

FORSYTH COUNTY

BOARD OF COMMISSIONERS

MEETING DATE: MARCH 23, 2015 AGENDA ITEM NUMBER: 8

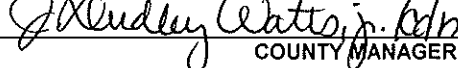
SUBJECT: RESOLUTION AUTHORIZING APPLICATION FOR A 2015-2016 LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA) EZ INNOVATION GRANT TO FUND A DESIGN CAMP FOR INNOVATIVE DESIGN (FORSYTH COUNTY PUBLIC LIBRARY)

COUNTY MANAGER'S RECOMMENDATION OR COMMENTS: Recommend Approval

SUMMARY OF INFORMATION:

See attached

ATTACHMENTS: YES NO

SIGNATURE:  COUNTY MANAGER DATE: March 17, 2015

RESOLUTION AUTHORIZING APPLICATION FOR A 2015-2016 LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA) EZ INNOVATION GRANT TO FUND A DESIGN CAMP FOR INNOVATIVE DESIGN (FORSYTH COUNTY PUBLIC LIBRARY)

WHEREAS, the Forsyth County Public Library will operate a 2016 Teen Summer Reading Program for rising 7th through 10th graders and would like to incorporate a two-week Design Camp for innovative design and thinking; and

WHEREAS, during the Design Camp portion of the 2016 Teen Summer Reading Program, students will learn to create items utilizing mold-making techniques such as 3D scanning and computer aided design (CAD) technology and learn to integrate “maker” technology with storytelling; and

WHEREAS, the Design workshops will be provided in collaboration with the UNC Center for Design Innovation located at the Wake Forest University Innovation Quarter; and

WHEREAS, the Forsyth County Public Library administration requests authorization to apply for a Library Services and Technology Act (LSTA) EZ Innovation grant in the amount of \$22,594 to fund the Design Camp portion of the 2016 Teen Summer Reading Program; no additional County dollars are requested to match this grant.

NOW, THEREFORE, BE IT RESOLVED that the Forsyth County Board of Commissioners hereby authorizes the County Manager or his designee, the Library Director, and the Clerk to the Board to execute, on behalf of Forsyth County and its Public Library, the necessary documents to apply for a Library Services and Technology Act (LSTA) EZ Innovation grant in the amount of \$22,594 to fund the Design Camp portion of the 2016 Teen Summer Reading Program.

Adopted this 23rd day of March 2015.

State Library of North Carolina

2015-2016 LSTA Online Signature Page

Print this page, obtain the required signatures in blue ink, scan the PDF and return it with the application as an attachment to LSTA@ncdcr.gov by 2:00 p.m. on February 27, 2015.

Grant Category: EZ Innovation Multi-year?
Institution/Library: Forsyth County Public Library
Mailing Address: 201 North Chestnut Street, Winston-Salem, NC27101
City: Winston-Salem Zip Code: 27101
U.S. Congressional District (in which library is located): 12
Library Director, Name: Sylvia Sprinkle Hamlin
Phone: 336-703-3016 E-mail: hamlinss@forsyth.cc
Project Manager, Name: Christina Mayhand
Phone: 336-703-2913 E-mail: mayhance@forsyth.cc

Grant Amount Requested:	\$	<u>22594</u>
Matching Funds:	\$	<u>0</u>
Project Total:	\$	<u>22594</u>

Project Abstract:

Design Camp will be a summer teen's program and collaboration between the Forsyth County Public Library and the UNC Center for Design Innovation in Winston-Salem. The program leverages a project-based approach to building a foundation in design-thinking and to empower teens to become more participatory, experiential, and experimental in their learning. Design Camp aims to provide a meaningful innovative experience to teens in Forsyth County to enhance and extend the Forsyth County Public Library summer reading program. Design Campers will learn the building blocks of design thinking; add some skillsets to their figurative Maker's toolkit; build creative confidence to try new things, go beyond the comfort zone; develop an awareness of the role of maker/innovator in society; begin to see themselves as innovators; recognize that they are part of a collaborative and innovative community; and model the Maker mindset to others .

Certification and Signatures (please sign in blue ink)

We are aware of and agree to comply with all state and federal provisions and assurances required under this grant program. If awarded grant funds, we assure that we will carry out the grant project according to the approved grant application. This application has been authorized by the appropriate authorities of my institution/library.

Printed name of library director

Printed name of local government or institutional authorizing official

Signature of library director

Signature of above official

Date

Date

Forsyth County Public Library in collaboration with the UNC Center for Design Innovation

Pilot: Design Camp

A collaboration between the Forsyth Public Library and the UNC Center for Design Innovation

Target Age: Rising 7th through 10th grades

Activity: My Superhero's Mask: exploring Making and Storytelling

Dates: Summer 2015

Format: One 2 week session divided into part 1 & 2

Location: Center for Design Innovation, 450 Design Avenue, Winston-Salem, NC 27101

Project Leads:

Christina Mayhand, Teens Services Librarian, Forsyth County Public Library (mayhance@forsyth.cc)

Pamela L. Jennings, PhD, Director, Center for Design Innovation (jenningsp@cdiunc.org)

Janis Fox, Teen Services Coordinator, Forsyth County Public Library (foxjb@forsythlibrary.org)

1. What idea would you like to pitch?

Forsyth County Public Library (FCPL) has presented an annual Summer Reading program for over 20 years. The Summer Reading Program aims to support reading and other literacy skills throughout the summer. Our target audiences include children, teens and adults who benefit from age appropriate programming. While teen programming is popular and continues to grow there is still an unmet need for innovative programs that appeal to teens in new areas that connect their experiences to the technologies they use and forms of entertainment they see every day. In the last year FCPL has provided over two hundred programs for teen with over fifteen hundred in attendance. Our programs consist of crafts, video/film, gaming, and various literacy programs. Our programs are varied but lack the complexity and depth of some making programs.

MAKING has offered millions of people worldwide the opportunity to discover, create, invent, and learn with hands-on activities that introduce new ways of using technologies creatively to express and realize fanciful ideas, dreams, and yet to be realized projects and products. Through the activities of MAKING teens and adults learn about advanced technologies from 3D printing and electronics to STEAM concepts in computer programming and design.

Forsyth County Public Library (FCPL) and the Center for Design Innovation (CDI) – a multi-campus research center in the UNC system, are taking the unprecedented opportunity to collaborate in the pilot development of Design Camp. Our organizations will combine our pedagogical, technical, and facilities resources to pilot a two-week opportunity for Forsyth County teens to explore MAKING and storytelling to the FCPL theme of “My Superhero’s Mask”.

The Design Camp pilot will initiate the beginning of a series of collaborative workshops and “camp” activities for teens to adults in MAKING at the Center for Design Innovation that will be part of the CDI *Cultivating Future Innovators* program - our flagship program in MAKING and advanced manufacturing programmed for a range of learners from novices to domain experts in design.

Teen participants in the Design Camp will create an original superhero mask based on their own face through mold making techniques such as Paper Mache and 3D scanning. The molds will be digitized for further embellishments from 3D CAD programs made for kids. For example, they might place new shapes on the surface or change the geometry of their features. From those digital scans, the teens will

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have the opportunity to make 3D rapid prototype prints that will be ready for further embellishments with paint, glitter, and other crafts materials.

Teens who continue to week two of the camp (attendance will be optional) will have the opportunity to incorporate basic electronics into their masks. For example, they might make a decorative pattern of led lights embedded into the surface of the 3D printed mask.

The Center for Design Innovation views the MAKING creative learning process as threefold.

1. **Making** is hands-on discovery led by curiosity, creativity, and experimentation. It opens the door to a world of materials, processes, and technologies used to produce and manufacture items that we use on a daily basis, from our smart phones to our cars, and even the coffee cup that sits on our desk.
2. **Understanding** is activated when the learner is encouraged to probe deeper by asking questions. These inquiry-based skills prepare the learner to engage in problem solving, which is a path toward inventing new futures for themselves and others.
3. **Synthesis** is the process of realizing one's ideas with the tools commonly used for Making. The Center for Design Innovation Tech Sandbox offers the space, tools, and resources from 3D printers, laser scanners and electronics to software applications for graphics, design, and programming.

Teens will use storytelling as a technique to brainstorm and share creative design ideas about the features of their superhero masks. There are several learning opportunities that will be explored during the storytelling component of this project. Teens will be engaged in inquiry-based thinking, learning to ask questions that will lead to deeper explorations for their solutions. Through articulation of their ideas to their peers, teens will learn the importance of working well with others and openness to sharing ideas in development. Through constructive critique they will learn how to think out loud while giving useful, positive feedback. We will incorporate into the final reflection activity (presentation, skit, Pitch, etc.) the teens' demonstration of understanding of the processes and techniques they learned during Design Camp.

A typical day in Design Camp will include a combination of hands-on design activities, storytelling activities, and direct engagement with the technologies, tools, and techniques that will be used during project creation.

We will also bring in local guests who will give our teens new ideas and perspectives about how MAKING, and maker technologies are used professionally. For example we will bring in world class mask and wig makers from the UNC School of Art Design and Production department (<http://www.uncsa.edu/designandproduction/progUGWigMakeup.htm#program>) who work on very sophisticated mold and mask techniques. We will also bring in local storytelling experts from groups such as Scrapmettle (<http://scrapmettle.net/>) in Greensboro, NC.

Program Registration Process:

The Forsyth County Public Library has a thorough understanding of the best processes for enrolling teens into extra-curricular and summer programming activities. We will make a public announcement about the program on the FCPL and CDI websites for online and phone registration. We will also send notices

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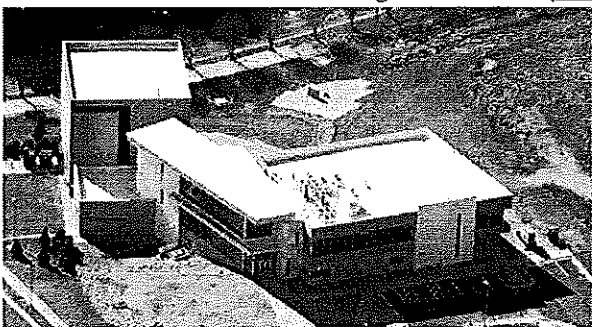
about the program through our organizations social media channels and local news media. A policy for participation will be set that includes the expectation of full participation for the duration of the program. Exceptions will be made for extenuating circumstances. Transportation services to and from the CDI will be provided to ensure that all teens interested in participating will be able to regardless of where they live or their ability to find transportation within Forsyth county.

About the Forsyth County Public Library (<http://www.forsyth.cc/library/Default.aspx>)

Our mission is to connect our community to reading, information, and lifelong learning.

The Forsyth County Public Library (FCPL) first began serving citizens in 1906. Today it continues to provide the core library services that define a public library while integrating emerging technology. Of the approximately 360,000 residents of the County, 58.2% have a library card. Over 1.4 million people visited the Library in fiscal year 2013-14, checking out over 1.8 million items. The FCPL system consists of the Central Library and nine branches, two youth mini-libraries, three outreach departments and two bookmobiles. The Library's Board of Trustees, Friends of the Library groups, volunteers and supporters all help to accomplish the mission and achieve the goals and vision.

About the UNC Center for Design Innovation (www.centerfordesigninnovation.org)



The Center for Design Innovation (CDI) is a multi-campus research center in the University of North Carolina system. The CDI is located in Winston-Salem. The UNC School of the Arts and Winston-Salem State University are our constituent UNC campuses as well as Forsyth Technical Community College. We collaborate on research projects with other local, national, and international academic and industry partners. The Center for Design Innovation will move into its

new 24,000 sq. ft. facility located in the downtown Winston-Salem Wake Forest Innovation Quarter in the first quarter of 2015. This permanent home will house facilities for creative learning and production in advance technologies from large-scale data visualization and immersive experiential performance to prototyping workshops and product development in our tech sandbox.

Our mission is to catalyze economic development in the Piedmont region through design-focused activities and creative practices that are at the nexus of technology and culture. We do this by:

- **Promoting** interdisciplinary research across the sciences, arts, engineering, and design;
- **Providing** opportunities for our constituent campuses (students, faculty, and staff) to engage in programs that extend learning and research beyond and across institutions;
- **Provoking** the Piedmont Triad Region community with experiences that demonstrate how design and technology are both means for creative expression and vehicles for economic development.

Cultivating Future Innovators at the Center for Design Innovation (CFI@CDI) is the Center for Design Innovation flagship program supporting the local Maker community. CFI@CDI includes learner-centric, inquiry-based informal learning activities and the development of tools for learning for DIYers,

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self-learners, educators, pro-makers, and entrepreneurs. In particular, our mission is to increase the diversity of people engaged in the Maker culture with skill-level appropriate learning activities that provide exposure to and a path toward participation in the larger technology innovation economy.

2. How is it innovative?

The phenomenon of the global Maker community is a paradigm shift in how people come to view their agency and self-efficacy with material objects and technology. MAKING has shifted us from being a mere consumer of technologies into a creative maker and inventor of new ideas that could have great impact on how we live in the 21st century. It is through the “aha” moments in projects such as Design Camp that give our teens (and adults) insight into their futures that they might not otherwise imagine.

As an information and community center, the library has embraced the goals of the Maker movement. Teens are seeing what others have created, and want to try it themselves. This project combines many elements of STEAM (Science, Technology, Engineering, Arts & Math)-based learning and invite community experts in creative technology related fields, to work directly with teens. Teens will learn first-hand about what it is like to work in a fields that integrate technologies that are often used in advanced manufacturing and careers in design, entertainment, and other STEM related fields.

3. What is the need or problem it will solve?

Despite the popularity of the Maker movement there remains much work to be done in bridging the digital divide to expand the outreach of opportunities to experience and become part of that movement. While some students in Forsyth County attend schools/programs that give them access to activities that relate to the Maker movement and overall technology learning, there is an overwhelming need for information access to science, technology and related resources for all teens. A large part of creating a functional environment for teens to be able to create and explore is having mentors and knowledgeable guides to help teens understand how to integrate the technologies into their creative learning activities.

FCPL strives to provide timely and adequate resources for teens to use in a variety of formats. For example our circulation this past year demonstrated ongoing usage of both print and electronic literature (i.e. YA-Spoken).

FCPL intends to continue offering as many resources regardless of barriers to accessing materials. In doing so we are providing our teens with access to information and support in making the best of that access.

Through collaboration with the Center for Design Innovation *Design Camp* pilot and this grant, the Forsyth County Public Library can help address the unmet need of Forsyth County teens to develop their technological literacy and continue to connect our community to information and lifelong learning. This program will also address inequity of access and digital divide and introduce the local teens and their families to new ways of becoming active and learning in the STEM to STEAM pipeline.

Forsyth County Public Library in collaboration with the UNC Center for Design Innovation

Library Circulation	YA-FICTION	YA-NONFIC	YA-PBK	YA-SPOKEN	TOTAL
Carver School Road Branch	1491	292	298	78	2159
Clemmons Branch	3589	118	556	146	4409
Forsyth Adult Outreach	0	0	0	1	1
Forsyth Central	2599	872	683	103	4257
Forsyth Children's Outreach	53	2	32	0	87
Forsyth Spanish Services	41	5	120	0	166
Kernersville Branch	5429	275	1282	444	7430
Lewisville Branch	5216	276	2450	371	8313
Malloy/Jordan East Winston Heritage Center	386	24	162	11	583
Reynolda Manor Branch	5192	211	1363	295	7061
Rural Hall Branch	1446	64	284	77	1871
Southside Branch	5461	96	1332	193	7082
Walkertown Branch	2691	129	629	141	3590
TOTAL	33594	2364	9191	1860	47009

FCPL (2014) Teens Circulation Statistics

4. Intended outcomes (pick 3 and describe how the project addresses them.)

a. Civic engagement

The Center for Design Innovation partnership with the Forsyth County Public Library will increase our community engagement with a partner that has experience and insight about the breadth of learning activity opportunities and needs in the Piedmont Triad Region. The Center for Design Innovation is both UNC campus and community facing with a state legislative mandate to demonstrate how design can be a vehicle for economic development. Design Camp will be the first of many activities in our new facility, located in the Winston-Salem Wake Forest Innovation Quarter that will broadly extend our program outreach into the local community.

Furthermore, our teens are familiar with different pressing issues that surround our communities. In providing multi-faceted venues of literacy the library gives teens a basis for which they may be able to work on real-world problems with guidance, mentors, and resources.

b. Institutional Capacity

While Forsyth County Public Library strives to provide new technologies and resources for its patrons it is not always possible to meet the need of the community through traditional elements. In

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order to continue to provide emerging technologies partnering with CDI is a mutually beneficial solution. Forsyth County staff will also benefit from exposure to outside organizations, technology, and resources. This in turn will assist the library in future program that may involve similar technologies.

c. Lifelong learning

Lifelong Learning requires a willing mind to entertain new thoughts and ideas throughout life. As we work with teens we engage them in this process by providing opportunities that will allow teens to learn as they grow as well as provide a basis for which they may grow to accept as learning outside of the context of the classroom. In doing this we hope to ensue in them a desire to experiment, innovate, and create which the library can facilitate through programs in and outside of the library.

With this partnership, teens who participate in this program will be given heightened learning opportunities that they can use to take back to their own neighborhood and school communities. The information exchange has the potential to empower others on so many levels -- in their decision making, information access and move toward closing the digital divide. The residual effect of our teens gaining exposure to technologies through creative projects is that they will share their enthusiasm with other teens and adults in their families and communities. That contagious enthusiasm can translate to others gaining interest in participating in other activities in the public library and the Center for Design Innovation that match their interests and skills level.

5. Describe how this idea might extend the Library's reach and enhance capacity, for whom?

Forsyth County, in the central Piedmont region of North Carolina, consists of 8 cities and towns, with a range from urban (Winston-Salem is the 4th largest city in the state) to rural environments. In a population of 350,000 (230,000 in Winston-Salem), the public schools serve over 53,000 students. The citizens are approximately 68% Caucasian, 26% Black/African-American, 6% Hispanic, and also includes people of mixed race, Asian, and Native American heritage. There are 16 middle schools and 16 high schools for local teens in the public school and a number of private schools and home-school families. There are approximately 25,000 teens (ages 15-19) in Forsyth County; this grant would benefit teenagers throughout the county.

In the past year FCPL had over two hundred programs for teen with over fifteen hundred in attendance. About seventy of those programs occurred during the summer with six hundred and seventy teens attending. This program is unprecedented as it enables the Center for Design Innovation and the Forsyth County Public Library to partner and leverage resources, and public trust to strengthen community based learning, particularly for critical thinking and problem solving. In the broader context by partnering with the Center for Design Innovation and providing community teens with access to resources that are outside of the libraries capabilities we will be able to provide our teens with current technologies and multiple learning opportunities for lifelong learning and development.

6. How much money is needed, why?

We are requesting \$22,594 to support the pilot of Design Camp, a collaboration between the Forsyth County Public Library and the UNC Center for Design Innovation.

Forsyth County Public Library in collaboration with the UNC Center for Design Innovation

Item	Rate/wk	# weeks	Total
Project Manager(s) FCPL	in-kind		0
Project Manager(s) CDI	in-kind		0
Workshop Instructor	2,000	3*	6,000
Workshop Assistant(s) x 2 (\$750 each)	1,500	3	4,500
Design Guest(s)	500	3	1,500
Intern (\$18/hr x 20 hr) **	360	3	1,080
Materials and Supplies ***			4,000
Snacks	100	3	300
Transportation	in-kind		0
Total Direct Charges			17,380
CDI Indirect Charges (30%)			5,214
Total			22,594

* This is a two week program with one paid week for preparation work.

** The Center for Design Innovation places great value on extending all learning opportunities to members of its constituency, especially when we can connect our campus students and faculty to the local community. This internship opportunity will be offered to either a student at Winston-Salem State University or UNC School of the Arts.

*** Materials and Supplies includes all mold making materials, 3D printing ABS plastics, electronic toolkits for the workshop participants, and other miscellaneous workshop supplies. This includes the littlebits Pro Library module @ \$3,299. All materials and supplies will be housed at the Center for Design Innovation to support this pilot program and subsequent activities.

7. Is this idea being implemented anywhere else? If yes, tell us about it; if no, how do you know?
 While there are some Maker groups within Forsyth County, their meetings are sporadic and trend toward adult attendees. Some local schools may have Maker clubs, but those are only active during the school year and do not address the need to teens that are a part of alternative schooling. This program would provide a variety of teens with the access to a maker program outside of the school.

8. ABSTRACT: Clearly and concisely summarize your project in 200 words/ 1300 characters, or less.

Design Camp will be a summer teen's program and collaboration between the Forsyth County Public Library and the UNC Center for Design Innovation in Winston-Salem. The program leverages a project-

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based approach to building a foundation in design-thinking and to empower teens to become more participatory, experiential, and experimental in their learning.

Design Camp aims to provide a meaningful innovative experience to teens in Forsyth County to enhance and extend the Forsyth County Public Library summer reading program. Design Campers will learn the building blocks of design thinking; add some skillsets to their figurative Maker's toolkit; build creative confidence to try new things, go beyond the comfort zone; develop an awareness of the role of maker/innovator in society; begin to see themselves as innovators; recognize that they are part of a collaborative and innovative community; and model the Maker mindset to others.