



DREMEL® DIGILAB

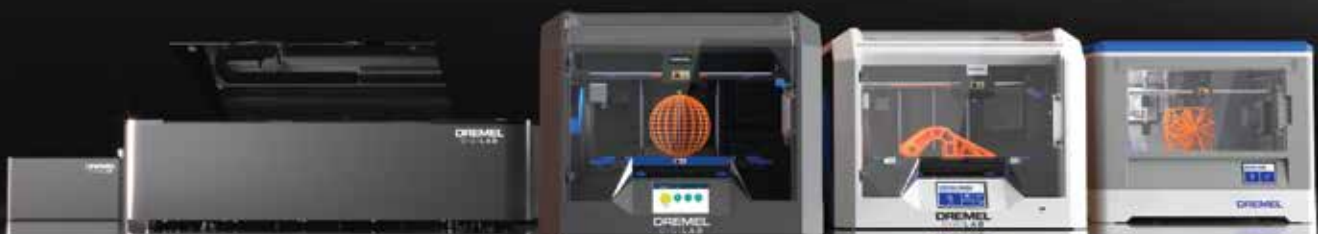


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3D PRINTER

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WHAT SETS OUR 3D PRINTERS APART?

3D40-FLEX AND 3D45 HAVE THE FOLLOWING 4 CORE BENEFITS:



RELIABLE PRINTING STARTS WITH THE EXTRUDER

The Filament Run-Out Detection resumes printing where you left off when filament runs out. The all-metal extruder nozzle is clog resistant and delivers smooth 3D prints. The built-in automatic Leveling Sensor adds precision leveling for even more reliable printing. The high-powered, direct drive extruder can heat up to 280°C for flexibility in different print materials.

CHROMEBOOK AND IPAD COMPATIBLE

Both Cloud and Desktop (downloadable) software solutions available making these Dremel 3D Printers compatible with PC, MAC, Chromebooks or iPads.



NETWORK FRIENDLY

Equipped with Static IP, Proxy and Dual 1GHz processors, our printers achieve fast and reliable cloud printing. Admins and Users can connect via LAN, Wi-Fi or Cloud. This enables managing user access, queue prints, view print history and run reports using the Admin portal. The Advanced Fleet Management software allows for user access levels, reporting and analytics. Available printers can be selected to print from and printer access sharing with remote users.

HIGH QUALITY AND RESOLUTION

Dremel Digilab 3D printers are high-performance printers which can print difficult overhangs (up to 80 degrees). They deliver ultra fine resolution with 50 Micron (1/20th of mm) layers in print thickness. They are manufactured using high quality components, internally tested (800 hours) for safety and performance and 3rd party tested by UL.



THE AWARD WINNING 3D45 PRINTER

Starting at \$1,999

The 3rd generation, top-of-line, Dremel DigiLab 3D Printer is engineered for anyone from a first-time user to advanced professionals. Backed by lifetime support and a 1- year warranty, the 3D45 is incredibly reliable and built for heavy usage. Easy-to-use features, quick start guide and everything you need to go from unboxing to printing in minutes.

Compatible with Nylon, ECO-ABS, PETG and PLA filaments

Clog resistant, all-metal extruder heats up to 280°C, with active filament monitoring

Automatic filament detection

Carbon and particulate filters to help protect against emissions

Automatic 9-point calibration to help prints stick to build plate and resist clogs

1-year warranty, lifetime customer support



50 Micron Print Resolution

Easily accessible USB input to transfer files to printer

Network-enabled to send or queue prints over WiFi and Ethernet

KEY FEATURES



Heated Build Plate heats up to 100 C allowing you to print different filament types including PLA, PETG, ECO-ABS and Nylon.



Built-in HD Camera for remote print monitoring. Watch how your print is progressing in real-time from a computer or mobile device.



RFID Tagging auto detects filament type loaded then adjusts nozzle and build plate to optimized setting for effortless operations.



4.5" Color Touch Screen makes it easy and intuitive to navigate and operate the printer functions and settings.



Print Functional Parts print stronger, more flexible, and more durable parts. Filament such as our ECO-ABS or Nylon.

DREMEL DIGILAB 3D40 FLEX

THE BEST VALUE OPTION

Starting at \$1,499

Designed for beginner to intermediate users, the 3D40 FLEX is the best value 3D printer option. Manufactured with high-quality components, the 3D40 FLEX is internally tested (800 hours) for safety and performance and 3rd party tested by Underwriters Laboratories (UL).

Generous Build Volume
(10 x 6 x 6.7 inches)

Print High-Quality Parts with
PLA filament

Quiet Operation



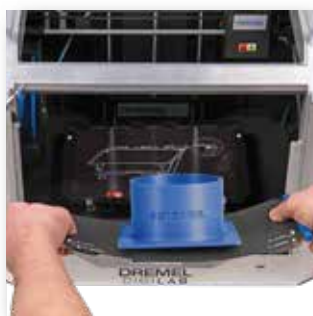
50 Micron-Print Resolution

1-year Warranty, lifetime
customer support

Semi-Automated Leveling

Easily Accessible USB
input to transfer files to
printer

KEY FEATURES



Flexible Build Plate
with ergonomic handles
and a magnetic snap-on
mechanism makes build
plate and print removal
easy and fast.



**3.5" Color Touch
Screen** makes it easy
and intuitive to navigate
and operate the printer
functions and settings.



**Fully Enclosed
Housing*** improves
print quality, reduces
warping, cracking, and
VOC emissions – all in
quiet operation.



**Automated 9 Point
Leveling Sensor*** detects
any variation in the print
bed and automatically
accounts for it for more
successful printing.

*also included with 3D45

FEATURE COMPARISON - 3D PRINTERS

Also available as
EDU-Bundles
(see page 7)



3D40 FLEX
Starting at \$1,499



3D45
Starting at \$1,999

PRINTING	Build Size (in.)	10.0 x 6.0 x 6.7	10.0 x 6.0 x 6.7
	Total Build Volume	402 cubic in.	402 cubic in.
	Minimum Layer Height	50 microns	50 microns
	Build Platform	Flexible Steel on Glass	Heated Glass
	Single Extruder	●	●
	Automatic 9-Point Calibration	●	●
CONNECTIVITY	Wi-Fi-Enabled	●	●
	Cloud Connectivity	●	●
	Ethernet	●	●
	Mobile Web Optimized	●	●
	USB Stick	●	●
HARDWARE	Clog-Resistant Extruder	●	●
	Semi-Automatic Leveling	●	●
	Fully Enclosed	●	●
	LCD Touchscreen	●	●
	HD Camera		●
FILAMENT	PLA Compatible	●	●
	PETG Compatible		●
	ECO-ABS Compatible		●
	Nylon Compatible		●
	Filament Auto-Recognition		●
	Run-Out Detection	●	●

DREMEL DIGILAB 3D EDU BUNDLES FOR SCHOOLS

Empower educators to bring a hands-on learning and design thinking experience to the classroom, developing STEAM skills and competencies that prepare students for college and career readiness.

EACH EDU BUNDLE COMES WITH:



ACCESS TO LESSON PLANS

20 Lessons (3rd – 12th grades) teaches design thinking, collaboration, communication and creativity through various design challenges. Students gain experience through hands-on learning using Auto-Desk Software (recommended).

10 mystemkits Lessons (6th – 12th grades) these lesson plans offer an easy to follow lesson with no need for 3D design software skills.

ACCESS TO PROFESSIONAL DEVELOPMENT

Our Professional Development course demonstrates critical Pedagogy instruction on how to 3D design, print and implement 3D Lesson Plans into your curriculum. The course's interactive lessons include videos, articles, lesson plans, case studies, and much more. Once you complete your self-paced course you will receive a PD certificate for 4 hours of Professional Development credits. (Limit one certificate per bundle)



3D45 EDU



3D40 FLEX

EXTRA SUPPLIES

Extra spools of filament, adhesion, and an additional build plate give you more of the supplies and consumable materials you will need to keep your students printing and learning. Spend less time creating Purchase Orders and more time printing.

	\$1,999	\$2,199	\$1,499	\$1,799
	3D45	3D45-EDU	3D40-FLEX	3D40-FLEX-EDU
Filament Rolls Included	1 PETG, 1 ECO-ABS	1 PETG, 1 ECO-ABS, 2 PLA	1 PLA	4 PLA
4 hr. Professional Development		•		•
30 Lesson Plans for K-12		•		•

All four come with access to desktop and Cloud slicing software options

Also Included:

Object removal tool • Unclog tool • USB connection cable • 1-year warranty • User manual • Quick Start Guide

DIGILAB 3D FILAMENT & ACCESSORIES

3 REASONS WHY YOU SHOULD INSIST ON DREMEL DIGILAB FILAMENT



Preset and optimized print settings



New and improved formula reduces breakage



Fits perfectly into Dremel Digilab 3D printers

FILAMENT MODEL

PLA FILAMENT

- PLA-WHI-01
- PLA-BLA-01
- PLA-RED-01
- PLA-ORA-01
- PLA-PUR-01
- PLA-BLU-01
- PLA-GRE-01
- PLA-PIN-01
- PLA-SIL-01
- PLA-GOL-01
- PLA-TRA-01
- PLA-YEL-01

PETG FILAMENT

- PETG -TRA-01

ECO-ABS FILAMENT

- ECO-BLA-01
- ECO-WHI-01

NYLON FILAMENT

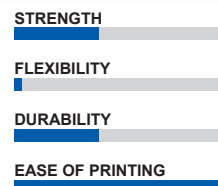
- DF45-NYP-B



\$32.99

PLA 0.75KG

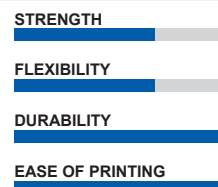
PLA is a plant-based bioplastic that is the most commonly used filament in 3D printing. PLA is a good choice for creating reliable, high-detail prints, ideal for cosmetic or low-stress applications. It's perfect for beginners due to its ease of printing.



\$39.99

PETG 0.75KG

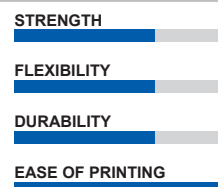
A thermoplastic filament that combines the strength of ECO-ABS, some flexibility of Nylon and the easy printability of PLA. It is also very durable and temperature resistant. It is good for printing mechanical parts and protective components. It is also good for printing large objects since it doesn't warp much.



\$39.99

ECO-ABS 0.75KG

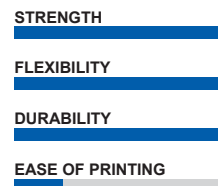
ECO-ABS is a modified version of PLA that offers the same high-detail finish but with added strength, flexibility and durability. It is great for making durable mechanical parts with a smoother surface finish.



\$44.99

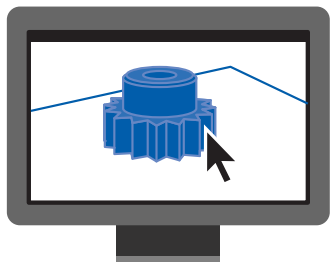
NYLON 0.5KG

A synthetic polymer that provides strong and flexible prints with heavy wear resistance. Nylon requires a little more care when printing, however it is ideal for parts that require strength or that endure wear over time, such as gears and working hinges.



DIGILAB 3D SOFTWARE

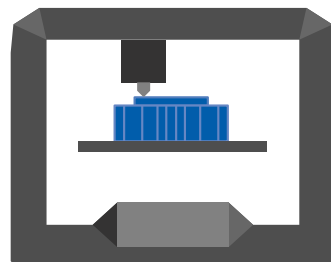
3 EASY STEPS FROM DESIGN TO PRINT



STEP 1 DESIGN



STEP 2 SLICE



STEP 3 PRINT

STEP 1 DESIGN

DESIGNING A 3D OBJECT

Every 3D print begins as a 3D model generated in a modeling program. There are many easy-to-use modeling software options available, many of which are free. You can also download STL/OBJ files from internet sources.

HERE ARE A FEW OF THE MANY 3D DESIGN SOFTWARE OPTIONS:

BEGINNER ←—————→ ADVANCED



Onshape



STEP 2 SLICE

IMPORT AND SLICE 3D OBJECT

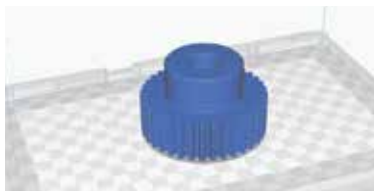
3D designed files (.STL/.OBJ) that are created in 3D design software, or downloaded from the internet, must be sliced into layers (G-code) which converts it into a format readable by your Dremel Digilab 3D printer.

Using the slicing software you can modify settings like layer height, print speed, orientation, scale and in-fill, among others, to tailor the print of your 3D object to your liking. Once you've set these options you can send your file to the 3D printer.

DIGILAB 3D SOFTWARE

STEP 2 SLICE

DREMEL DIGILAB OFFERS TWO FREE SLICING SOFTWARE TOOLS TO ALIGN WITH OUR 3D PRINTERS:



Desktop Slicer vs. Cloud Slicer Software Comparison Chart

FEATURE	DESKTOP PRINT SLICER	CLOUD PRINT SLICER
Works with Windows & Mac computers	•	•
Compatible with 3D40, 3D40-FLX & 3D45	•	•
Import .STL and .OBJ files	•	•
Manipulate objects (scale, rotate, duplicate)	•	•
Print settings (resolution, in-fill, supports, bed adhesion)	•	•
Local Wi-Fi / ethernet printing	•	
Compatible with 3D20	•	
Advanced slicer settings	•	
Internet access required		•
Cloud access for Chromebooks and tablets		•
Remote printing		•
Assign and manage remote users		•
Remote monitoring*		•
Remote project sharing / printer sharing		•
Record time-lapse video*		•

*3D45 only

STEP 3 PRINT

SEND FILES PRINT

With Dremel Digilab 3DPrinterOS cloud based software, you are able to send your prints directly to the printer through a Wi-Fi connection.

With the Dremel Digilab 3D Printer Slicer program, save the file to a USB drive and insert into the printer. You are able to copy the files from the USB and save directly on any 3D40 or 3D45 printer.

4 OPTIONS TO GET YOUR SLICED FILE TO YOUR DREMEL DIGILAB 3D PRINTER



WI-FI



USB



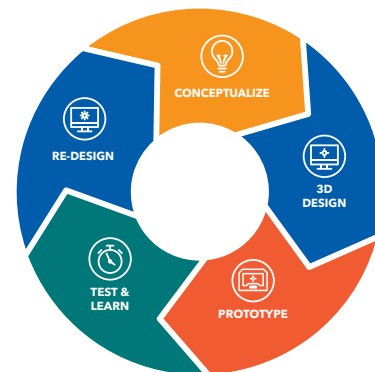
ETHERNET



CLOUD

3D LESSON PLANS

Dremel Digilab lesson plans provide teachers with a standards aligned curriculum (Common Core, NGSS, TEKS) created in collaboration with education experts. Every lesson plan has been tested in real-life education settings and designed to work in classrooms up to 30 students. Students will follow the lesson plan guidelines, work in teams while using their CAD design, Data Collection, Subject Knowledge, Creativity, Critical Thinking, Communication and Collaboration skills.



WHAT'S INCLUDED:

- Teacher's Guide (shows alignment to standards)
- 6 Phase Design Challenge
- Guiding Questions
- Learning Objectives
- Summary of Skills & Practices
- Timeline
- Materials
- Assessment Rubric

6 PHASE DESIGN CHALLENGE:

I. PLANNING

Student teams use creativity, communication and collaboration

II. DESIGN

3D design skills take over and the planning comes to life

III. CONSTRUCTING

3D prints are often printed in parts and assembled

IV. GATHERING DATA

Students accurately gather data, speeds or results

V. EVALUATING

Students analyze their results and make

VI. IMPROVE DESIGN

Improve design using the evaluation results



20 LESSON PLANS RANGING FROM 3RD TO 12TH GRADES

ELEMENTARY (3-5)

1. Modular Frame
2. Memento
3. Sextant
4. Artifact
5. Topographic Map

MIDDLE SCHOOL (6-8)

1. LED Accessory
2. Passive Cell Speaker
3. Sunglasses Frame
4. Windpower
5. Balloon Car
6. Boat Propeller
7. Cell Receptors
8. Seed Dispersal
9. Unfair Math Game
10. Plant Tower

HIGH SCHOOL (9-12)

1. Water Filter
2. Fossil
3. Cube Set
4. Scotch Yoke
5. Nerve Cell

10 ADDITIONAL LESSON PLANS FROM MYSTEMKITS ARE AVAILABLE

3D PROFESSIONAL DEVELOPMENT

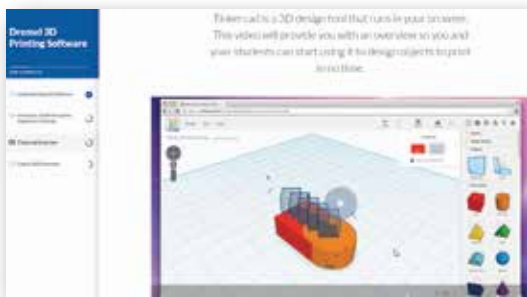
Learn how to use your Dremel Digilab 3D printer, software and integration into your classroom, while getting 4 hours of Professional Development credit.

Aligned to ISTE standards, this course includes videos, articles, lesson plans, school case studies, and hands-on learning opportunities that provide a pathway into 3D printing and its application to industry. Quizzes at the end of each module provide you with feedback on your progress. Average completion time is approximately 2 hours.

Before you teach your students, teach yourself.



How to use your 3D Printer



3D Software (Tinkercad)



Lesson Plan Implementation

- 4 Chapter Course
 1. Introduction to 3D Printing
 2. 3D Design and Slicing Software
 3. Dremel Digilab 3D Printer
 4. Pedagogy - Using Lesson Plans
- Curated Open Education Resources
- Pre-Assessment
- Certificate of Completion (4 credit hours)

EASY 5 STEP PROCESS



Purchase Bundle/Card

Access Course

Pass Course

Input Promo Code

Download Certificate

