li>Staff to support a thirty-month <i>ELO Design Challenge</i> process</li> <li>Data collection, evaluation and outreach planning tools, with wellestablished feedback loops connecting each phase of the <i>ELO Design Challenge</i></li> </ul>	<ul> <li>Which will result in the following:</li> <li>1. Insights from key stakeholder groups</li> <li>2. Implement multi-site, multi-phase <i>ELO Design Challenge</i></li> <li>3. Kick off design sessions with overall group, then subgroups: <ul> <li>Programming, staffing and scheduling</li> <li>Strategic financing and sustainability</li> <li>Data collection, use and dissemination</li> </ul> </li> <li>Prototyping new K-8 programs, units and approaches in new and existing programs</li> <li>5. Field Testing and data collection / evaluation</li> <li>6. Revising and retesting tools and ELO strategies in new settings</li> </ul>	<ul> <li>Accomplishing these activities will result in the following progress:</li> <li>Development of tested and validated K-8 programs (6-7 units) innovative material development including makerspaces in pilot communities; schedules and staffing approaches for ELO programs</li> <li>Development of new approaches and models for strategic financing</li> <li>Development of new methods of data collection, use and dissemination</li> <li>Identification of new communities and models</li> <li>Toolbox capturing all these models and lessons learned</li> <li>Statewide partnerships to disseminate models and lessons learned</li> </ul>				
<b>Evaluation</b> : The <i>ELO Design Challenge</i> will use a continuous						

Inputs, Activities and Outputs:

**Evaluation**: The *ELO Design Challenge* will use a continuous improvement / feedback process to collect insights gained throughout the thirty-month process to refine inputs, activities and



Nebraska ELO Design Challenge - Logic Model (cont.), p.2

**Need:** Across our state, more Nebraska students need engaging, high-quality ELO experiences.

**Goal(s):** To design hands-on, sustainable, affordable, data-driven ELO programs, powered by school-community partnerships, that support *AQuESTT* tenets, help meet district goals, enhance student learning and growth and are scalable across Nebraska.

Short Term Outcomes	Medium Term Outcomes	Long Term Outcomes
<ul> <li>During the <i>ELO Design</i> <i>Challenge</i>, we expect to accomplish:</li> <li>Development, testing and refining of K-8 programs and units that support Nebraska Career Readiness standards and Nebraska STEM process</li> <li>Development, testing and refining of financing and sustainability planning for ELO programs in a variety of settings</li> <li>Development, testing and refining of data use, collection, reporting and outreach tools illustrating the role ELO can play in meeting <i>AQuESTT</i> and district goals.</li> </ul>	<ul> <li>We expect the following measurable changes within 1-3 years:</li> <li>Adoption of <i>ELO Design Challenge</i> tools to support the development of new K-8 ELO programs in small / medium sized communities across the state currently without ELO programming</li> <li>Adoptions of these tools in communities with existing ELO programs to enhance quality and sustainability</li> <li>Increased numbers of Nebraska students having access to high-quality ELO programs that support district goals</li> <li>Increased student achievement and <i>AQuESTT</i> rankings for schools implementing the <i>ELO Design Challenge</i> models.</li> </ul>	<ul> <li>We expect the following impacts/trends within the next 3-7+ years:</li> <li>Continued spread of K-8 ELO programs based on the principles developed in <i>ELO Design Challenge</i> into most communities across NE.</li> <li>Increased academic performance in students participating in these ELO programs</li> <li>Increased community support for public education, as ELO programs support increased opportunities for comm. involvement in education</li> <li>NE becomes a national model for education innovation and success through intentional, strategic use of time.</li> </ul>
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**Dissemination**: We will work with an array of partners to disseminate items developed including model programs, scheduling and staffing models, strategic financing plans and data collection and outreach materials to communities across



## Appendix B: Site Specific Logic Models

	Auburn						
Inputs	Activities	Outputs	Short term Outcomes	Medium Term Outcomes	Long Term Outcomes		
Funding from ELO Design	Development of K- 8	Creation of a K-8 program	Available K-8 programs	Increased K-8 programs	Tested and validated K-5		
Challenge	program toolbox that	toolbox that can be used in	that can be used in the	that can be used in the	programs that can be used		
	includes CATCH activities,	the afterschool program	afterschool that includes	afterschool that includes	in the afterschool program		
	community service needs	that includes CATCH	CATCH activities, small	CATCH activities, larger	that includes CATCH		
	within the community, and	activities, community	community service needs	community service needs	activities, community		
	FIRST Lego	service needs within the	within the community, and	within the community, and	service needs within the		
	STEM/engineering	community, and FIRST	FIRST Lego	FIRST Lego	community based on		
	program.	Lego STEM/engineering	STEM/engineering	STEM/engineering	stakeholder input, and		
		program.	program.	program participation in	FIRST Lego		
				competition.	STEM/engineering.		
Key stakeholder input:			Increased student	Total student participation			
- Focus group with middle			participation in community	in community service			
school students about			service projects and the	projects and CATCH			
programming			CATCH program.	program.			
- Research' on similar							
programs across the			Partnerships with the	Have community member			
state			community to participate in	offer mentorship			
- Findings from the			afterschool programing	opportunities with students			
need's assessment			(e.g. engineers, health	involved in the FIRST Lego			
(parents of K-8)			organizations).	program.			
Survey of least	Providing			Increased number of			
- Survey of local	funding/scholarships to						
community, including	needy families (if needed)			students (especially those with high needs) having			
banks and daycares				access to the afterschool			
Model for staffing	Hiring high-quality staff	A high-quality staff and	A staffing model of Peru	program. A sustainable staffing			
	(educators, paras; Peru St.	staffing model to ensure	State College students as	model of Peru State			
	College students who get	sustainability	well as community	College students as well as			
	paid, do it as an internship,	Development of staffing	members (e.g. engineers).	community members (e.g.			
	or receive course credit)	model that is sustainable.		engineers).			
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	Beatrice						
Inputs	Activities	Outputs	Short term Outcomes	Medium Term Outcomes	Long Term Outcomes		
Funding from <i>ELO Design Challenge</i>							
A plan for adequate staffing in order to support the program and develop program materials	Identifying and hiring high- quality staff	A high-quality staff/educator which will have an ongoing role in supporting and sustaining the programs	An adequately staffed afterschool program that is highly engaging, enjoyable, and has a connection to the community	Increased numbers of students (esp. those at risk) having access to the afterschool program, summer program	Increased academic performance, social skills, and opportunities for students that participate in the program(s)		
Survey, observational, and perceptual data with past/current programs What worked, what didn't, what did students enjoy/learn	Ongoing collection of survey, observational, and perceptual data of past and current programs Piloting new programs/activities/units in new or existing programs	Programs/activities/units for the afterschool program	A 'toolbox' for programs that have a variety of activities, units, and clubs, enabling student choice	More tested and validated clubs/activities, allowing more student choice	Increased community support, and an abandonment of the 'babysitting' stereotype of afterschool programs by community members		
Collaboration/Partnership with the local community	Collaborative program writing for the afterschool program with teachers, stakeholders, community members etc. Continual revising, updating, and re-testing of programming and evaluation tools	Community partnerships and collaboration with parents and the local community	A program that gives students the opportunity to socialize with friends, learn and build social skills in a positive manner, have positive influences, and have more positive, fun experiences with education		Collaboration and connection of education with families [and the community], enabling partnerships that are continually promoted in order to help paint a better picture of Beatrice		



Boone Central					
Inputs	Activities	Outputs	Short term Outcomes	Medium Term Outcomes	Long Term Outcomes
Key stakeholder input: Boone County Foundation Fund (BCFF) "Needs Assessment" Afterschool Program Parent Survey	<ul> <li>Development Steering Committee to establish:</li> <li>Program strands based on the needs and resources within the community</li> <li>Roles and responsibilities of the Boone Central Public Schools and BCFF</li> <li>Public relation events to showcase program</li> </ul>		Increased participation of "at-risk" and low-income students.	Expansion of the ELO Program to other schools within Boone Central County.	Increased participation of "at-risk" and low-income students in other schools within Boone Central.
Funding	Provide scholarships Continually revising and updating program strands to ensure relevance and sustainability. Purchase "big ticket" program items	Development of K-5 programs based on community needs and resources that can be used for a summer program as well as new ELO program that will be started at other schools in Boone Central County.	Increased interest in school Available K-5 programs based on the community's needs and resources as well as help address areas of need identified by the school's Improvement Plan.	Increased student NeSA achievement scores, with specific attention to the needs identified by the school's Improvement Plan	Increased "at-risk" and low-income student achievement scores K-5 programs based on the community's needs and the school's Improvement Plan.
Creation of a staffing model	Obtaining adequate staffing (Program Director, Site Director, Program Staff, and Facilitators). Professional development for all program staff. Continually revising and updating staffing model to ensure sustainability.	Development of staffing model that is finically sustainable on student fees.	Development of an adequate staffing model that is sustainable on student fees.	Development of staffing model that will be sustainable at multiple sites within Boone Central County.	Development of an adequate staffing model that is sustainable on student fees at multiple sites.



		Cen	ntura		
Inputs	Activities	Outputs	Short term Outcomes	Medium Term Outcomes	Long Term Outcomes
Funding from the <i>ELO</i> <i>Design Challenge</i>	Development of major program strands based off community needs: agriculture, technology, and consumer family sciences Hiring a program director to develop programming. Continually revising and updating programming to ensure relevance and sustainability.	Creation of a K-6 program toolbox that can be used in the afterschool program that is based on the community's needs and resources that are engaging to students.	Available K-6 programs that can be used in the afterschool that is based on the community's needs and resources that are engaging to the students.	Expansion of the K-6 programs that can be used in the afterschool that is based on the community's needs and resources that are engaging to the students.	Tested and validated K-6 programs that can be used in the afterschool program that is based on the community's needs and resources.
Model for staffing	Obtaining adequate staffing (Program Director and Facilitators). Continually revising and updating staffing model to ensure sustainability.	Development of staffing model that is finically sustainable off the ELO programs of future student fees.	Development of staffing model that is finically sustainable off the ELO programs of future student fees.	Adequate staffing model that can be used with a larger group of participants. Use trained high school students as staff member.	
Model for student selection into the program	Student Selections		Development of a participation fee system.	Increased number of participants participating in the program.	
Key Stakeholder Input	Community members and parents participate in programs when appropriate.	Establish community partnerships to help sustain the program.	Establish community partnerships to help sustain the program and replenish consumables.	Increased establish community partnerships to help sustain the program and replenish consumables.	Be able to sustain the program and replenish consumables totally through community partnerships.



Grand Island					
Inputs	Activities	Outputs	Short Term Outcomes	Mid Terms Outcomes	Long Term Outcomes
Creation of "Makerspace" Travel Schedule/General procedures	TMC lab will be stationed at each elementary school for 2 weeks. Teachers may use non-		Increase student interest in STEM.	Increase in student connections to STEM careers.	Increase in student skills related to STEM careers.
	consumable program pieces in their classroom. 3 ELO events will take place afterschool.				
	Marketing to raise community awareness of the opportunities the TMC lab and STEM learning can provide.	Community partnerships to increase sustainability of the TMC lab traveling ELO program	Development of community partnerships to increase sustainability of the TMC lab traveling ELO program (e.g., replenishing consumable supplies).		
Creation of Activity Sharing Website	<ul> <li>TMC lab, especially larger non-consumable items.</li> <li>Build activity toolbox by adding activities to the website.</li> <li>Continually revising and updating activity sharing website to ensure</li> </ul>	Creation of a K-5 activity toolbox for TMC lab that can be accessed/used in the classroom as well as in the afterschool program to support STEM learning.	Available K-5 activities for TMC lab that can be used in the classroom as well as in the afterschool program to support STEM Learning	Expansion of K-8 STEM activities that can be used in the classroom as well as in the afterschool program to support STEM Learning	Tested and validated K-8 activities that can be used in the classroom as well as in the afterschool program to support STEM Learning.
Collaborating with community partners (parents, volunteer teachers, etc.) to staff pop- up TMC events.	relevance and access. Community partners will run pop-up TMC events at each school using programs available on TMC website.	Development of a model to staff pop-up TMC events with community partners (parents, volunteer teachers, etc.).	Available model to sustainably staff pop-up TMC events with community partners (parents, volunteer teachers, etc.).	Extend TMC events to STEM programing in the schools beyond the 2- week pop-up time.	Community partners continue STEM programing outside the TMC pop-up events.



## Appendix C: ELO Toolbox

The ELO Toolbox contains a variety of information related to creating, improving, and sustaining successful ELO programs. Organized around the stages of developing an ELO program, the Toolbox presents background information, relevant examples, additional resources (i.e. program management, partnerships and sustainability, reporting tools for disseminating information), links to various curriculum/activity ideas, and helpful videos regarding various topics. A summary of information included in the toolbox is provided below. Although currently under development, it will be available starting in January through the Beyond School Bells website at <u>tinyurl.com/ELOtoolkit</u>

The ELO Toolbox currently contains information on the following topics:

## • Thinking about starting an ELO program

- ABC's of ELOs
  - Beyond School Bells (BSB) Program Start-Up Toolkit
  - ABC's OF ELO'S Overview Document
- ELO Funding Structures
  - Sample budgets for a \$15k, \$25k, or \$40k afterschool program
  - Funding Source ideas for \$15k, \$25k, or \$40k afterschool program
- Starting an ELO program
  - Program management resources
    - Organizational and management practices (including the 'Building and Managing Quality Afterschool Program Practitioner's guide)
    - Example registration forms, policies, procedures
    - Sample application and job descriptions
    - Interviewing, hiring, and maintaining staff resources
  - Curriculum & activity resources
    - Beyond School Bells career education curriculum
    - National activity resources
      - National curriculum resources
      - Gardening

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- Professional Development
  - Program leadership, development leadership advice from the field (e.g., Getting started: Checklists and advice from current directors, Building school relationships: Starting on the right note, Effective communication, and Stepping into leadership)
  - Staff development resources & positive youth behavior (e.g., Bullying prevention, Tips for addressing bullying, developing positive youth relationships, and Supporting positive behavior)
  - Family Engagement (e.g. Developing positive relationships with families and Ideas for engaging families)
  - Online PD resources (e.g., links to DoS, Click2SciencePD, Afterschool Alliance webinars, PBS Zoom science training, Southwest Educational Development Laboratory (SEDL) instructor's guide to the afterschool training toolkit, and You for Youth)

## • Improving an ELO program

- Information and resources on quality programming
  - Literature review sources
  - Core competencies
  - Common Measures of ELO quality and illustrations of this work in Nebraska programs
- Successful strategies
  - Maximizing growth opportunities (e.g., diversifying funding sources, expanding programming sites, lights on afterschool event planning, marketing your program, utilizing college work study for staffing)
  - Maximizing grant opportunities (e.g., afterschool gardens, engaging community in career education, entrepreneurship programming, seizing grant opportunities)
- STEM programming and resources
  - Nebraska STEM infographics
    - Dipping deeper into STEM and ELO's (e.g., STEM Learning Ecosystems, Examining the impact of afterschool STEM programs, Know Your Funders: A guide to STEM Funding for Afterschool, STEM Talking Points, Solving the Skills Gap, STEM in Afterschool, Why Business Should Support STEM ELO's, Expanded Learning Opportunities and STEM: The Perfect Fit, Partners in STEM Education)

## • Sustaining an ELO Program

- Sustainability and Partnerships
  - BSB website resources (e.g., Building Local Partners and Sustainability: Toolkit, Community-Wide ELO Systems & Sustainability: Resource Guide, Building Sustainability Webinar Series, National Sustainability Resources: Funding Tools & Funding Database
  - Powerpoints and Planning Guides (e.g., Effective afterschool programs: School leaders; Effective afterschool programs: Community; AQuESTT Planning for effective afterschool programs: Planning guide)
- Advocacy
  - Ten Tips for Successful Advocacy
  - Tips for Successful Public Testimony
  - Communicating with your Legislator
  - Communicating with the Media
  - Engaging Parents as Program Advocates
  - Talking Points for Parents in Advocating for ELO Programs
  - Key Talking Points
- Messaging tools
  - BSB Infographics (e.g., Afterschool STEM Works in Nebraska, ELO Work for Nebraska Business, ELO Help Build Lifelong Success, Afterschool Keeps Kids Safe, Afterschool Fostering Student Success the Nebraska Way)
  - This is Afterschool handouts

