Education Foundation of Lake County, Inc
2018-19 CTE Grant Application
Deadline to Apply: August 31, 2018

Basic Project Information

Principal Name:	Brent Frazier	
School Name:	Umatilla Middle School	
Teacher Name(s):	Allison Fee	
CTE Program Name:	Agriscience	
Grade levels:	6th – 8th	
Number of Students:	155	
Number of Participating Teachers:	1	
Amount Requested:		

Would you consider this a multi-year project? (*are funds to be used this year that support future efforts and greater impacts to students in subsequent years) If so, please outline multiyear goals and expected measurable metrics.*

We consider the materials outlined in this proposal to last over multiple years. Though some are disposable and will only be used in the 2018-2019 school year, the use of the disposable materials will provide the foundation to establish these new programs for future use. We would like to enhance our Agriscience program in preparation for the Associate Agriculture Certification testing that we will be offering to our students this year and in years to come. Additionally, most of program materials are not disposable and can be used for at least the five year term outlined below.

2018-2019:
-Construction of a shade house and school garden with irrigation: The construction of the shade house, garden, and irrigation systems will be treated as a lab activity for students. 155 students will participate in various stages of design and construction. A minimum of one plant lab in the shade house, one plant lab in the garden, one water quality lab, and one soil quality lab will take place in the 2018-2019 school year.
-Construction of a rain barrel irrigation system to supplement the garden's water supply and teach water conservation. 155 students will participate in various stages of design and construction.
-Install Safety signage for the classroom shop lab and land lab: The safety signs have the potential to reach all 155 students and their parents. Faculty and visitors will also have the benefit of clear safety signage to illustrate the school's dedication to a safe learning environment.
-Visual aids in the form of large animal anatomy diagrams: 155 students will participate in a creative activity where they will use the large anatomy diagrams to create their own version of the animal anatomy system. This material may be on the Associate Agriculture Certification exam.
-Explore alternative methods of plant growth using two indoor hydroponic towers: This project has the potential to reach the entire student population with a minimum of 200 students experiencing alternative plant production. Students will plan and conduct an experiment with hydroponics.

2019-2023:

-Use of the new shade house and raised garden beds to demonstrate knowledge of plant science to meet the content standards. These materials will also assist in teaching plant growth and reproduction per the Associate Agriculture Certification. At least 150 students will participate in a minimum of two different plant labs in the shade house and 4 different plant labs in the garden each school year. Students will also perform an annual water quality lab and soil quality lab.

-The rain barrel irrigation system will provide an opportunity for water quality and plant production experiments in future years. At least 150 students will participate in a minimum of one experiment. All students will benefit from the hands on experience with water conservation techniques.

-Visual aids will continue to assist a minimum of 150 students each year. The activities we do with the diagrams will vary to maintain student interest.

-Hydroponic growing systems (Tower) may be used every year to illustrate alternative methods of plant production. The hydroponic system will be use to assist a minimum of 150 students will participate in a minimum of 2 labs or experiments using the tower garden each school year.

-Safety signage for the classroom tool lab and land lab will be a lasting addition as well and will aid in keeping students safe while working with larger power equipment. We will also utilize a PPE Sanitation Cabinet to protect students and faculty from the unnecessary spread of germs and bacteria on personal protective equipment. The safety signs and sanitation cabinet will reach a minimum of 150 students and their parents. Faculty and visitors will also have the benefit of clear safety signage to illustrate the school's dedication to a safe learning environment.

-Interactive Agribusiness Portfolio will aid at least 155 students each year. Students will track our agriculture program ("The Farm") expenses and income. They will learn how to complete a profit and loss statement, analyze the outcome and plan for future business decisions. Students will also track all of their supervised agricultural experiences (labs and activities), community service, leadership and extracurricular activities and more. At the end of the school year, they will use this information to create a resume to apply for a career of their choosing.

Project Abstract *(Describe in 200 words or less your project proposal and outcomes to be measured. Think of this as your elevator speech, what would I say about this project and its potential impact?)*

The modern agriculture education program offers students experiential learning which can give them something tangible with which to apply core subjects such as Science, Math and Language Arts. This year, my students will conduct experiments using the scientific method, record observations and write detailed ideas for the projects needed to provide proper garden beds, housing for animals, and water systems. These students read and interpret plans and instructions, write formal letters, and use graphic organizers to express their thoughts and ideas. The students will measure, calculate, and create materials lists with their personalized engineered blueprints for each project. They are encouraged to be creative. Some are choosing creative construction while others chose to paint and give a more traditionally artistic touch to theirs. Aside from calculating materials and measurements, students will learn how to record income, expenses, profit, loss, and so much more. Improving our outside lab gives students a reason to love their Agriculture class as well as a diverse learning environment where they can tie all of their core learning together into something real and inspiring.

Project Detail

In the space below, please provide a detailed outline of your project activities. Please be sure to include the following: Goals and objectives of your project activities, expected timeline for project activities, when certification exams will be taken, etc.

We will be offering the Associate Agriculture Certification which covers the following content areas:

1. Agricultural safety
2. Environmental resource conservation and management
3. Plant growth and reproduction; including fertilization, irrigation and pest control
4. Animal systems and livestock management; including health and reproduction
5. Agricultural machinery and facility maintenance and operations
6. Agribusiness marketing and finance concepts
7. Mathematics and physical science skills

3 & 7 Construction of a shade house and school garden with irrigation

By September 30th, 2018 five raised garden beds will be constructed by the students and placed at our farm area. They will be filled with light potting mix and the students will transplant their seedlings out of the plug tray and into the garden bed. They will then conduct experiments on fertilizers, soil pH, and water quality testing.

By October 31st, 2018 we will have completed the irrigation system for the garden bed and students will manually run the system using a standard ball valve while checking the welfare of the plants and making necessary observations.

By January 1st, 2019 we will have constructed a 10' by 16' shade house using 4"x4" posts, 2"x 4" frame, shade cloth, and benches for the plants so that we may use it before the end of the 2018-2019 school year to begin propagating succulents, zinnias, and other ornamental plants.

2 & 7 Construction of a rain barrel irrigation system

By November 30th, 2018 we will have constructed five rain barrel irrigation systems (one for each garden bed) each equipped with a ball valve. We will discuss natural resources and conservation while the students experience a method of water conservation hands-on.

4 Visual aids in the form of large animal anatomy diagrams:

From November 26, 2018 through December 21, 2018, we will be covering animal science (including animal health and livestock management). Using the diagrams of the animal anatomy and skeletal system, students will recreate various systems on poster board. We will discuss the various functions of each system. This will help students better understand how each systems works through visual aids and interactive learning.

3 & 7 Setup and Planting the Hydroponic Tower Garden

By January 31st, 2019 we will have planted seeds in the two tower gardens, discussed how hydroponics works to grow plants without soil, made observations about the plant growth between the two towers, and compared them to our observations from the outdoor garden as well. The two towers will provide the ability to perform an experiment and change variables to illustrate hydroponic plant production.

1 Safety signage & PPE Sanitation Cabinet for the Classroom Shop Lab & Land Lab

By September 15th, 2018 we will order large, tool-specific, safety signs to be posted above each machine in the classroom shop lab as well as a general safety sign to be posted in the shop lab as well. These are necessary for the students to begin using the shop equipment in

the larger construction projects. Additional signage will be posted around the land lab. This will provide a visual reminder to both students and visitors, that our number one priority in addition to animal welfare is SAFETY! We will also purchase and utilize a PPE Sanitation Cabinet to protect students and faculty from the unnecessary spread of germs and bacteria on personal protective equipment.

6 Interactive Agribusiness Portfolio

By April 30th, 2019 students will create an individual 'business' portfolio by tracking our agriculture program ("The Farm") expenses and income. They will learn how to complete a profit and loss statement, analyze the outcome and plan for future business decisions. Students will also track all of their supervised agricultural experiences (labs and activities), community service, leadership and extracurricular activities and more. At the end of the school year, they will use this information to create a resume to apply for a career of their choosing. This portfolio will assist students in learning agribusiness concepts and career skills.

-**Agriculture Associate Certification Exam** – Tentatively scheduled for February 20th, 2018

Outcome Measures

Outcomes *(change/improvement in knowledge, behavior, skills scores)*
By granting students a more options for experiential learning, we are expanding their career choices and giving relevance to their core education. We expect to see the following tangible outcomes:
- Behavior Improvements due to incentivized learning experiences
- Improved Math scores due to relevant practice outside of core class time (calculating construction measurements, feed intake and conversion ratios, profit and loss statements, doses of fertilizer/pesticide/etc)
- Improved ELA scores due to relevant practice outside of core class time (reading and interpreting agricultural articles for a research project on the rabbit they've been caring for, writing formal buyer's letters, explaining data from their projects in written and spoken form through presentations)
- Improved readiness for High School agricultural pathways demonstrated through the successful completion of the agriculture associate certificate.

What certifications are offered through this CTE program? Agriculture Associate

What is your target number of students receiving certifications that you are trying to reach? 50% +/-   Estimated 77 Students

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Budget

Please do not submit a budget item that does not fit a category below or one that has not been approved by the EFLC staff. It will only delay the processing of your application.

NO GENERAL ADMINISTRATIVE OR INDIRECT CHARGES MAY BE APPLIED TO THIS GRANT.

Allowable expenditures include: training/conferences, professional and technical services, classroom materials, computer software, computer hardware, other equipment, program supplies, and printing
Non-Allowable expenditures include: administrative expenses, capital improvements, support of interscholastic athletics, refreshments, transportation, food items, decorative items, awards for outstanding service, and the entertainment of dignitaries.

Category of Expenditure	Amount	Category of Expenditure	Related Activity
Professional Contracted Workers (i.e. stipend workers, trainers, work for fee etc.)			
Program supplies	$2,800.00	Total – See Attached Breakdown	
Computer Software			
Computer Hardware*			
Other Equipment (not computers)	$2,200.00	Total – See Attached Breakdown	
Printing			
Tuition/Training/Conferences/Admission			
Room Rental Fees			
TOTALS	5000 00		
Key Terms:			
Category of expenditure *(Short description for categories of expenses)*		**Related Activity** *(What activity does this support in the grant? i.e. classroom project, training, computer project, etc.)*	

Program Approved By: _____ and _____ and
                             Risk Management   Operations

_____
     CTE Coordinator

(Request must be approved by all three departments before being submitted to the Foundation).

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

Principal's Signature: _Bnt Am_____ Date: __9-5-18____

Email: _____

To be completed by foundation staff/board

Program meets Foundation Mission/Funding Policy: Yes   or   No

Visioning Committee Recommendations: _____

Executive Board Recommendations: _____

_____ Approved   _____ Denied

_____
                        President Signature
Date

Please submit the completed application to:
Educational Foundation of Lake County, Inc
2045 Pruitt Street
Leesburg, FL 34748
Or
Email: Cullen-battc@lake.k12.fl.us

- All funds must be used by May 1, 2019. A final program evaluation must be submitted by May 15, 2019.

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Conditional Approval

Program Approved By: Lauren DeRidder _[Digitally signed by Lauren DeRidder DN: cn=Lauren DeRidder, o=Lake County Schools, ou=Risk Management, email=deridderl@lake.k12.fl.us, c=US Date: 2018.09.05 14:31:50 -04'00']_ _____and_____ and

Risk Management (see notes below)   Operations

_____
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Risk Management Notes: Program outline sounds good with exception of middle school students participating in the construction of shade house and raised garden beds. Recommend this activity be limited to adult volunteers that sign a waiver and release form.

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Program supplies	$2,800.00	Total – See Attached Breakdown	
Computer Software			
Computer Hardware*			
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Tuition/Training/Conferences/Admission			
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_____ Approved _____ Denied

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Category of Expenditure	Category of Expenditure - Detail	Amount	Related Activity - Classroom Project
Classroom Materials	Chicken Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Rabbit Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Goat Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Cow Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Pig Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Horse Anatomy Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Chicken Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Rabbit Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Goat Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Cow Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Pig Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Horse Skeletal Diagram	$ 50.00	Visual Aids- Animal Science
Classroom Materials	White Poster Board	$ 50.00	Visual Aids- Animal Science
Classroom Materials	Poster Markers (Classroom Set)	$ 45.00	Visual Aids- Animal Science
Classroom Materials	155 - 3 Prong Folders	$ 35.00	Visual Aids- Animal Science
Classroom Materials	155 - Composition Notebooks	$ 70.00	Agriculture Business Portfolio
Classroom Materials	Case - Copy Paper (Portfolio & Labs)	$ 80.00	Agriculture Business Portfolio
		$ 30.00	Agriculture Business Portfolio
Other Equipment	2 Tower Gardens w/ Indoor Lights, Timer, Rock Wool, Net Pots	$ 1,700.00	Hydroponic Towers
Other Equipment	Safety Goggle Sanitizing Cabinet	$ 500.00	Safety Signage &PPE Sanitation
Program Supplies	Shade House Materials (posts, framing materials, shade cloth, plant benches)	$ 400.00	Shade House & Garden Bed
Program Supplies	Irrigation Materials (Pipe & Fittings)	$ 100.00	Shade House & Garden Bed
Program Supplies	55 Gallon Open Top Barrels	$ 520.00	Rain Barrel Irrigation
Program Supplies	Safety Signs x 6	$ 120.00	Safety Signage &PPE Sanitation
Program Supplies	Water Test Kits	$ 450.00	Shade House & Garden Bed
Program Supplies	Soil Test Kits	$ 300.00	Shade House & Garden Bed
Program Supplies	Potting Soil – Bulk 80+ cubic feet	$ 50.00	Shade House & Garden Bed

Total $ 5,000.00