

SEEKING FOR ECOLOGICAL ALTERNATIVES

KA229 PROJECT

VIRTUAL MEETING #3

3D MODELING WORKSHOP







SEEHING FOR ECOLOGICAL ALTERNATIVES



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3D MODELING

Short presentation of the 3D modeling & printing technology

• 3D CAD software

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« SHORT HISTORY»

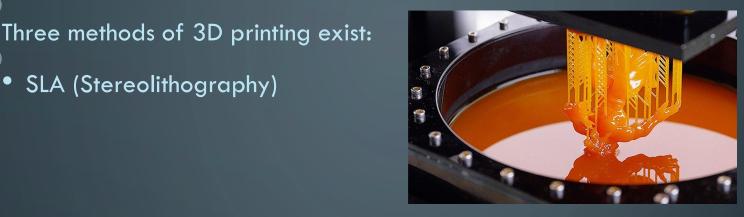
3D PRINTING is a brand new echology!

This technology blows its fiftieth candle!



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

« SHORT HISTORY»



• SLS (Selective Laser Sintering)

SLA (Stereolithography)



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...



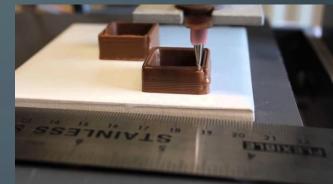
« Material used»

Today 3D printing is also used to print:



HOUSES & ROADS

 \frown



FOOD



ORGANIC CELLS & ORGANS



MOON DUST

« CAD Software»

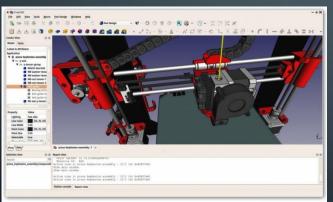
CAD = Computer-Aided Design

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 :-)

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