

# **3D Educational Services**

*Teaching essential 3D skills in K-12 classroom*

## **Proposal for 3D Modeling and 3D Printing Workshop**

The mission of 3DES, Inc is to bring 3D skills to the classroom. The teaching of 3D skills in our schools has shown to generate interest in STEM subjects and supplement the math and science skills that are crucial for building the future STEM workforce. This course attempts to provide the basic foundation for the 3D skill while engaging the students in hands-on maker activities.

Teaching 3D skills has shown to further STEM interest in ones career. This workshop provides foundation for learning 3D

### **Objective of the proposed workshop**

*The objective of this workshop is to train students in 3D skills which include 3D Modeling, 3D Printing and the use of 3D technology. Upon the conclusion of the workshop each participant will have the 3D knowledge and tools to improve their perception of objects both simple and complex, and how to view them in various dimensions and physically create 3D objects using the printer. The workshop will engage the students through a series of projects with increasing complexity, while testing the 3D skills that students have learnt.*

### **Benefits of this Workshop**

Participants will take away beginner skills in 3D Design software (Tinkercad) as well as practical knowledge on how to use the 3D printers. In addition to the ability to create their own original 3D objects, they will also be provided with example projects for K-12 classrooms (both middle & high school) and helpful online resources.

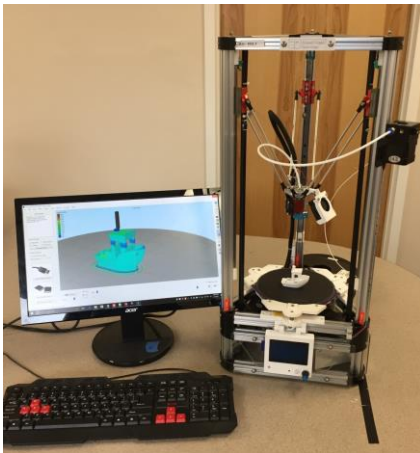
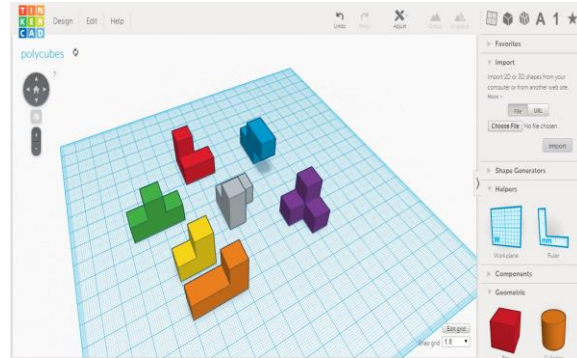
# 3D Educational Services

*Teaching essential 3D skills in K-12 classroom*

## Workshop Details

### Day 1 - 3D Design and 3D Printing end-to-end process

- Introductions, Objectives and preview of 3D objects
- Computer representation of 3D Models, workflow: design – slice – print
- Introduction to Tinkercad, design original objects.
- Introduction to Cura slicer (or a similar open source slicer), prepare original object for printing.



### Day 2 – 3D Printing Projects

- Begin printing of original objects
- Discussion of libraries and more advanced tools
- Complete printing of original objects and feedback by classmates.

**Note:** These workshops do not provide a full 3D curriculum lesson plan. Since 3D technology may apply to and can be used in almost any subject at any grade level for any standard, such a body of work does not exist and cannot be supplied.