Lesson Plans and Resources

Note: Right click on the hyperlink to open resources in a new tab. When you are finished with a resource, close the tab to return to this page.

General

7 Hands-On Projects That Use 3D Printers (Article)
Get ideas for incorporating 3D printing into your curriculum no matter what subject area you teach.

Print Your Own Moby (BrainPOP) (Lesson Plan)
In this lesson plan, adaptable for grades 3-12, students explore 3D printing using BrainPOP’s resources. Students will learn the capabilities and limitations of 3D printers and sketch an object they wish to make with a 3D printer. Students will also print their own 3D Moby.

Tinkerine U Lesson Plans (Lesson Plan)
This site provides several free lesson plans that are appropriate for a variety of subjects and grade levels. The site does require you to sign up in order to access the lesson plans, but the process is quick and free. Lesson plans may suggest specific printers, but your Dremel printer will do the job!

Art

Stamp Making (Lesson Plan)
Unleash the inner artist in every student by introducing the concept of designing a stamp mold that can create original prints unique to each child.

Auto/Mechanics

The First 3D-Printed Supercar (Video)
Did you know that a 3D printer can create a car? Show students this video to inspire them and get their creative wheels turning.
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English/Language Arts

**Army Eyes 3D Printed Food for Soldiers** (Article)
This NPR article, most appropriate for middle school students, explores the Army’s research into creating 3D printed food for soldiers.

**Tactile Picture Books** (Lesson Plan)
Bring books to life by creating tactile pictures to accompany text. Students can create images to accompany the books they read in class or to supplement book reports.

Mathematics

**3D Printing Math Lesson Plans** (Lesson Plan)
From math puzzles to tessellations, this website has a list of math-based 3D printing lesson plans to get you started in the classroom.

**The Handicap Ramp** (Lesson Plan)
Students will be able to design and produce a scaled model of a handicap ramp. Design the models to meet your school or district’s ADA specifications and watch as your students create objects that are used every day.

**Cell Phone Case** (Lesson Plan)
Students will gain a new appreciation for math when they use it to design and print a cell phone case.

**3D Printing Math Lesson Grade 3** (Video)
See how one school incorporated 3D printing into their mathematics curriculum, in particular to teach about geometric shapes.

Science

**GB3D Type Fossils Online** (Website)
The GB3D Type Fossils Online project aims to develop a single database of the type of fossil species and subspecies found in the UK, including links to photographs and a selection of printable 3D digital models.
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Science (cont.)

Enhance a Lesson on Erosion  (Lesson Plan)
2nd-3rd grade students will be presented with a real-world problem of building a home near a river. 3D printed buildings will show the impact of erosion.

Whirligigs  (Lesson Plan)
Does size affect the ability to fly? Encourage your students to find the answer to this question by introducing topics such as aerodynamics and energy with this engaging lesson plan.

3D Printed Entomology  (Lesson Plan)
Learn about ecosystems by having your students design their newly “discovered” insects with 3D printing software.

Social Studies

Cryptography  (Lesson Plan)
High school students create their own Caesar Ciphers and learn about encryption, decryption, algorithms, and even urban legends!

Monuments of Ancient Egypt  (Lesson Plan)
Young students will begin to understand the true complexities of pyramids and obelisks through this interactive lesson plan.