

Education Foundation of Lake County, Inc 2019-20 CTE Grant Application

- All funds must be used by May 1, 2020. A final program evaluation must be submitted by May 15, 2020. If the applicant misses the deadline but submits a final grant report by September 30th, they will be eligible to apply after one academic year. Applicants that do not submit a final grant report by the deadline of September 30th will not be considered for future funding.

Deadline to Apply: September 30, 2019

Basic Project Information	
Principal Name:	Dr. Rhonda Boone
School Name:	Mount Dora High School
Teacher Name(s):	Cindy Brisson
CTE Program Name:	Architectural Drafting
Grade levels:	9-12
Number of Students:	170
Number of Participating Teachers:	1
Amount Requested:	\$10,755.00

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 benefits of the 3-D printer is that it allows the student to solve a real-world problem. The students will learn teamwork and problem solving.

Having a 3-D printer in the classroom would improve student participation and attendance in class with hands-on activities. It would promote active learning because the students will be creating a design. Further it encourage creative thinking as the students design, test and print a 3-D object. It transforms student learning into a career exploration by providing an opportunity to explore a career in science, manufacturing, construction, or engineering.

Project Detail

In the space below, please provide a detailed outline of your project activities. **Please be sure to include the following:** 1) Goals and objectives of your project activities, 2) expected timeline for project activities, 3) when certification exams will be taken, 4) additional information pertaining to your request.

Using the 3-D printer in the classroom would enforce the student learning with the following Curriculum Frameworks.

- 01.0 Apply basic drafting skills.
- 02.0 Design and prepare multi-view drawings.
- 03.0 Prepare sectional views.
- 04.0 Prepare auxiliary drawings.
- 05.0 Apply basic dimensioning.
- 06.0 Prepare pictorial drawings.
- 07.0 Prepare surface developments.
- 09.0 Perform basic computer aided drafting functions.
- 11.0 Prepare computer aided drawings (CAD).
- 13.0 Perform computer aided drafting functions.
- 16.0 Apply three-dimensional modeling concepts.
- 17.0 Explain three-dimensional modeling.

The goal would be for the students to use the CAD software and the 3-D printer to create an object. They could choose to improve an existing product or they could design a new product.

The object can be no larger than 6" W x 6"D x 6"H.

The design requirements would include:

1. Write a description for the design creativity. Does your design have meaning and impact?
2. Design Brain Storming Sketches
3. Create the drawings with a CAD software (.dwg or .prt format)
4. Create a rendering of the design in CAD
5. Peer and Teacher review of the design
6. Students create the 3-D file with 3-D printer software (.stl file format)
7. Students s the object in 3-D
8. Peers and Teacher evaluate the final design.
9. Present drawings, renderings and object during Drafting Student Showcase

The design project would be a student project that begins in January and ends in April 2020.

Week of January 20th students research and choose an object to improve or create.

Week of January 27th students will write a description for the design creativity.

Week of February 18th student will brainstorm, create sketches, and present their ideas to their peers and teacher in a formal presentation.

Week of February 24th students will create drawings with a CAD software, AutoCAD or SolidWorks.

Week of March 2nd students will create rendering of their design with a CAD software, AutoCAD or SolidWorks.

Week of March 9th Students will present their final design for review to their peers and teacher in a formal presentation.

Week of March 23rd Students will create .stl file for 3-D printer.
Week of March 30th Students will print their 3-D printed objects.
Week of April 6th students and teacher will evaluate the final designs.
April to be determined date – Drafting Student Showcase. Students will present their drawings and 3-D printed object during the student showcase.

Student Certification testing schedule for drafting.
AutoCAD Attempt #1 November 13, 14, 15, and 18
SolidWorks – Part 1 Attempt #1 November 19, 20, and 21

AutoCAD Attempt #2 December 11, 12, 13, and 16
SolidWorks – Part 1 Attempt #2 December 17, 18 and 19

AutoCAD Attempt #3 January 29, 30, 31 and February 3
SolidWorks – Part 1 Attempt #3 February 4, 5, and 6
SolidWorks – Part 2 Attempt #1 February 7, 10, and 11

SolidWorks – Part 2 Attempt #2 March 9, 10, and 11

SolidWorks – Part 2 Attempt #3 April 28, 29 and 30

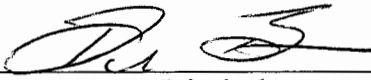
Outcome Measures

What certifications are offered through this CTE program (*is this a new or current certification offered at your school*)?

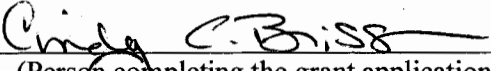
Certified SolidWorks Associate – SolidWorks – Current certification
Autodesk: AutoCAD Certified User – AutoCAD – Current certification

How many students will participate in this CTE program? 170

What is your target number of students that will receive an industry certification? 75

Program Approved By: 
Principal

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

Signed: 
(Person completing the grant application)

Date: 9/23/2019

Printed Name: Cindy Brisson

Email: brissonc@lake.k12.fl.us

Please complete all information requested on the application. Incomplete applications will not be processed for review.

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 <i>(Short description for categories of expenses)</i>
Professional Contracted Workers (i.e. stipend workers, trainers, work for fee etc.)		
Program supplies		
Computer Software		
Computer Hardware	<u>\$10,755.00</u>	900-0001A MakerBot Method 3D Printer 3 years of maintenance services 900-0025A MakerBot Tough 6 Pack Filament Bundle 900-0030A MakerBot PLA 6 Pack Filament Bundle 900-0031A MakerBot PVA 6 Pack Filament Bundle 900-0014A Method Accessory Tool Kit Freight and Installation
Other Equipment (not computers)		
Printing		
Tuition/Training/Conferences/Admission		
Room Rental Fees		
TOTALS	<u>\$10,755.00</u>	

To be completed by foundation staff/board

Program Approved By: _____ and _____ and
Risk Management Operations

CTE Coordinator

To be completed by foundation staff/board

Program meets Foundation Mission/Funding Policy: Yes or No

Visioning Committee Recommendations: _____

Executive Board Recommendations: _____

_____ Approved _____ Denied

Date President Signature

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