



Innovation Project Application

Library: Hurlburt Field Library

Project Manager: Hattie Inman

Phone: 850-884-6266 **Email:** hattie.inman@us.af.mil

Name of Project: 3D Commandos – Design, Discover, Deploy

Project Amount requested: \$4,758.00

Scope of the Project:

Hurlburt Field Library provides access to information, resources and technology to over 40k military members, retirees, government employees, and their family members. Maker spaces, innovation labs, and creation stations are all a part of a growing network that introduces people to creative design, problem solving, and innovative thinking. The Hurlburt Field library currently has a STEM program that incorporates a MakerBot 3D printer with which we have introduced 3D design and printing to our patrons. While our STEM program has been successful with over 200 participants in the last 9 months, our 3D printing is limited in its use for anything other than a basic introduction due to time constraints and filament type. The grant will allow for the addition of another 3D printer, 3D scanner, and equipment that will allow us to expand our reach and programs, providing more in-depth opportunities to work one-on-one with 3D technology and in groups learning about 3D scanning, design and printing. To accomplish this we will offer multiple 3D programs focused on specific demographics; Home school Tech classes, 3D Days for school aged students, 3D Nights and Lunch & Learn programs for adults and our senior population.

What need in the library/community will this project address?

Hurlburt Field Library is part of the 1st Special Operations Wing, the most deployed wing in the Air Force. This, along with the transience of military life can be an isolating experience for many Airmen and their family members. Library programs are a vital role in building resiliency and in providing access to technology to the thousands of Airmen and hundreds of home school children of military personnel. The library is the only place on base where Airmen, their families, and civilian employees have access to recreational 3D printing capabilities free of charge. Our current 3D programs, which consists of 1 MakerBot 3D printer, fill up as quickly as we create them. With our growing success, patrons are requesting additional technologies and capabilities. However, we are limited in the material we use, a biodegradable plastic that does not allow patrons to print sturdy and multi-use projects. Additionally, our technical capability with the computer that runs our 3D printing software limits us in the size of files. This project will fill the gaps from a very limited, entry level 3D design and printing, to

a more advanced program incorporating multiple stages of creation and serving a larger portion of the community. With the 3D scanner our patrons will be able to scan parts and create replicas, giving them the ability to visualize how 3D printing can impact real-world aerospace technology. Patrons will be able to take a concept and work their way to a printed prototype using multiple materials.

Resources required:

3D printer: Flashforge Creator Pro - \$899.00

3D printing software: Simplify 3D - \$150.00

Laptop for software, CAD design, and mobile programs - \$1,300.00

Desktop for software, CAD design - \$1,200.00

3D scanner: Matter and Form V2 + Quickscan - \$749.00

3D filament (PetG, Flex, ABS,) - \$226.00

3D printing (tools, accessories, storage, desiccant) - \$234.00

Activities/Timeline (include estimated completion date):

3D classes will begin immediately upon receipt of the materials and will continue for 1 calendar year. As our population is transient we will continuously adapt and add programs as patrons move to and away from Hurlburt Field and as new technologies become available. In addition to the structured 3D classes offered, we will extend our current programs to include 3D open hours where patrons can reserve access to our 3D printers, scanner, and dedicated desktop computer.

How will the library sustain this project?

The project will be sustained through continuous staff training. To supplement staff members, the library will recruit educators from the Hurlburt Youth programs to aid in providing structured 3D classes to students. Funding for additional filament and replacement materials will be provided by Friends of the Library.

Library Director's signature: _____ Date: _____

Signature of agent, office, or board to whom the Director reports Date: _____

For PLAN use only:

Approved _____ Not Approved _____

PLAN Executive Director _____