



# SEEKING FOR ECOLOGICAL ALTERNATIVES

KA229 PROJECT

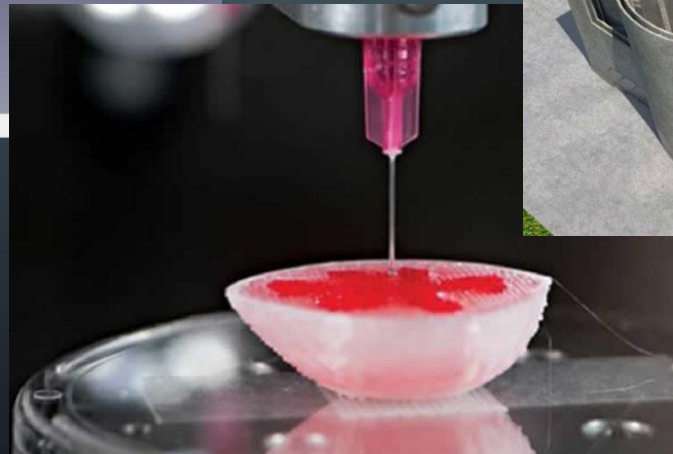
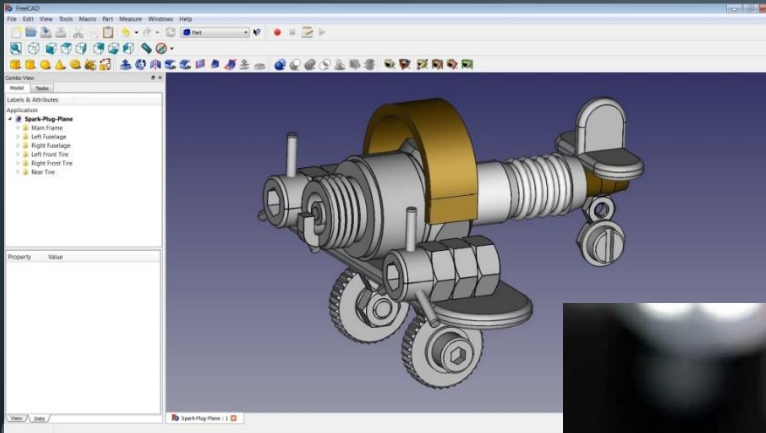
VIRTUAL MEETING #3

3D MODELING WORKSHOP



# 3D MODELING

- Short presentation of the 3D modeling & printing technology
- 3D CAD software

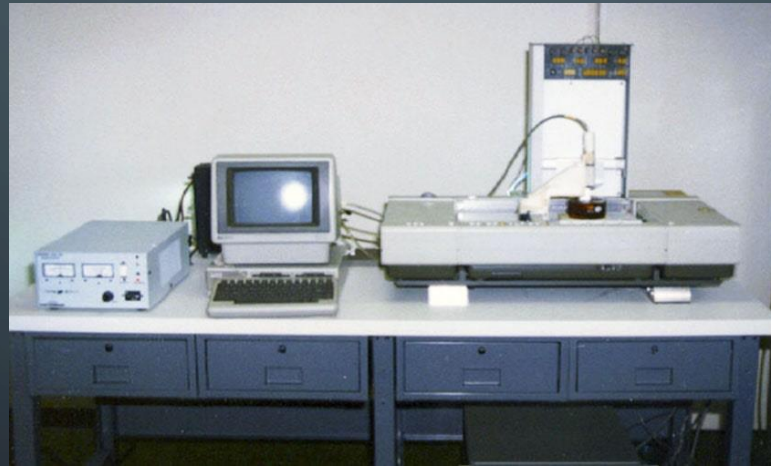


# « SHORT HISTORY »

3D PRINTING is a brand new technology!

**WRONG**

This technology blows its fiftieth candle!

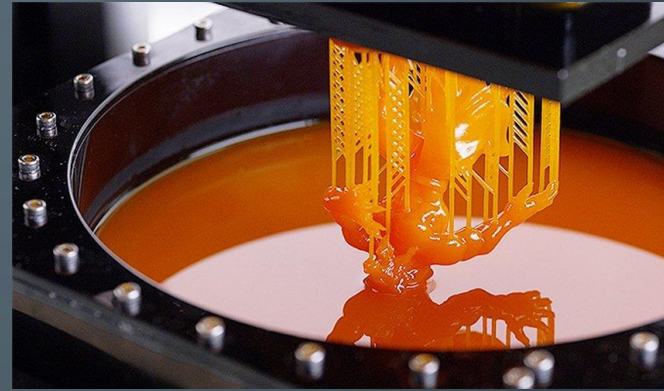


It appeared in 1970 thanks to the work of Japanese researcher Hideo Kodama.

# « SHORT HISTORY »

Three methods of 3D printing exist:

- SLA (Stereolithography)
- SLS (Selective Laser Sintering)
- FDM (Fused Deposition Modelling)



# « Material used »

Our home printers most often use:

- Photosensitive resin in SLA
- All kinds of filaments in FDM

For example:

PLA made from corn starch

ABS, the same plastic used in car dashboards

Nylon

PET (plastic bottles)

...

The technology progresses and sometimes  
uses more exotic materials...

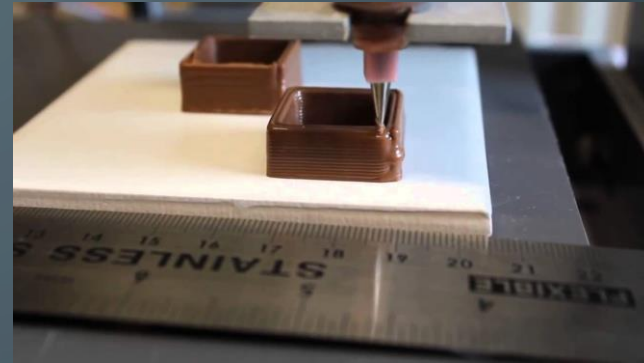


# « Material used »

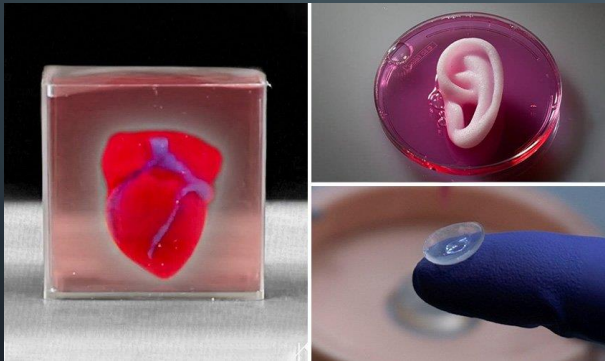
Today 3D printing is also used to print:



HOUSES & ROADS



FOOD



ORGANIC CELLS & ORGANS



MOON DUST

# « CAD Software »

CAD = Computer-Aided Design

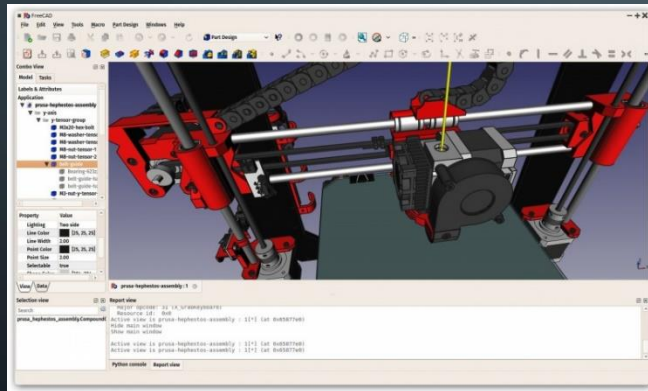
There are a lot of software to model objects in 3D.



AUTODESK FUSION 3D

**PRO:** very complete, lot of options, free for students and teachers.

**CON:** no backwards compatibility



FREECAD

**PRO:** open source, free, backwards compatibility.

**CON:** less ergonomic

Because **backwards compatibility** is really important to implement a software in a school we choosed to use FREECAD.

# « FREECAD WORKSHOP »

In this introduction you will learn how to reproduce in 3D  
a very familiar object :-)

