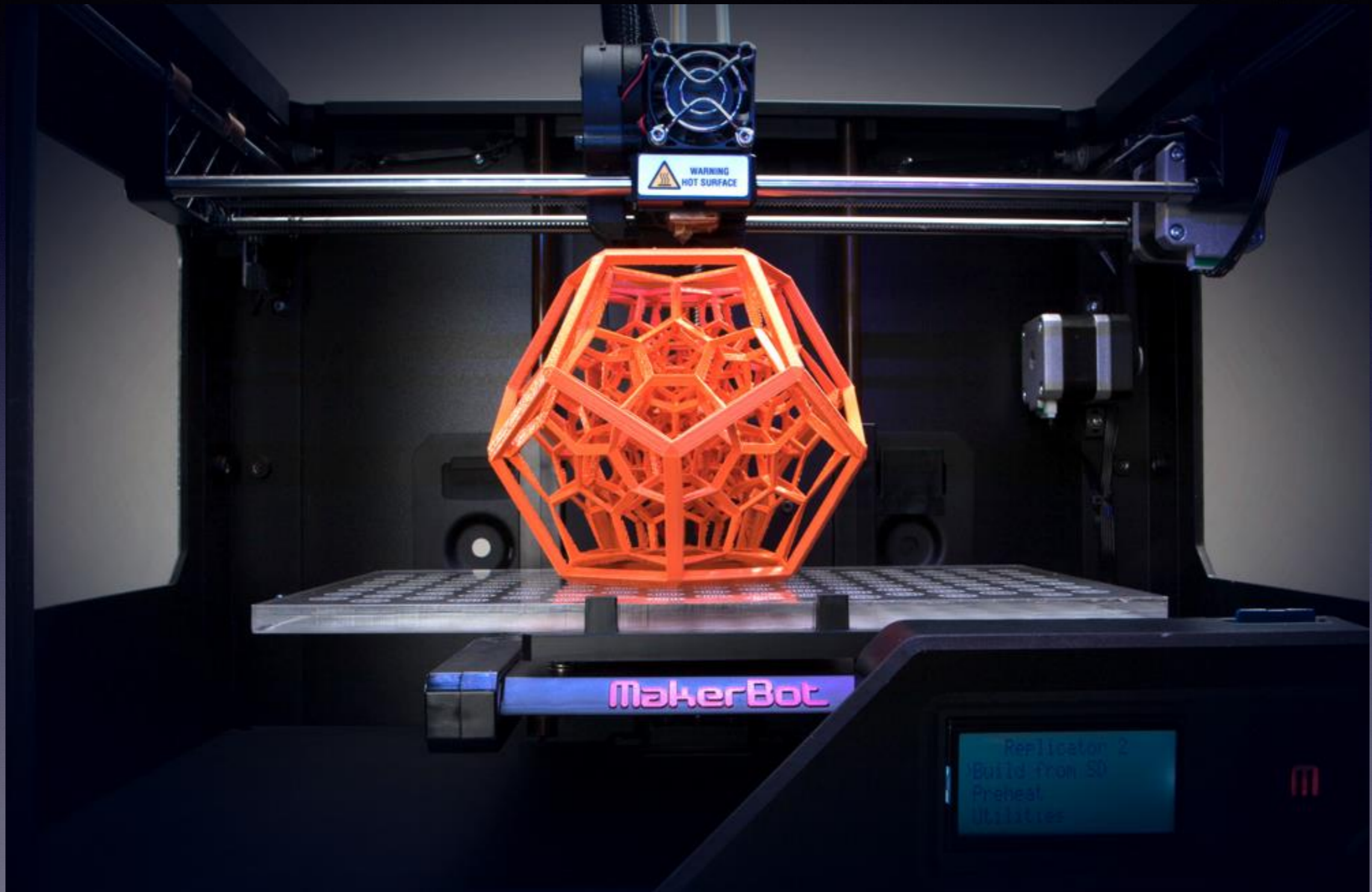


3D Printing

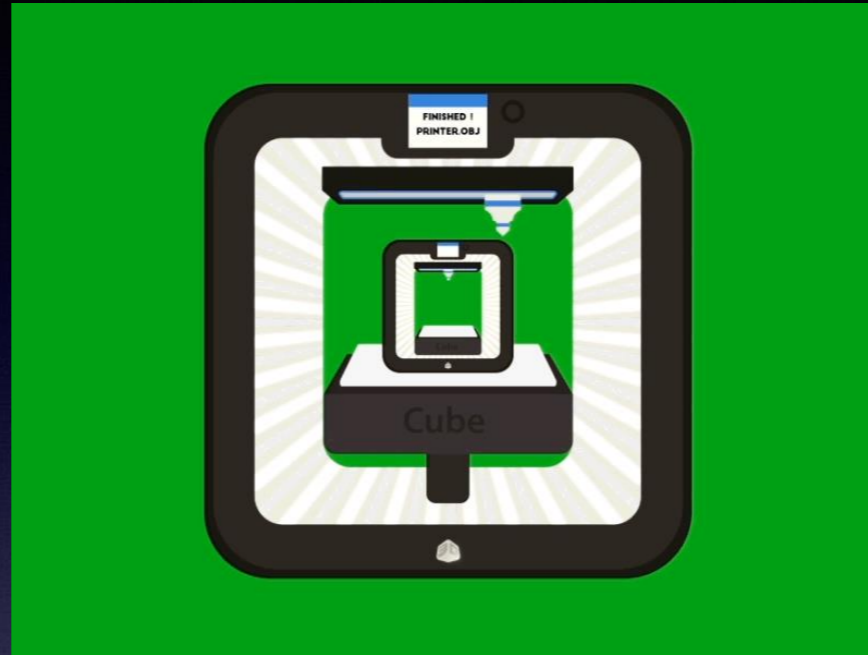


3D Printing

The process of making three dimensional solid objects from a digital file.

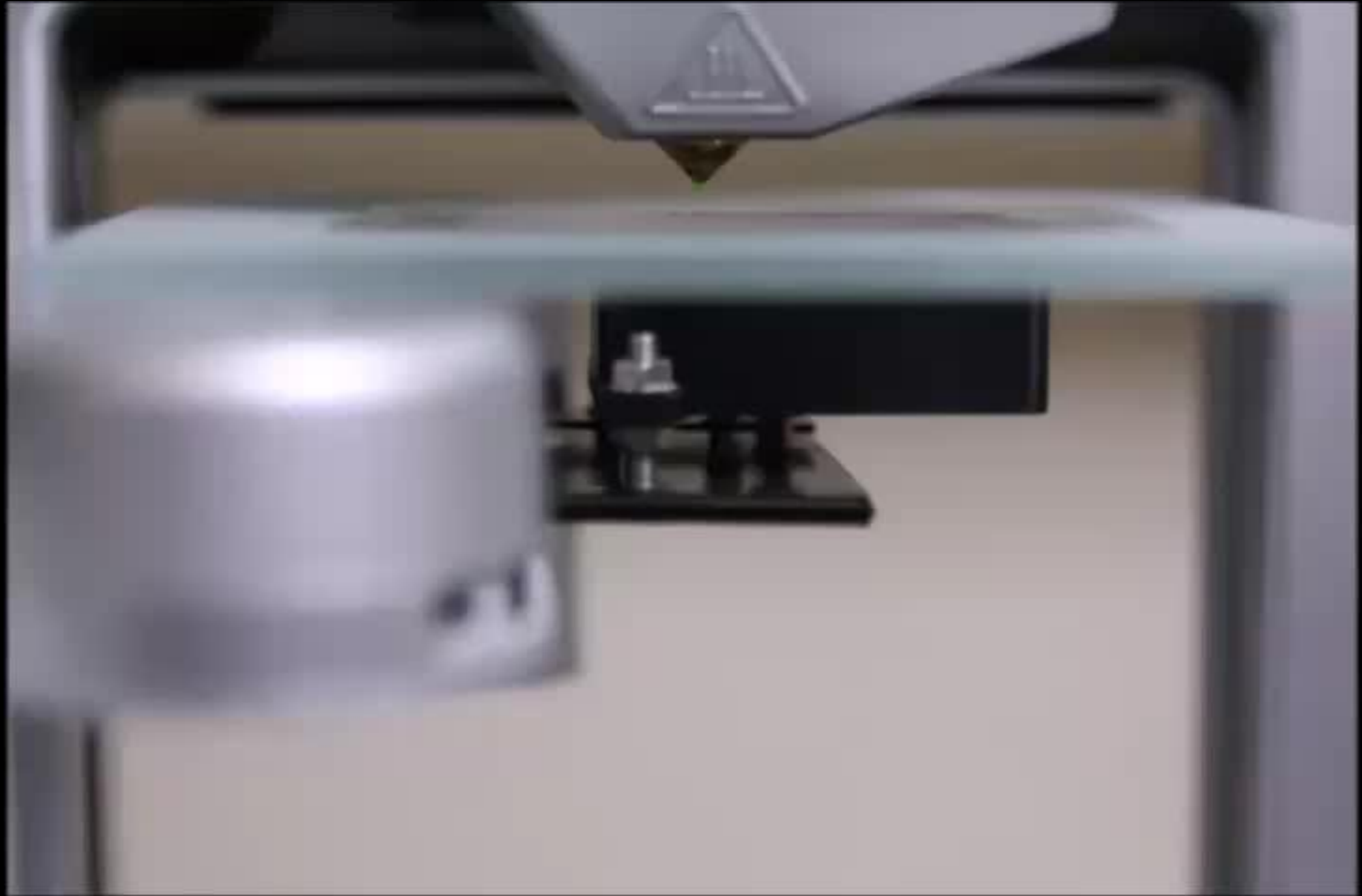
The object is created by using an additive process, laying down successive layers of material until the entire object is created.

Cube 3D Printer



Fused Deposition Modeling:

Uses high temperatures to melt plastic then applies it layer by layer to create a 3D object. The plastic solidifies upon impact.



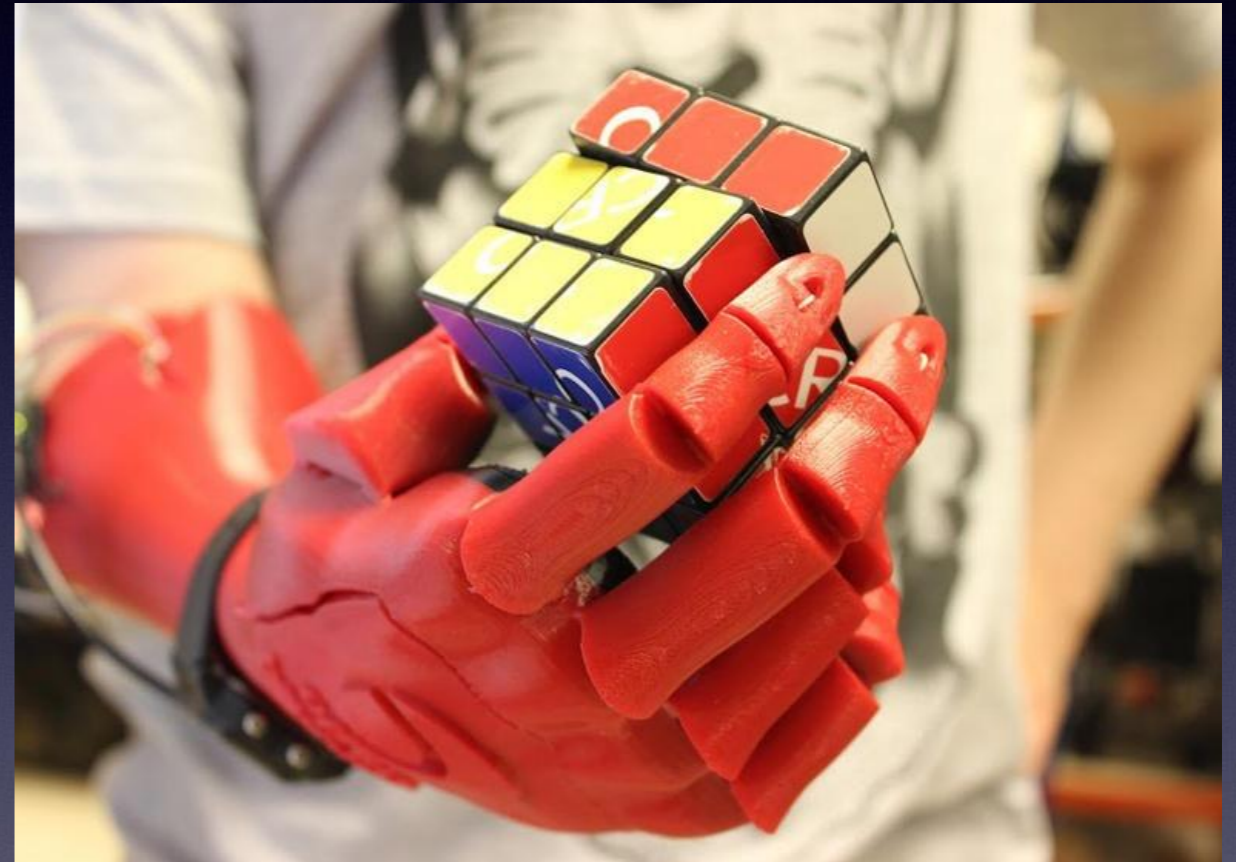
Printable Materials

- Plastics
- Metals
- Ceramics
- Paper
- Bio Materials
- Food
- Other

Today's Applications

Prosthetics

3D printing makes them more affordable than ever, around \$1,500 as compared to \$45,000-\$90,000 before.



Today's Applications

Houses

In China, a 3D printer was used to print 10 single-story homes within 24 hours.



Today's Applications

Bioprinting

In 2013, Chinese scientists began printing ears, livers and kidneys with living tissue.



3D Printing in the Art World



Recreating Classics



Valeriya Promokhova, *7 Davids Project: in Flowers*

Michaelangelo's *David*
reworked as a 3D print



Rob and Nick Carter, *Replica of Vincent van Gogh's Sunflowers*

van Gogh's *Sunflowers*
made into a 3D print

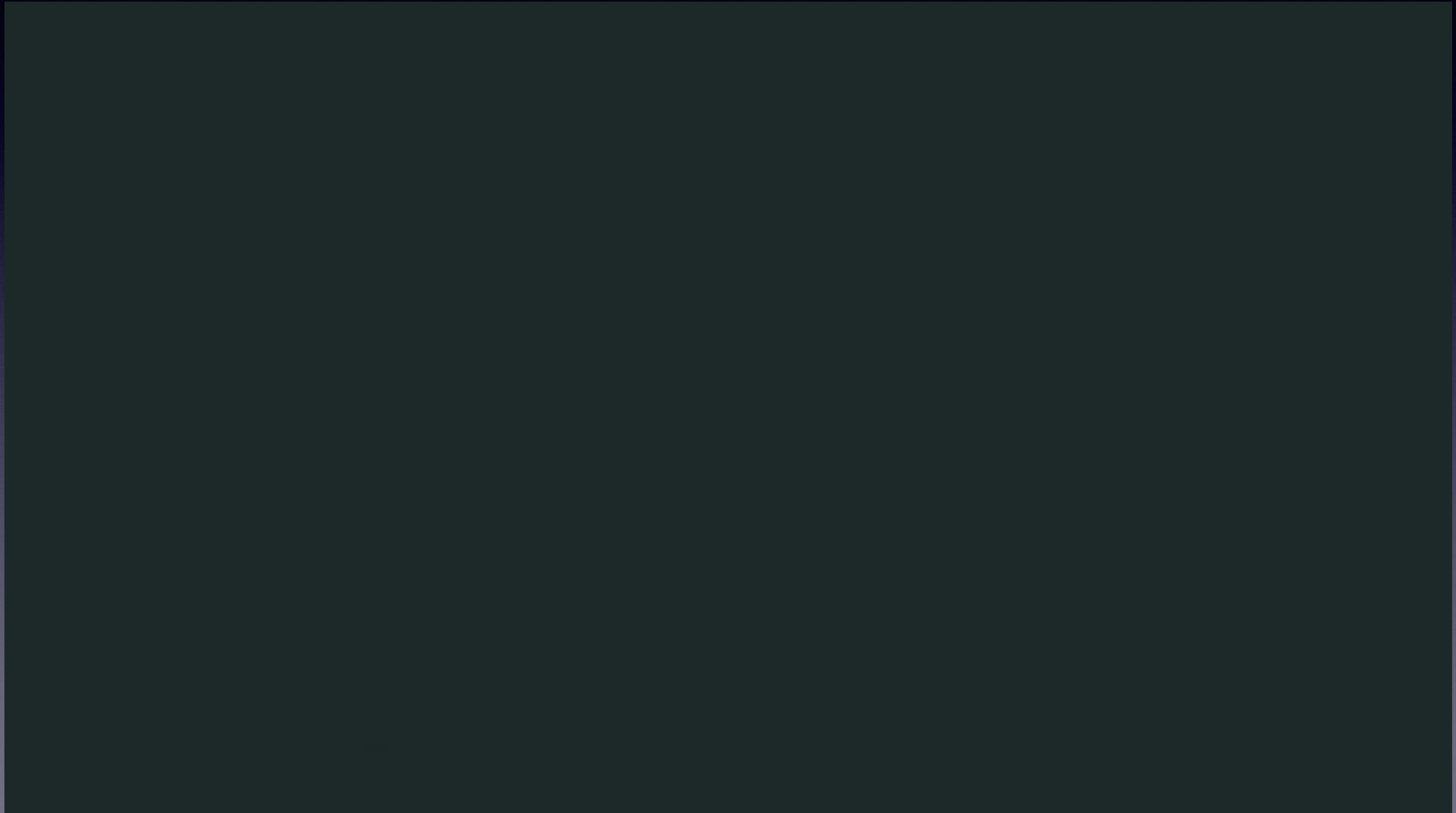
3D Printed Wearable Instruments



Researchers in Canada designed a family of prosthetic musical instruments, including an external spine and a touch-sensitive rib cage, that create music in response to body gestures.

3D Printed Stop-Motion Animation

“Bear on Stairs”



Original Work

Shane Hope, *Public Panopticon Powder*

Printed out various textured reliefs and painted to unify them as one piece.

