



# Datta Meghe World Academy

## Grade: IV to IX: 3D Printing Workshop

Dear Parent,

Date: 11<sup>th</sup> March 2019

This is to inform you that 3D Printing Summer Camp is scheduled for students of Grade IV to IX (2018-19) in association with Friction Innovative Education LLP. In this summer camp, every student would be mastering the use of 3D printers, right from understanding the complete process and working mechanism of 3D printing as well as learning to digitally design 3D models. Students will be witnessing the 3D printing procedure live and will also be getting a 3D printed takeaway model.

### What is 3D Printing?

3D Printing as the name suggests, is a computer controlled process of printing 3 dimensional solid objects. Just the way a conventional printer prints anything on a sheet of paper from the computer, a 3D printer prints 3D objects instead.

### Why students should learn 3D Printing?

- 3D Printers have their use is almost all major industries- Manufacturing, Architecture, Medicine, Civil, Dentistry, Graphic Designing, Automobile, Fashion and Design, Furniture, Education, etc.
- With the knowledge of 3D Printing, you can print practically anything that you can imagine. And when you know anything is possible, you can imagine without any restrictions.
- It is a very new technology and is considered as a very important professional skill today.
- It helps develop research oriented acumen.
- An excellent platform to channelize the imagination of students towards productive outcomes and take a step forward in technology.

### 3D Printing Summer Camp Details:

#### A. Course Content

- Dimensions -2D and 3D
- 3D Coordinate System.
- Difference between 2D and 3D printers.
- Types of 3D printers.
- FDM 3D printers: Construction, Functions of each part, Understanding the working of single and multiple extruders, different materials available for 3D printing, Criteria for material selection.
- Benefits of 3D printing over other manufacturing process.
- Application of 3D printing
- Designing in Software: 3D modeling, Learning Autodesk 123d design software
- Slicing Software-Cura
- Understanding supports and overhangs
- Setting on a FDM 3D printer
- Designing, slicing and printing multiple objects.

#### B. Inclusions ( for every student)

- Designing software- Autodesk 123d
- Slicing Software-Cura
- Detailed notes
- Default setting manual for printer and slicer
- Customized 3D printed model.

#### C. Charges: Rs. 2000/- per student

- D. Dates of the camp: **7<sup>th</sup> April 2019 to 10<sup>th</sup> April 2019** ( during regular school hours, only on 7<sup>th</sup> April 2019 – timings are 10.00 am to 12.30pm )  
(2 and half hour each day, Total duration of the camp- 10 hours)
- E. Interested students need to submit the amount to their grade teachers by 15<sup>th</sup> March 2019 ( or on 28<sup>th</sup> March 2019 i.e. Report card distribution day)
- F. Bus service will be available for students availing school bus service except on Sunday (i.e. on Sunday parents need to arrange for the pick up and drop facility of their ward enrolled for the camp.)

Principal

Acknowledgment for 3D Printing

Date: 11<sup>th</sup> March 2019

I Mr/Mrs. \_\_\_\_\_ parent of Miss/Mast. \_\_\_\_\_  
of Grade & Div: \_\_\_\_\_ is interested to enroll my ward for the 3D Printing workshop  
and adhere to the details provided for the same.

Date:

Parent's Sign: