**The ABC's of XYZ's**

**The Cube from 3D Systems**

* XYZ
* Build Area
* Feed Stock

**RepRap Printer**

* Files on SD Card
* Heated Printing Surface
* Hollow Core Support
* Stalactites

**What can I print?**

* StereoLithography (STL) files
* Cube catalogue
* Creativity reimagined
* Scanners: handheld, stationary, Makerbot Digitizer $799.
* 3D Modeling or CAD software: Blender, Sketchup, Rhino, Maya and AutoCAD

**Industrial Printing**

*Materials and Processes*

**Thermoplastic**

* PLA (PolyLactic Acid): bio-plastic, biodegradable, no smell, rigid, more sturdy - good for flat objects)
* ABS (Acrylonitrile Butadiene Styrene): thermoplastic, softer more flexible - good for support structures)

**Extrusion Deposition, or more specifically Fused Deposition Modeling (FDM).**

Multi Material Printing

**Connex500 Polyjet**

* Cures the material using UV light.
* The platform lowers one thousandth of an inch
* Prints moving parts by using two materials, a build material and a support material.
* Support Material

**Granular Materials Binding**

* Selective Laser Sintering or SLS
* Selective Laser Melting or SLM
* Electron Beam Melting, or EBM - electron beam in a high vacuum.

**Lamination** mCor

**Photopolymerization**, which utilizes **stereolithography** to produce a solid model from a **liquid polymer using UV light**.

* **Digital Light Processing or DLP**
* Liquid polymer, where UV light solidifies

**Applications**

* Rapid prototyping
* Shapeways
* Ceramic Powder
* Clay
* Contour Crafting
* MX3D Steel Support Structures
* Bio-printing – stem-cells heart, kidney
* Meet and Leather
* Food and Chocolate
* Education