3D Printing our Future

Using 3D Printing in Education

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10 Ways 3D Printing Can Be Used In Education

1. Engineering design students can create and print out prototypes
2. Architecture students can print out 3D models of designs
3. History classes can print out historical artifacts for examination
4. Graphic Design students can print out 3D versions of their artwork
5. Geography students can print out topography, demographic, or population maps
6. Cooking students can create molds for food products
7. Automotive students can print out replacement parts or modified examples of existing parts for testing
8. Chemistry students can print out 3D models of molecules
9. Biology students can print out cells, viruses, organs, and other critical biological artifacts
10. Math students can print out "problems" to solve in their own learning spaces, from scale models to city infrastructural design challenges

https://www.teachthought.com/technology/3d-printing-education/

30 YEARS

3D printers have actually been around for about 30 years. Barriers like cost are breaking down, so they're now becoming available to the public.

Printed objects can be incredibly intricate. They can also be created with working components, hinges, and parts within parts.

Biology students can study cross-sections of hearts or other organs.

REVOLUTIONIZING
the
CLASSROOM

Engineering and design students can print out prototypes of their creations.

Chemistry students could print out molecules to study.

3D printing has caught the attention of educators who are looking into ways to incorporate it into the classroom.

Architecture students could easily print out 3D models of their designs.

Using 3D printers in the classroom could mean:

Auto class students could print replacement or modified car parts.

History classes could print out historic artifacts for closer examination.

Cooking class students could design intricate molds for ices and gelatins.

Graphic design students could create 3D versions of their artwork.

Students in geography courses could print out maps showing the topography, population or demographics of an area.

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3D printers have significant potential as a teaching resource and can have a positive impact on pupil engagement and learning.

2,314,750+

3D models on Thingiverse

3D Printing—Organ Transplants of the Future

Using 3D Printing in Medical Education

3D Printing Educating for Careers

3D printing and educational technology is the wave of accelerating progress, delivering on the future of design potential, and making the earth a better learning environment. Today, if a student can dream it, he or she can create it with 3D printing. The creative process, the role of discovery and the imagination all become more fruitful through 3D printing.

Many industries and professions around the world now use 3D printing. It is not bound by culture or language. Education uses this form of technology to unlock a student's hidden potential; if the student has an idea, he or she can bring it to life in a 3D model. The high-tech digital world can now fit in one's hands, where today's students can improve upon it for a better tomorrow.

University of Texas, Arlington

Adoption of 3D printing across different sectors has increased globally from 4% from 2019 up to 29% in 2020.

3D Printing—Still Room for Growth

The US currently has the largest installed base of 3D printers in the world, with the US segment leading the market and accounting for more than 35% of the global additive manufacturing revenue in 2020. From printed cars to athletic shoes to a printed NASA rocket engine, if the US can dream it they can 3D print it, it seems. However, while implementation of 3D printing in the US has increased over the past year, according to the 3D Printing Sentiment Index 2021 over 60% of American businesses could potentially benefit from 3D printing and do not currently use the technology. This means there remains significant future potential for research, investment and education in this arena.

The use of 3D Printers in the classroom from K12 through Universities will allow us to reach the potential that 3D printing offers.