

3D Printing in the Classroom



Jaz Darden
3D Printing Instructor

Suggested 3D Printers

Flash Forge
Adventure 3 Lite



\$300

Monoprice
Mini V2



\$175

Ender 3 Pro



\$240

Software

Design Software



AUTODESK®
TINKERCAD®

Design Software



AUTODESK®
FUSION 360™

Slicing Software

Tip: Have a few computers
setup with Cura

CURA

Recommended Supplies

Laptops – CAD software/Slicing Software

3D Printers

Memory Cards – MicroSD, Jump Drive

Filament (PLA+ from Microcenter)

Wire Clippers

Blue Painters Tape – 3M Brand

Paint Scraper

Set of small metric allen wrenches

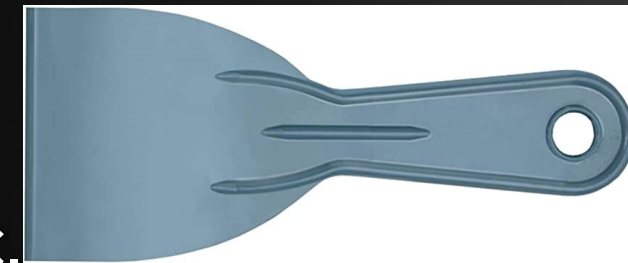
Set of small screwdrivers

Spare parts (ex. nozzles, heater blocks, etc.)

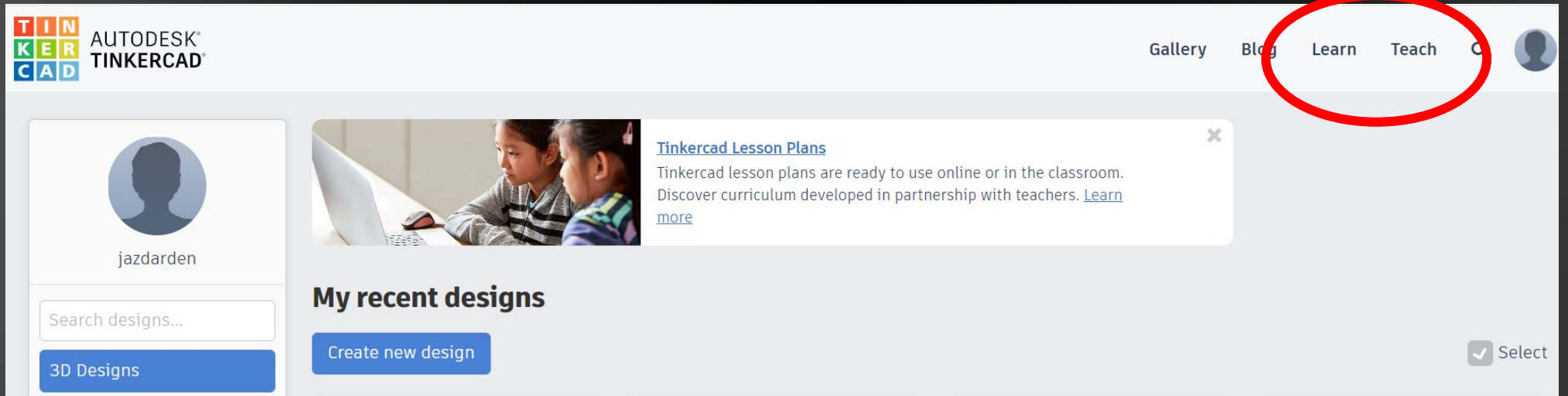
Ruler, calipers

Supplies for projects

Create Caddies or Tool Holders



Tutorials and Projects



TINKERCAD AUTODESK TINKERCAD

Gallery Blog **Learn** Teach

jazdarden

Search designs...

3D Designs

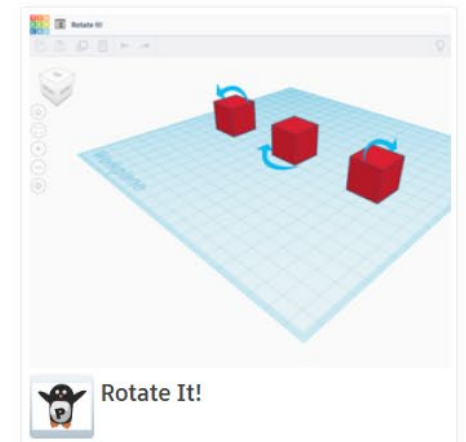
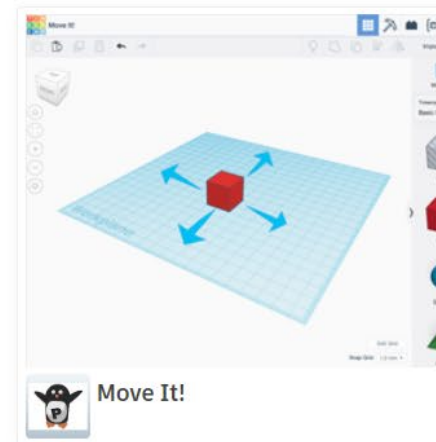
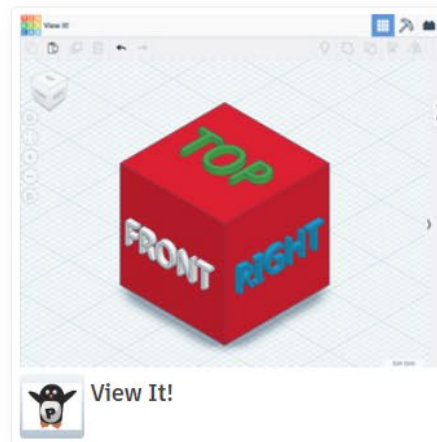
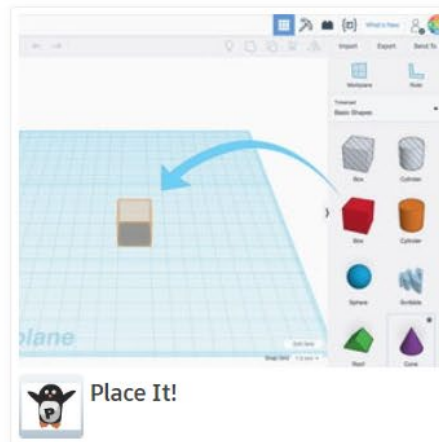
Create new design

Select

[Tinkercad Lesson Plans](#)

Tinkercad lesson plans are ready to use online or in the classroom. Discover curriculum developed in partnership with teachers. [Learn more](#)

Starters define basic 3D design functions, and link to relevant Lessons to develop your skills.

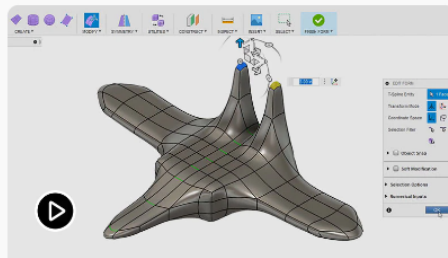


Tutorials and Projects

New to Fusion 360?

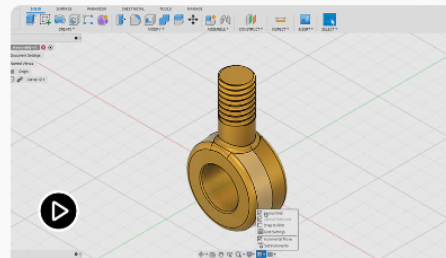
These bite-sized videos unpack core concepts like modeling, assembling components, drawing, rendering, managing student projects, and fostering student collaboration in Fusion 360.

[Download Fusion 360](#)



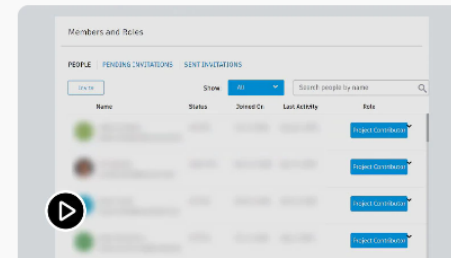
Introduction to Fusion 360

Explore a high-level overview of Fusion 360's capabilities and classroom applications.



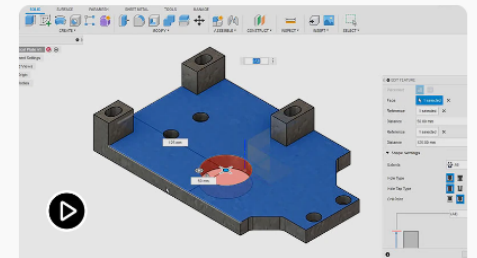
Module 1: Getting started

Review the fundamentals of account setup, user preferences, and display settings.



Module 2: Managing teams

Learn how to create and manage student projects and roles using Fusion Teams.



Module 3: Working with AnyCAD

Learn how to import and manipulate files from other CAD programs in Fusion 360.

Beginner - Keychain



Jaz - keychain - Aqua Blue



Rename File

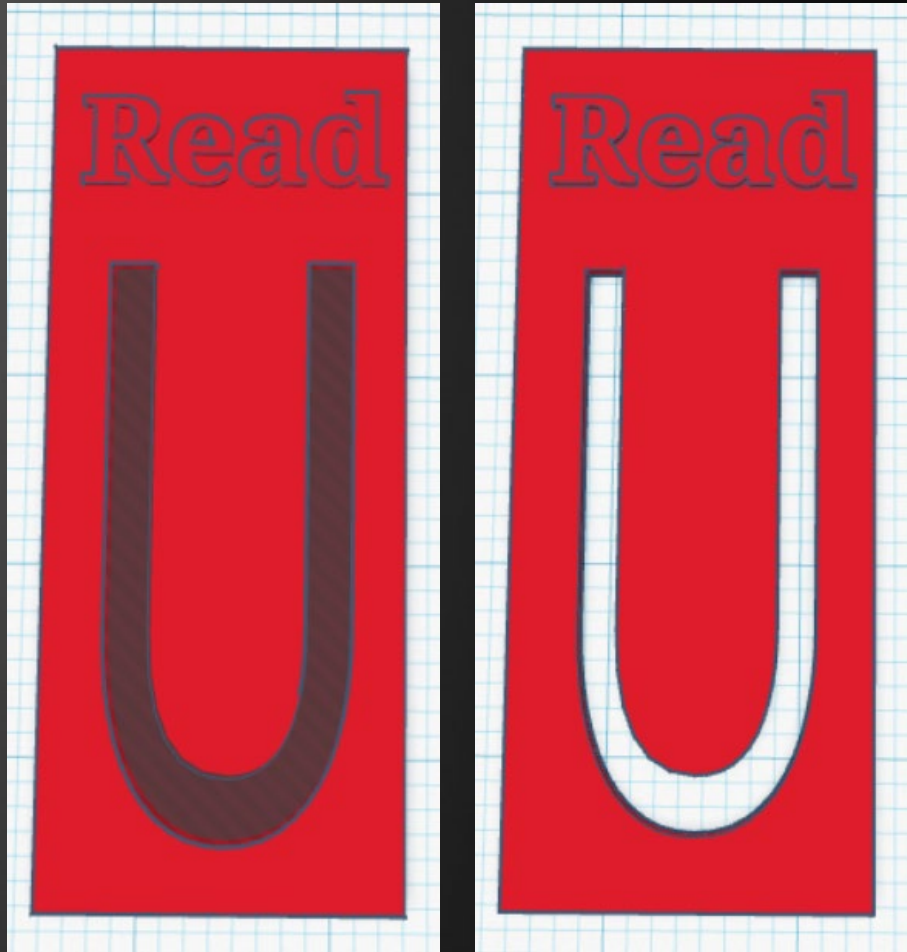
Creating a hole

Adding text

Work plane - 2" x 2"

Flat (quick print)

Beginner - Bookmark



Thin Bookmark

Letter "U" or similar in shape

Add personalization

Intermediate – Boat Challenge



Buoyancy
Shelling
Estimation
Reflect and retry



Intermediate – Tape Dispenser



Reverse Engineering
Assembly
Moving Parts
Functionality vs Aesthetics

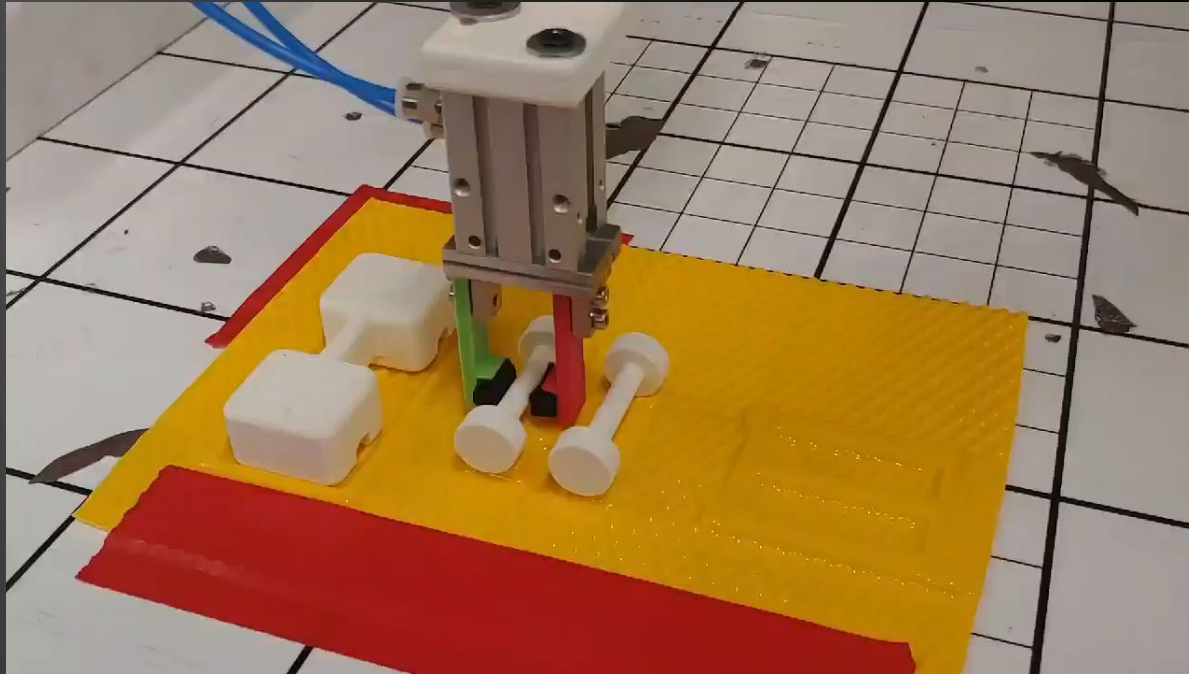
Beginner/Intermediate/Advanced – Design a Game



Game Design
Rule Writing
Designing 3D Pieces
Playtesting

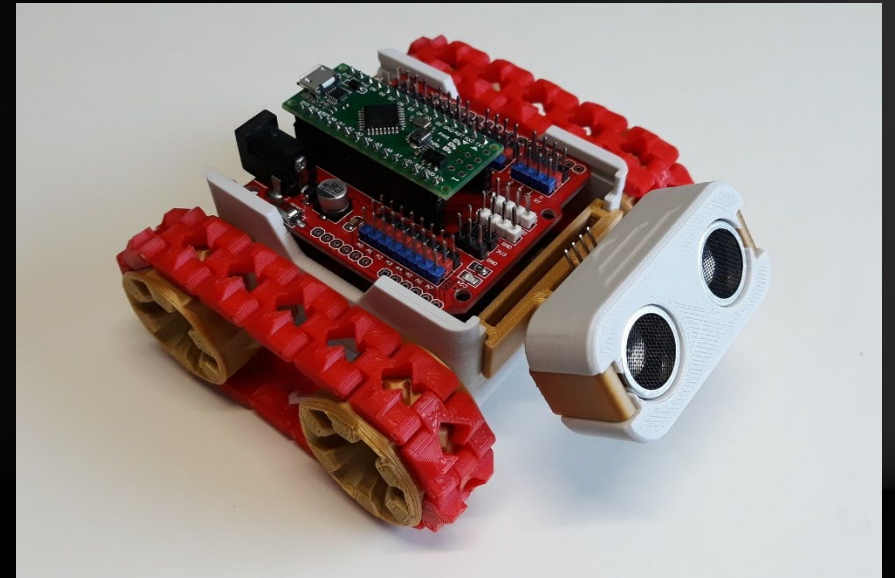
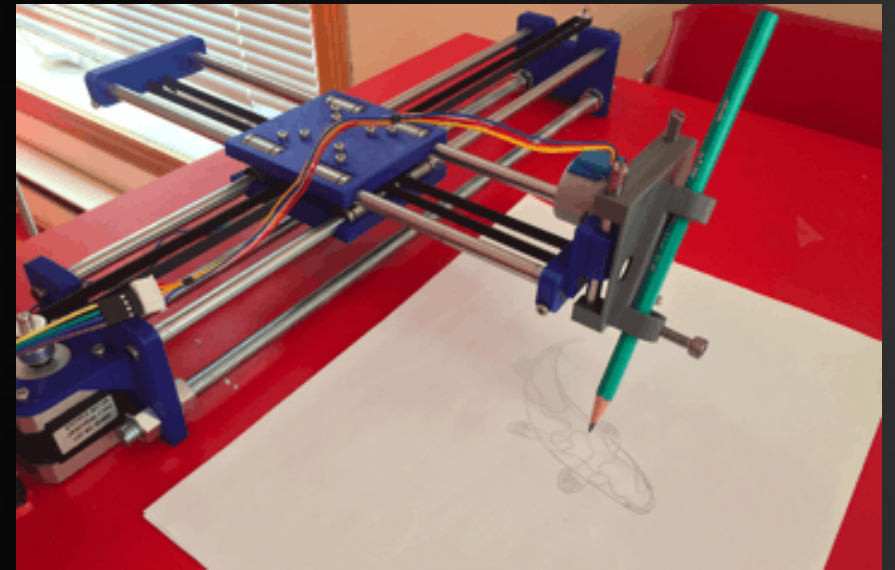


Advanced – Robotic Assembly



Reverse Engineering
End of arm tool design
Programming
Teamwork

Advanced – Fully Assembled Projects



Dunwoody College Foosball Table



Jaz Music Box – 3D Printed Bluetooth Speaker



CAD – 3D Modeling
3D Printing
Soldering
Electronics



Questions?

Aspire to Create.
Create to Inspire.

Contact: Jazdarden@gmail.com