

**PTO Enhancement Grant Request: 2019-2020**  
**ES MakerSpace 3D Printer**

**Applicant / Project Leader:** Cary Hart (Faculty/Staff)

**Description**

Across international schools, 3D Printers have become a central component of all maker space studios. With their ability to bring students' imaginations and creativity to reality, 3D Printers provide the missing piece in the Prototyping phase of Design Thinking. This piece of equipment will open up new doors to allow our students to create actual working prototypes of designs that they have created to solve real-world problems and create real world designs. With these 3D prototypes, students (especially our kinesthetic and visual learners) can more actively engage in the testing and reflection phases of Design Thinking. Not only will this printer directly support the ES curriculum (specifically the action phase of our Units of Inquiry), it also empowers students to fully utilize their agency as they pursue their own passions.

**Target Community**

The ES students are the main benefactors though the ES teachers will also benefit. Having a 3D printer in the ES will allow students to begin to build skills that they can carry with them into MS and HS.

As our Curriculum is demanding a space for creating and designing this piece of equipment will be available to all in the ES when necessary to help them reach curricular goals.

**Choices**

This equipment will be purchased from brands that are certified for use in Russian educational institutions. This will make them certified for schools as well as mean that there will be support and servicing available in Russia for them. They are also both able to work with iPads or Chromebooks as their applications do not require a dedicated computing device to run them, this fits nicely into our program.

**How will your project positively impact the AAS community?**

This piece of equipment will not only allow students to create actual working prototypes to address real-world problems. In addition, as we continue to grow our maker space studio, the 3D Printer will become a marquee attraction that will both inspire passersby, but also encourages our community to actively support the center's expansion.

**Projected Total Cost**

\$2250 includes machine and start-up materials costs.

**Where will your grant proposal item be purchased?** Locally

**Proposed start date**

As soon as the equipment arrives and training and safety policies have been set up for the teachers and student use.

**Estimated set up or lead time:**

**1 month after arrival**

**Success Criteria**

Students who have successfully be able to use the equipment to develop the prototype they imagined.

**Your "Elevator Pitch"**

In an effort to stock our design/maker space with the equipment it will need to create the type of space we would like to have to support the curriculum that the ES is delivering, we would like to request money for a 3D printer. This piece of equipment will open up new doors to allow our students to create actual working prototypes of designs that they have created to solve real-world problems and create real-world designs.