

TRY IT

It has never been easier for you to try 3D printing.

Artists, enthusiasts and entrepreneurs all over the world are taking advantage of 3D printing to imagine and create things.

In the UK alone around 4.8 million 3D printed things are made by enthusiasts each year. 3D printing lets people affordably create individual items.

Some people have even come up with innovative ways to use 3D printing to help others. What could you create and print?

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1. YOUR TUNES



Custom music box

1

Image: **Science Museum/Jennie Hills**
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1. YOUR TUNES

‘My friend insisted 3D printing could never produce something as complicated as a music box.

‘I proved him wrong and won MakerBot’s Customizer design competition. You can tweak my music box design to make it play any tune you fancy.

‘All the competition entries are free to download. These customisable plans allow anyone to try their hand at design, even if you have never done it before. Once you’ve customised your gadget you can 3D print it.’

Philipp Tiefenbacher

Programmer



Images: Philipp Tiefenbacher



Playing the music box

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2. ROBOHAND



Robohand

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'I lost my fingers in an accident and was told a prosthetic would cost \$60,000! I decided to create my own new fingers.

'I teamed up with inventor Ivan to make a functional mechanical hand. 3D printing made collaboration over the internet easy - Ivan could tweak the design in North America and I'd print and try on the prototype in my home in South Africa.

'The digital design for my Robohand is freely available online for anyone to customise and print.'

Richard Van As
Carpenter



Image: Richard Van As and MakerBot



Robohand in action

Image: Richard Van As and MakerBot



Richard adjusts Robohand

Image: Richard Van As and MakerBot

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3. COMPUTERS ON WHEELS



Raceware GPS holder

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3. COMPUTERS ON WHEELS

‘I’m a keen cyclist and I needed a mount to attach my training gadgets to my bike. I couldn’t find anything in the shops that fitted my bike and my training computer, so I designed and 3D printed one.

‘I hit the cycling forums – others wanted customised holders to attach computers and GPS units to their bikes too. Now I’ve got my own business selling customised holders. 3D printing lets me affordably produce small-quantity items and one-offs.’

Martyn Harris
Entrepreneur



Image: Martyn Harris



Raceware attaches to your handlebars

Image: Raceware GPS

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4. IMAGINARY CREATURES



Crayon Creatures

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4. IMAGINARY CREATURES

‘Children’s drawings are weird and beautiful, and I love to turn them into real objects.

‘I use several computer programs to inflate kids’ artwork into a digital 3D shape, like blowing up a balloon. With 3D printers I can print an exact 3D model of the child’s creation – it keeps every detail of each crayon stroke.

‘3D printing lets me make one-off items affordably. Ultimately, I want to make 3D design tools to allow anyone to turn a 2D drawing into a 3D object.’

Bernat Cuni
Designer



Image: Bernat Cuni



The artists

Image: Rohan Mehra



Image: Ling Lee

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5. WORLDWIDE ART



Horse marionette

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5. WORLDWIDE ART

'I live in the middle of nowhere in South Africa. 3D printing lets me run a global business from home.

'I sell my artwork worldwide and companies near to my customers 3D print it. I don't have to worry about shipping and manufacturing costs.

'3D printers let me use my engineering background to make complex artworks with moving parts that I can't make any other way.'

Michaella Janse Van Vuuren

Artist



Image: Michaella Janse Van Vuuren



Michaella's home

Image: Michaella Janse Van Vuuren

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6. THE 'LIBERATOR' GUN



The 'Liberator' gun

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6. THE 'LIBERATOR' GUN

Ville Vaarne is a Finnish journalist who downloaded the design for this gun from a digital file freely available on the internet. He then 3D printed it and fired it. The bullet fired straight down the range but the gun broke into four pieces. As more people try 3D printing, more open-source inventions will be available. How should society regulate this to protect people and their ideas? What do you think?



Image: Ville Vaarne



The gun assembled

Image: Ville Vaarne

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7. INVERSIVE EMBODIMENT



Inversive Embodiment by Tobias Klein

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Inversive Embodiment is a 3D printed artwork created by Tobias Klein. This intricate sculptural piece incorporates data from MRI scans of Tobias Klein's own body and the iconic structure of St Paul's Cathedral. Tobias is an internationally trained architect who works with 3D printing across the fields of art and installation, experimental design, interactivity and sculpture.



Image: Tobias Klein