DUKE ENERGY

Educational Foundation of Lake County

Educational FOUNDATION of Lake County

2018-19 Duke Energy Foundation STEM Grant

DEADLINE March 15, 2019 4:00 pm Foundation Office via Jackrabbit or Email (weidnerg@lake.k12.fl.us)

- This Classroom Grant is for 2018-2019 school year.
- Funds must be used to address a STEM related project.
- All funds must be used by May 1, 2019. A final program evaluation must be submitted by May 15, 2019.
- Requires signature of principal and requesting party

Contact Information	
Applicant Name: Kimberly Breeding	Position: Culinary Teacher
School: Windy Hill Middle School	
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Detailed Project Information
Project Title: Cooking with Technology
What priority area(s) will your project address: Science, math, technology
What is your estimated start date: August 2019
Estimated number of teachers who will participate in this project: 1
Estimated Number of Total Students Impacted by project: 340
Grade Levels to be Addressed: 7th and 8th

Program Background:

I have been the proud teacher of the culinary arts program at Windy Hill Middle for seven years. It started very small and very basic. Students learn about food safety, sanitation, careers, and much more. Over the years, and with the support of administration, I have been able to grow our program into what it is today. I have turned the culinary arts classes into hands and real world experiences. My goal is to provide the most update techniques and information so my students are prepared for not only high school but for college and career. The majority of students when they enter high school will obtain a part-time job in the culinary industry. I want to ensure that my students are prepared for whatever job they pursue and help them have the edge over the competition.

Culinary is not just about food it is about passion, innovation, and creativity. As a teacher, with a background in culinary, I want to share my enthusiasm for culinary and teach my students how vast the culinary world is. Bringing in things like a 3D food printer and GoPro cameras show students how technology has carried over into the world of food. I love bringing in new and exciting ideas to the classroom to generate interest and excitement. I believe that technology is one of those ways to accomplish this task.

Part of my job as a culinary teacher is to show students how everything they learn in math, science, and language arts carries over into the culinary field. I stress to students how much math and science are a major part of culinary arts. To be able to incorporate molecular gastronomy into my classes will generate more

interest into this career field and open up students minds to a completely new side of food they never knew. Molecular Gastronomy shows the science aspect of food, how you can manipulate your favorite food and drink into something extraordinary. I talk to students about how I struggled in math and science in school but when I applied it to something that truly interested me it all made sense, I want to provide that to my students now and not have them wait until college for something to click.

Within my program, my advanced students take what they learned in the beginning class and put it into practice to running a teacher café and coffee cart. They are responsible for running a business in that class. They create menus, search for recipes, serve, cook, delivery, and process payments. Advanced students also participate in food truck wars. They work in groups to create a food truck business from creating business plans, costing sheets, advertisements, menu creation, and much more. From there, we put on a food truck wars showcase in our school courtyard where they serve food from their menu they have created. This year, I had a group who experimented with molecular gastronomy; they loved creating unique items with the use of science. It thrills me to see students want to branch out of their comfort zone and try new things, that is what my job is to open their eyes to new and exciting things in culinary arts. These students also work towards earning their industry certification, which is a college level exam. Students that earn this certificate have the advantage going into the workforce because it shows employers that they know the importance of food safety and sanitation. This also help employers because they will be more inclined to hire someone with knowledge about the kitchen then a person without knowledge.

My goal is to continue to grow my program to be the best in the middle schools. I expect the best from my students and to expect the best I want to ensure that I am offering the best multiple learning opportunities for all of my students. By providing these materials to my classroom, our culinary program will soar into the future.

Project Summary:

My goal as a middle school culinary teacher is to give as many opportunities for my students to not only learn the basics of the culinary/hospitality industry but to immerse them into it as much as possible. By incorporating new and current technology, students can have a better understanding of not only the standards they are learning but they can apply those standards into a real world setting. I challenge my students every day to think outside the box, this project will allow them the creativity to accomplish this in a multitude of ways. My students will not only have the knowledge of the industry and how it constantly changes but will also have the hands on knowledge of how to use many of the technologies that are incorporated into the culinary and hospitality field. This project will affect both current students and future students at my school.

Need:

The items being requested are not for a one-year program. These items will be used every year in my classroom. Students in my semester class will have a chance to explore new technologies they might never heard of or seen in action. For my yearlong students they will be applying the knowledge gained from the previous year and put it into action through our teacher café and mobile food truck. They will highlight their learning in a creative way for everyone to see. All of these items are connected to standards I am expected to teach each year. This would also help promote our program and generate more student interest into the class and the culinary field.

Project Goals and Objectives:

1. Both students and I will use the GoPro cameras and tripods. I will be utilizing the

camera during cooking demonstrations that would broadcast to our TVs. This will allow students to see how to use equipment and prepare dishes. Students would use these cameras to create "how to videos" for class and future use. Many students have a difficult time presenting and performing in front of class. The GoPro cameras allow them to demonstrate their understanding in a safe and creative way. Students will also create instructional videos that will be used for current and future classes.

2. The Foodini 3D food printer will be used to enhance student learning. The culinary and hospitality industry is constantly changing and creating new things. By having this 3D food printer, I am keeping my students up-to-date on culinary trends. Students have to create showpieces and decorative items with food. This will allow them to use their creativity with a printer that will print any type of food. They can design their food on the computer, it transfers to the printer, and it is edible. This is becoming more and more popular in the industry and by introducing this to my students in middle school, they will have basic knowledge on how to use the technology.

3. Chromebooks are to help make our classroom a 1:1 learning environment. Students will be using the Chromebooks not just for classwork but also for researching, reading articles on current trends in the culinary/hospitality industry, creating and researching menus. This will allow students to hold rich discussions in class regarding their findings on the computer and allow them to create amazing projects and food in the kitchen. By each student having a Chromebook they will be able to work on projects such as designing restaurants, menus, business plans, and much more that are linked to learning standards. Students are expected to know how to use basic computer skills but not all receive technology classes. Not only will I be teaching them culinary/hospitality but I am also helping to bridge the technology gap to ensure my students are prepared for the future.

4. The molecular gastronomy items, sous vide, and digital scales are another way to introduce the trends happening in the industry. Teaching my students basic molecular gastronomy helps them understand how science and math play a significant role in the food industry. This also helps incorporate evolving cooking methods in culinary.

Evaluation Plan:

When I began my program my class sizes were around 23-25 students. That number has increased over the previous years and I now have 30-35 students in my classes. My advanced culinary class was created four years ago with 20 students it has grown each year with this year having 30 students. Students in this class work towards their industry certification and plan on continuing into culinary in high school.

By incorporating up-to-date information and trends in the culinary industry, I have had more students interested in enrolling in the culinary class. This increase of students in my classes shows how this project will generate more interest and continue to build upon itself each year. Adding more

technology and ways to teach my content. Making my content relevant, meaningful, and up-to-date is my goal and passion for my students. Real world and hands-on learning is the best way for students to learn and grasp both the culinary and hospitality skills.

Budget

Category of Expenditure	Dollar Amount	Related Activity
Computer Hardware	**$2,411.75**	Whole classroom project (researching articles, menu development, assignments, working and programming 3D food printer Ongoing classroom project
Computer Software		
Other Equipment (not computers)	**$6,122.38**	**Foodini 3D food printer (1)** - Teaches new culinary trends and cooking techniques (standards based - Works with food/menu development and creativity for projects - Ongoing classroom project **Sous Vide Machine (2)** - teaches students another method for cooking food - - standards based use - Used to enhance learning of technique standards and for food projects (food truck wars, gastronomy, café, demos) - Ongoing classroom project **High Precision Scale (2)** - measure ingredients by weight accurately

				- standards based use - Teaches students to accurately measure by weight for baking (standards based) and also required to work in Molecular Gastronomy - (Ongoing classroom project) **GoPro camera (2)** - Recording cooking activities for use during class and to create videos for Google Classroom - Integrating technology in culinary - Standards based - Teacher demonstrations for cooking techniques will broadcast to class TVs. Students will create "How to Videos" on what they have learned. - Ongoing classroom project **GoPro Mount (2)** - Works with GoPro camera to use as a tripod **Molecular Gastronomy Kits (2)** - Building tools to learn basic skills of applying math and science to curriculum - (standards based) - Introduces students to an increasing trend in culinary. Integrates math and science with cooking. - Ongoing project with classes
Competition Registration Fees				
Program supplies				
TOTALS		$8,534.13		22 Items total

Program Approved By: William P. Roberts
Principal

Funds Payable to: Windy Hill Middle School

Address: 3575 Hancock Rd
Clermont, FL 34711

Phone: 394-2123 **Email:** robertsw@lake.k12.fl.us

Requesting party has read and agrees with the funding policies of the Educational Foundation.

Signed _____ **Date** 3/14/19

To be completed by foundation staff/board

Program meets Duke Energy Foundation's Mission/ Funding Policy _____**Y** _____**N**

Director Recommendation: _____

Executive Board Recommendation: _____