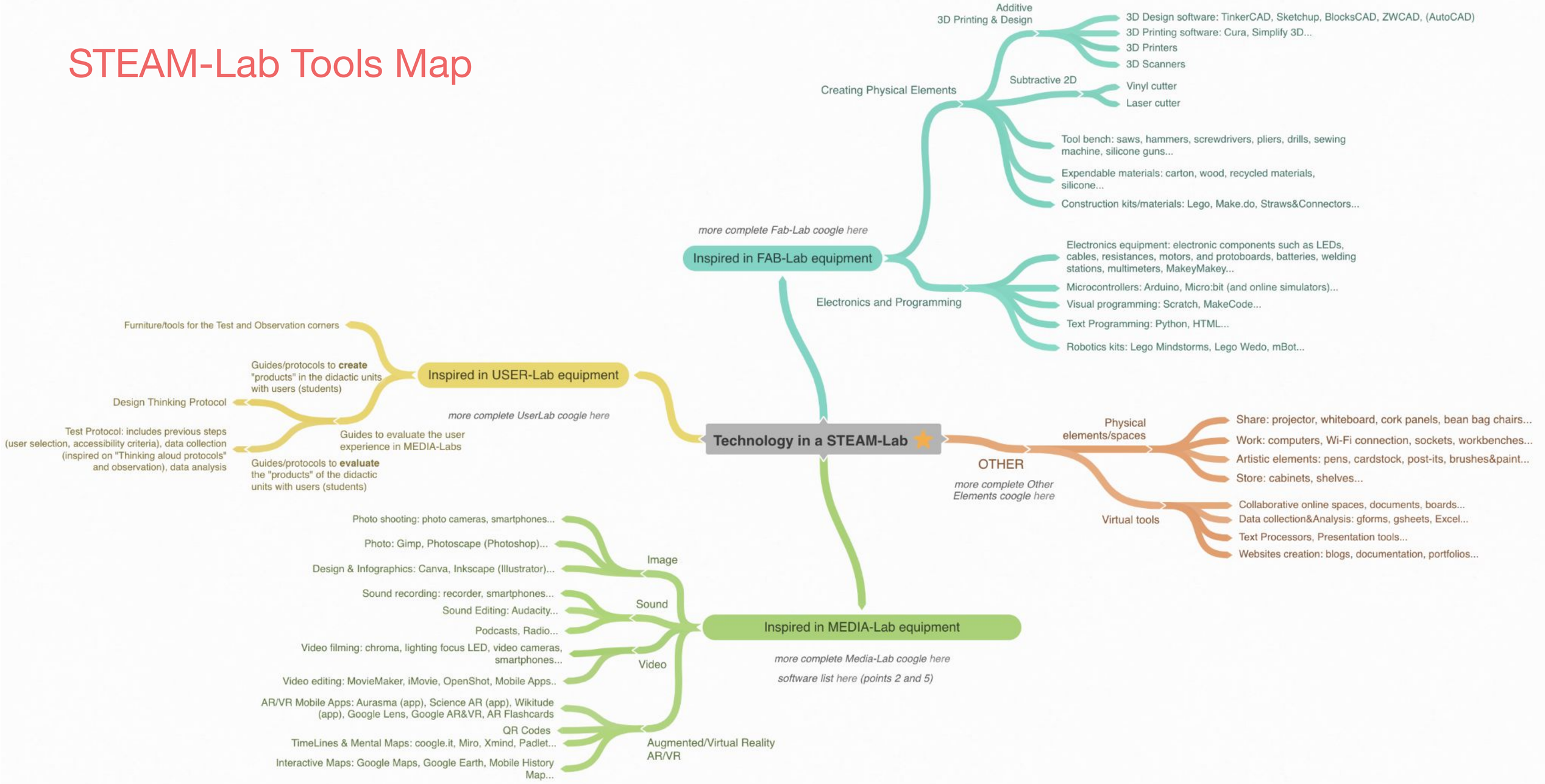
Which are the
STEAM-Lab tools?

Technological equipment mixing FabLab, MediaLab and UserLab tools

Playrooms and games, animals and plants, wood and nails… must take their place side-by-side with books and words

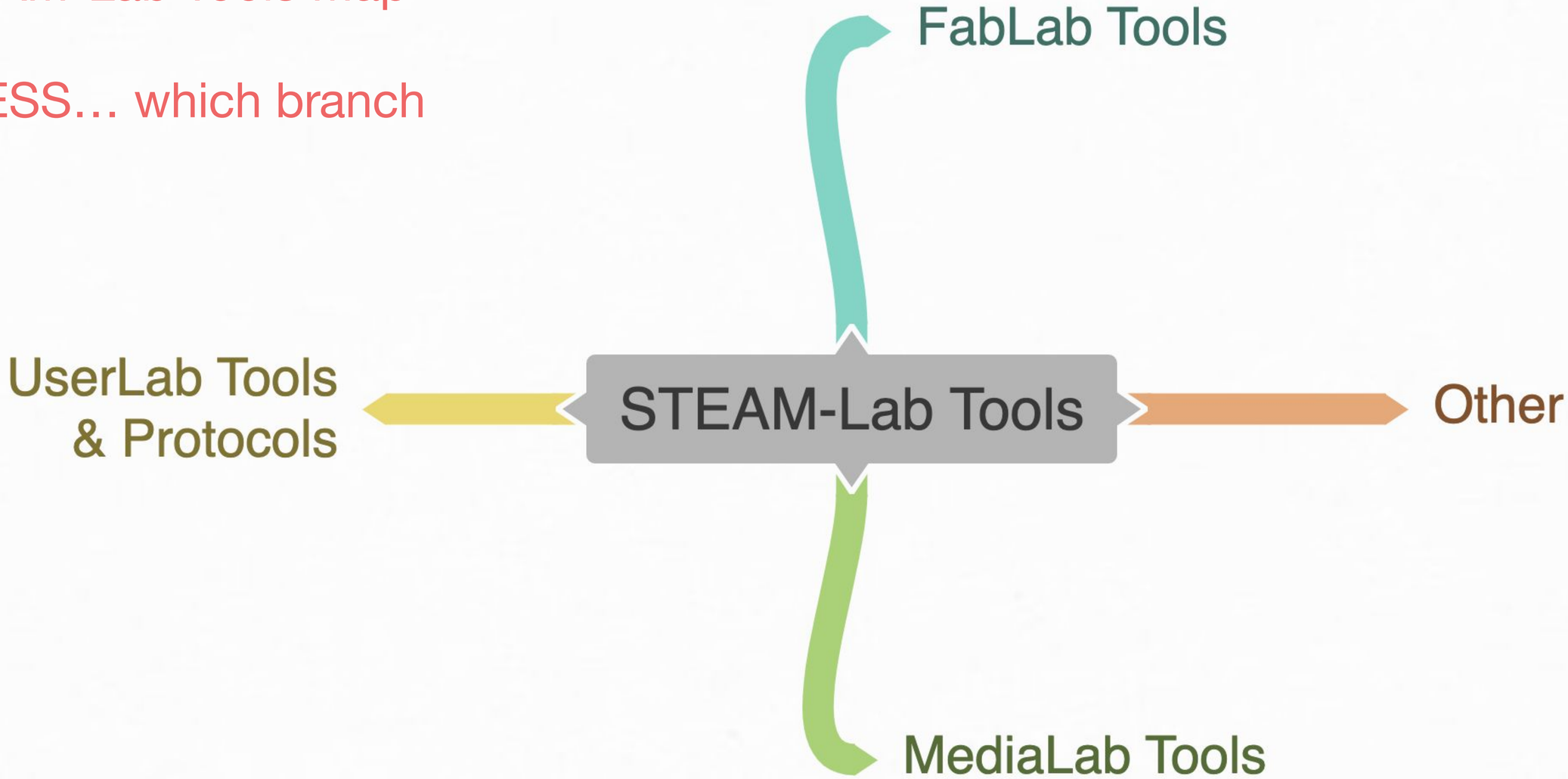
Angelo Patri (c.1920’s)

STEAM-Lab Tools Map

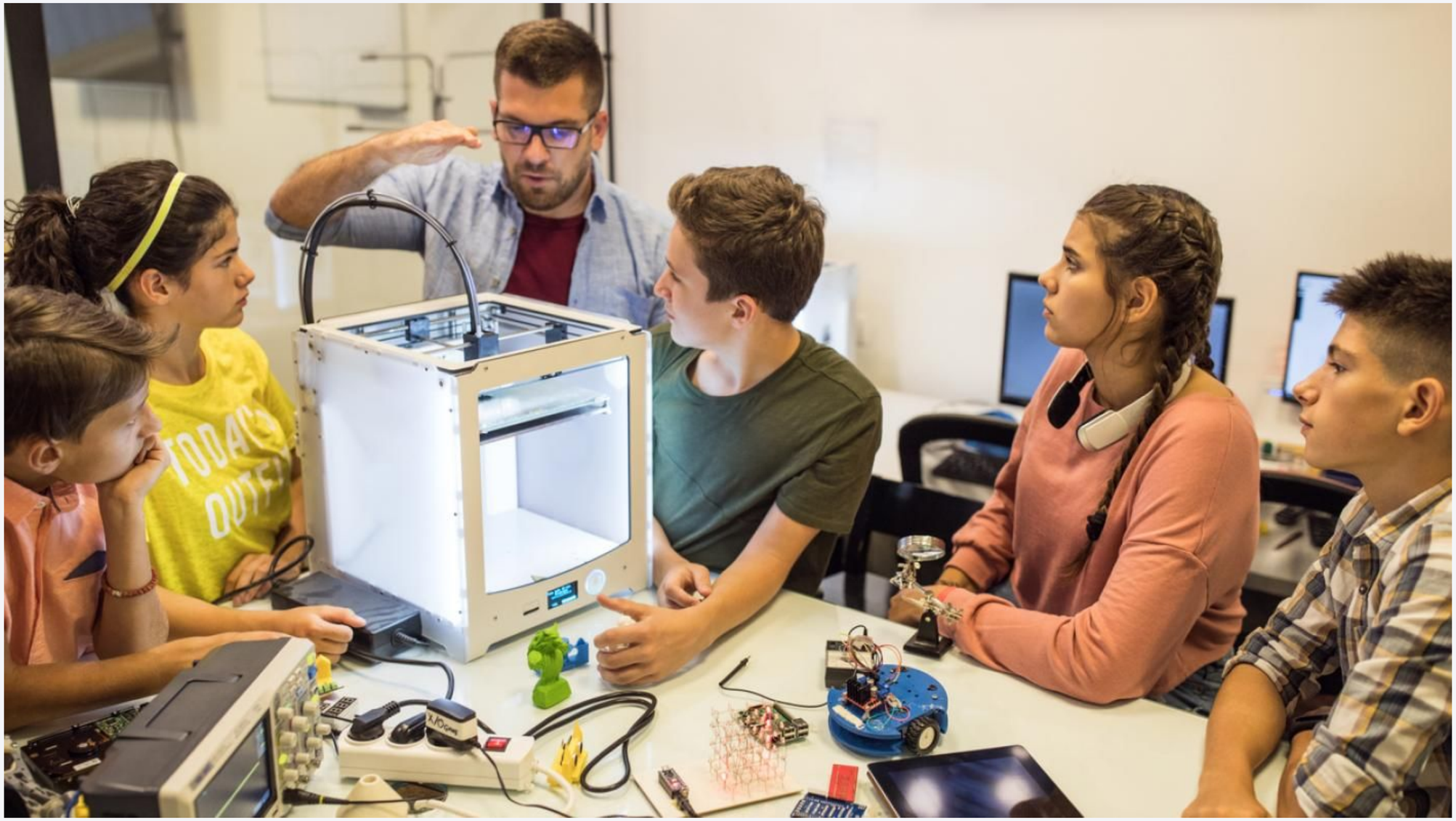


STEAM-Lab Tools Map

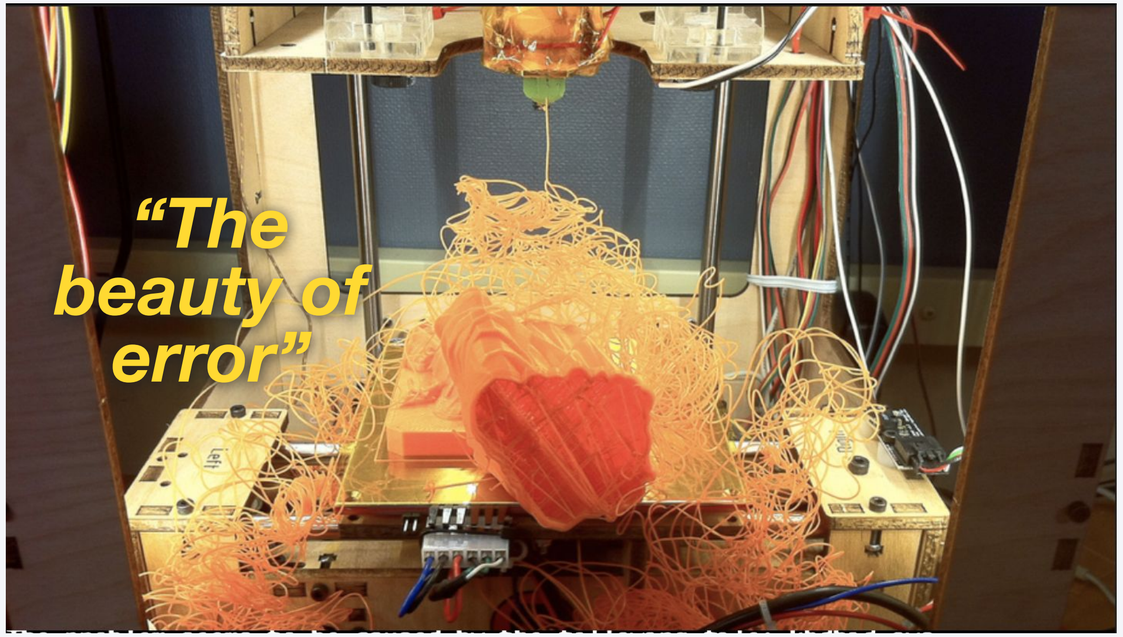
GUESS… which branch

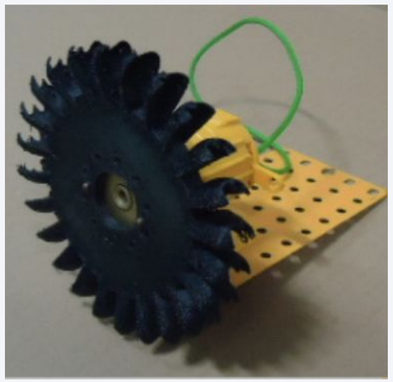


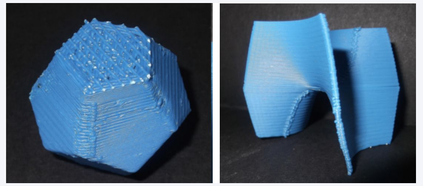
GUESS... ¿name and branch of this tool?

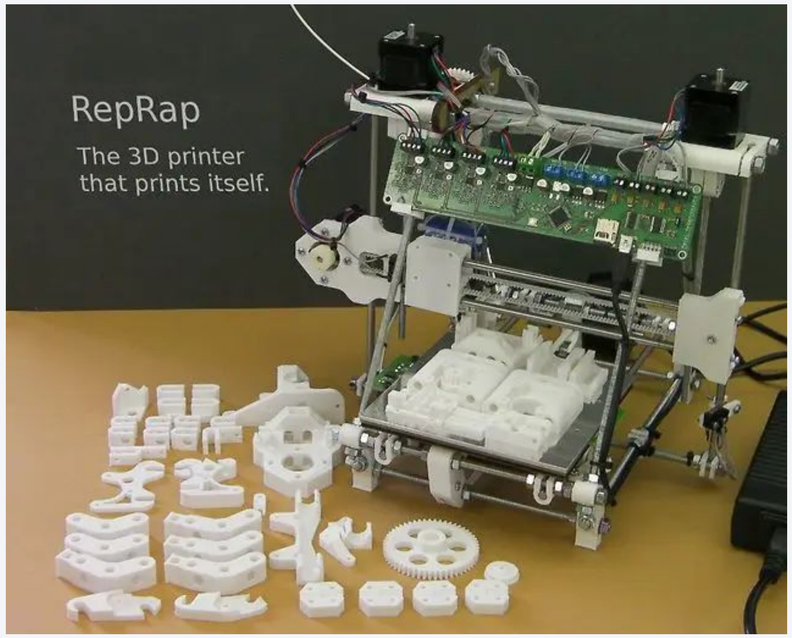


3D Printers



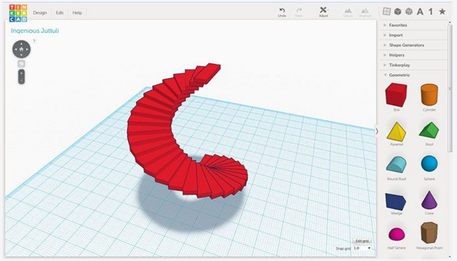




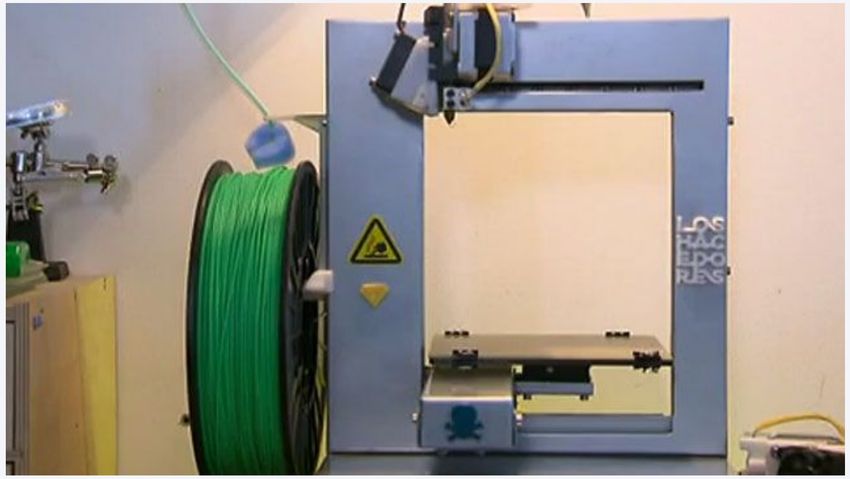


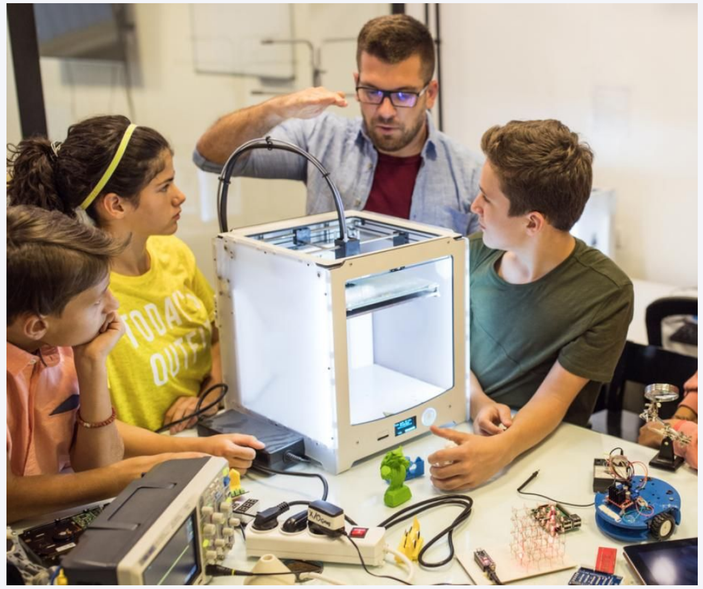
Source:https://reprap.org/wiki/RepRap/es

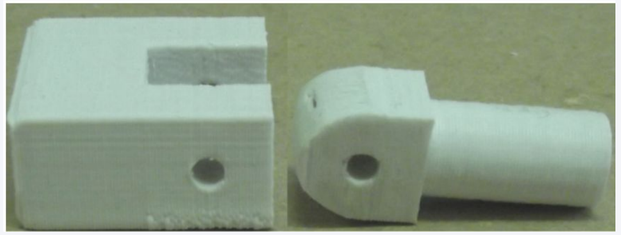
https://www.gov.uk/government/publications/3d-printers-in-schools-uses-in-the-curriculum



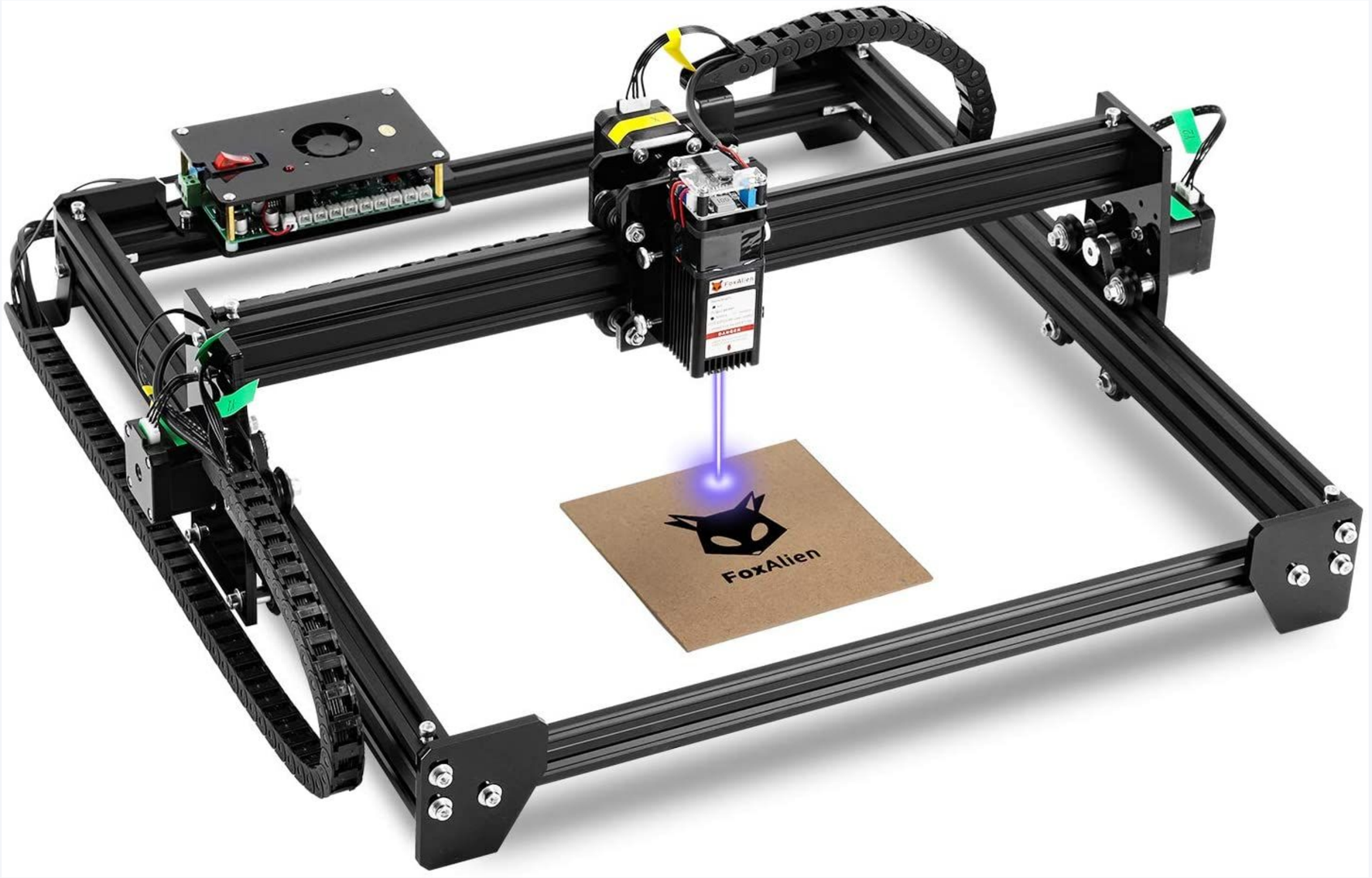
https://www.3dnatives.com/en/3d-software-beginners100420174/



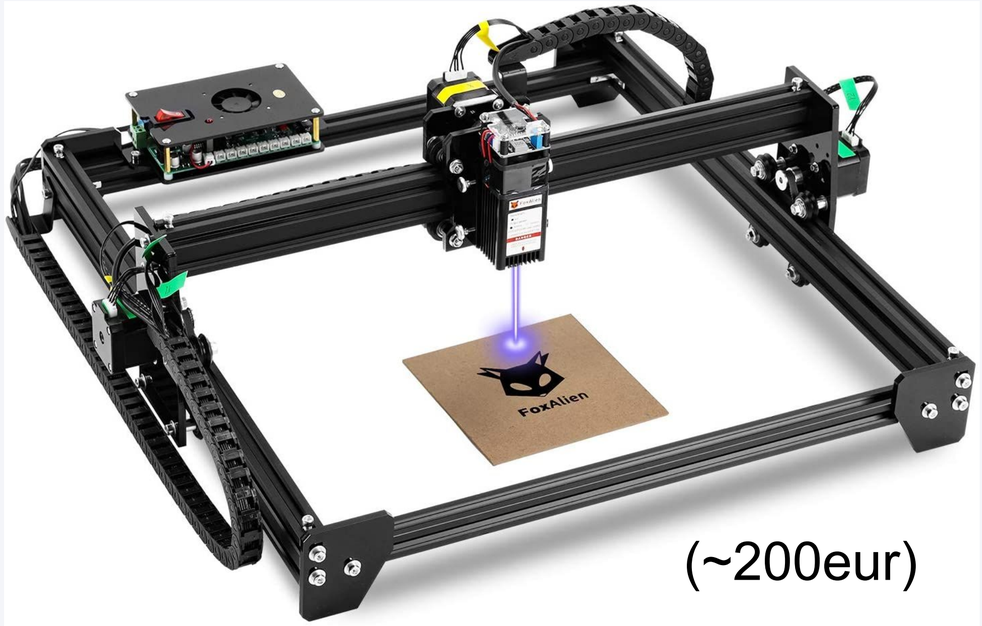




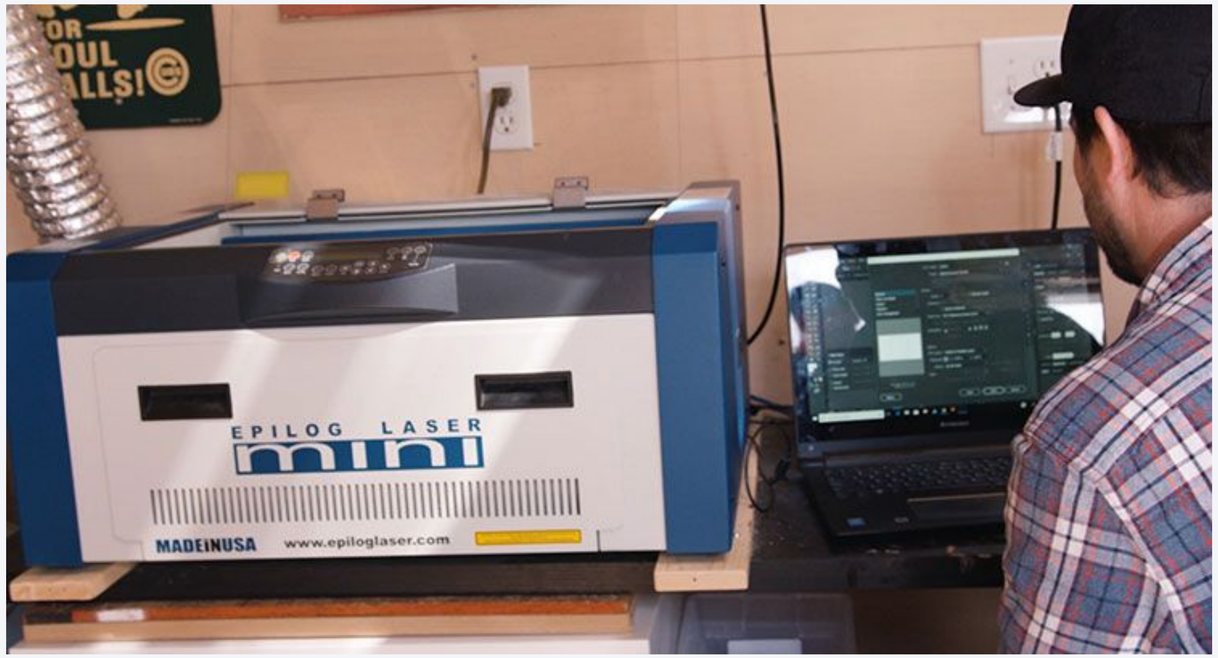
GUESS... ¿name and branch of this tool?



Similar Laser Cutters



(~200eur)



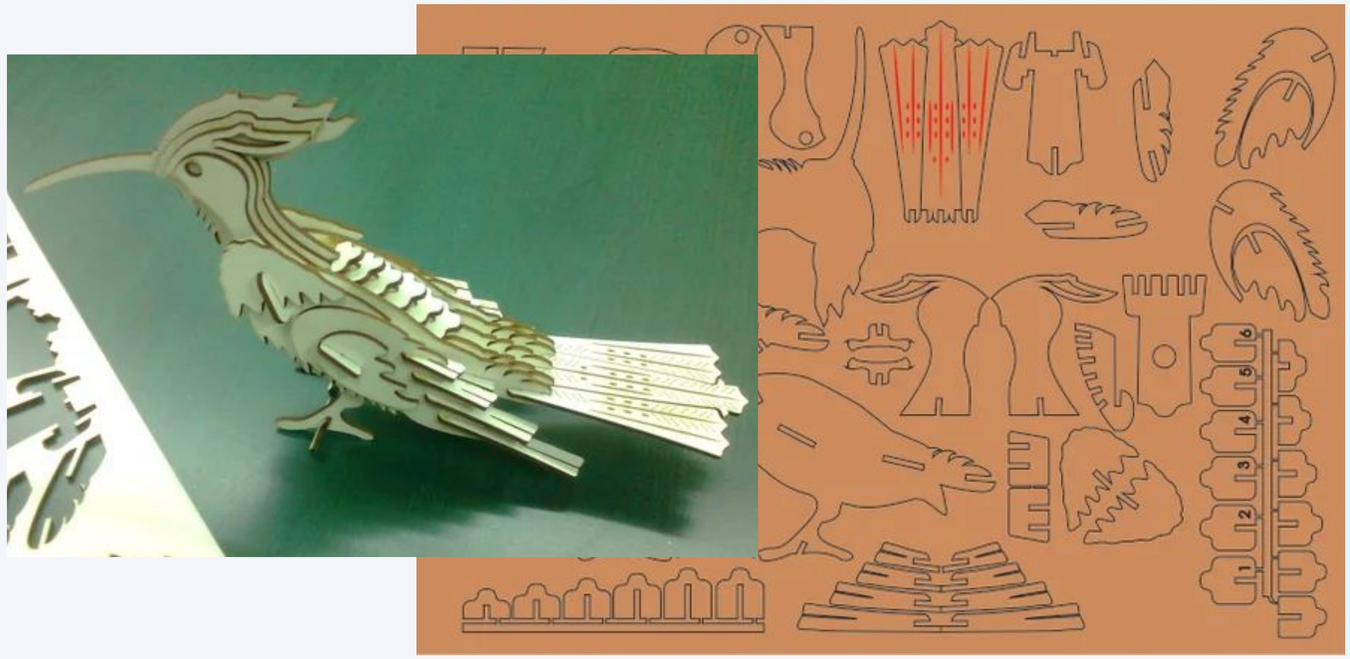
Epilog Mini/Trotec Speedy 1000 (>1000eur)

A4 cutter K40 (360€)

GCC LaserPro X252
63 x 45 cms 7995€

What can we do with Laser Cutter?

LAMINATED WOOD



PAPER

CARDBOARD

ENGRAVING

Source: Instructables.com

GUESS... ¿name and branch of this tool/material?

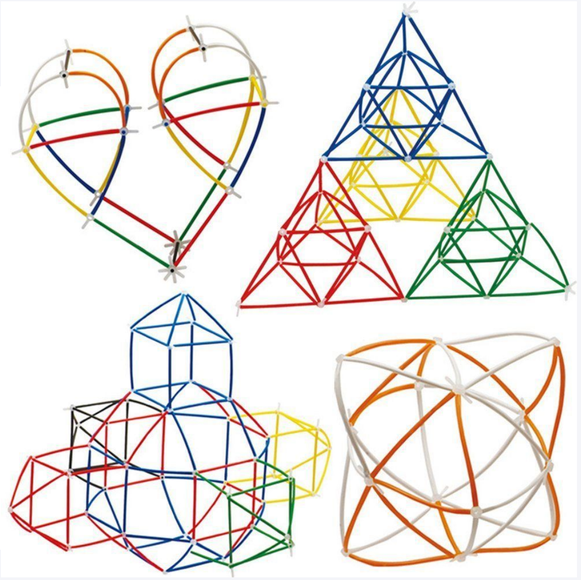
GUESS... ¿name and branch of this tool/material?

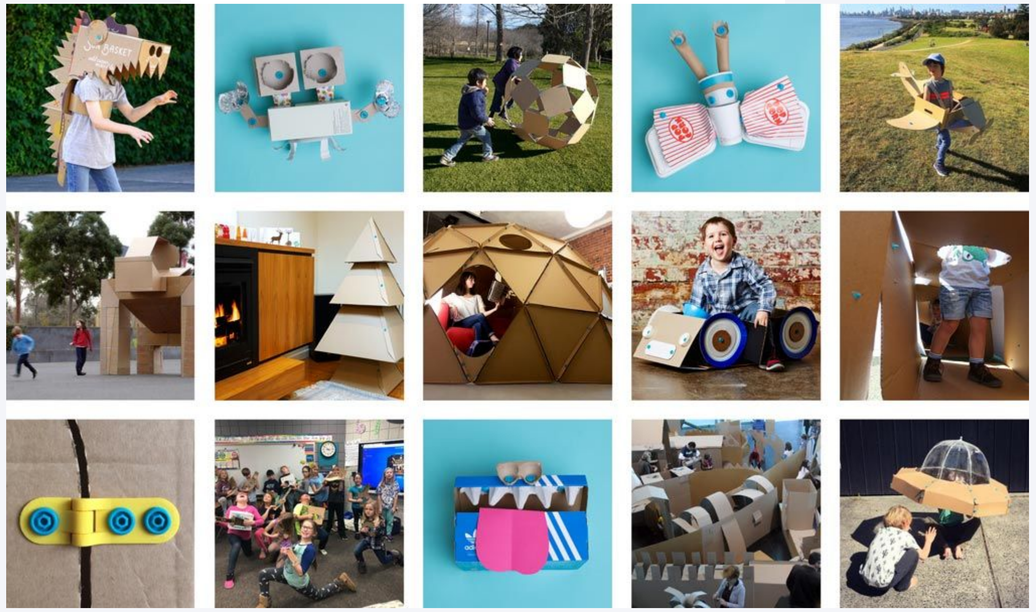
What can we do with cardboard, expendable materials, silicone gun...?

Source: https://intertecheducation.edublogs.org/2018/08/16/still-inspired-by-caines-arcade/

Source: https://www.polygon.com/gaming/2012/4/10/2938825/caines-arcade-video

Construction Kits





GUESS... ¿name and branch of this tool/material?

Bench Tools and Power Tools

Portfolio School

Sewing Machine
FaLab Devon

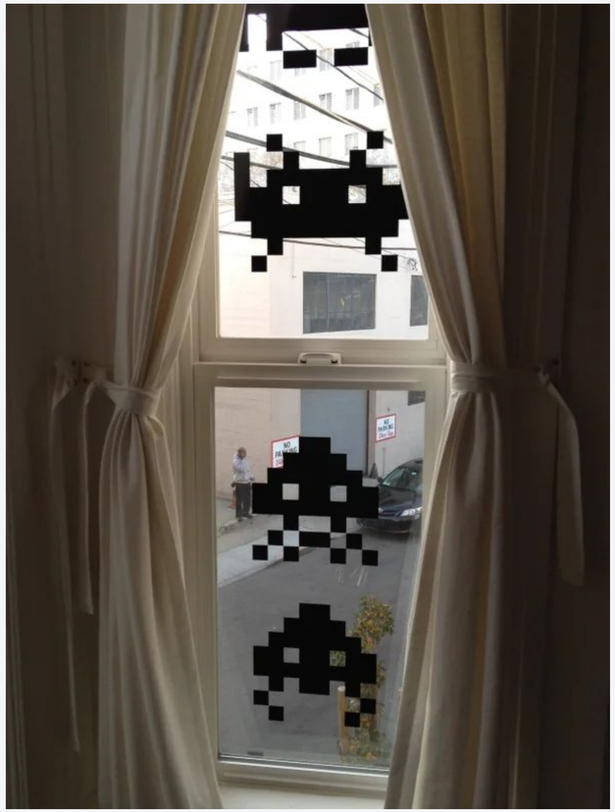
GUESS... ¿name and branch of this tool?

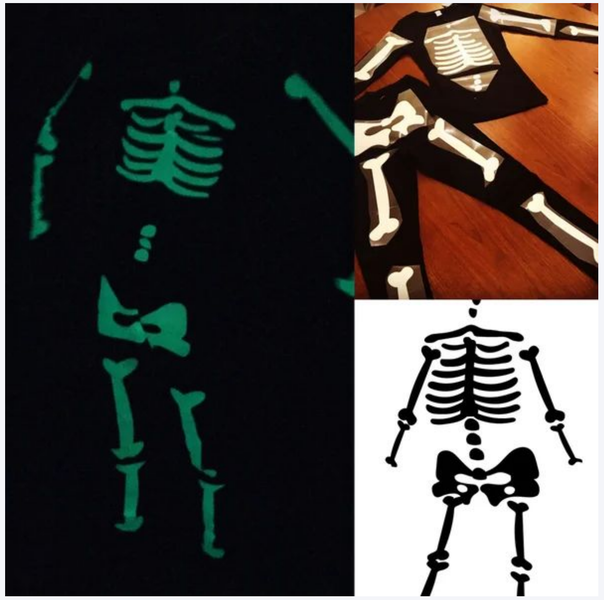
Similar Vinyl Cutters

Roland CAMM
(~1500eur)

Silhouette Cameo
(~300eur)

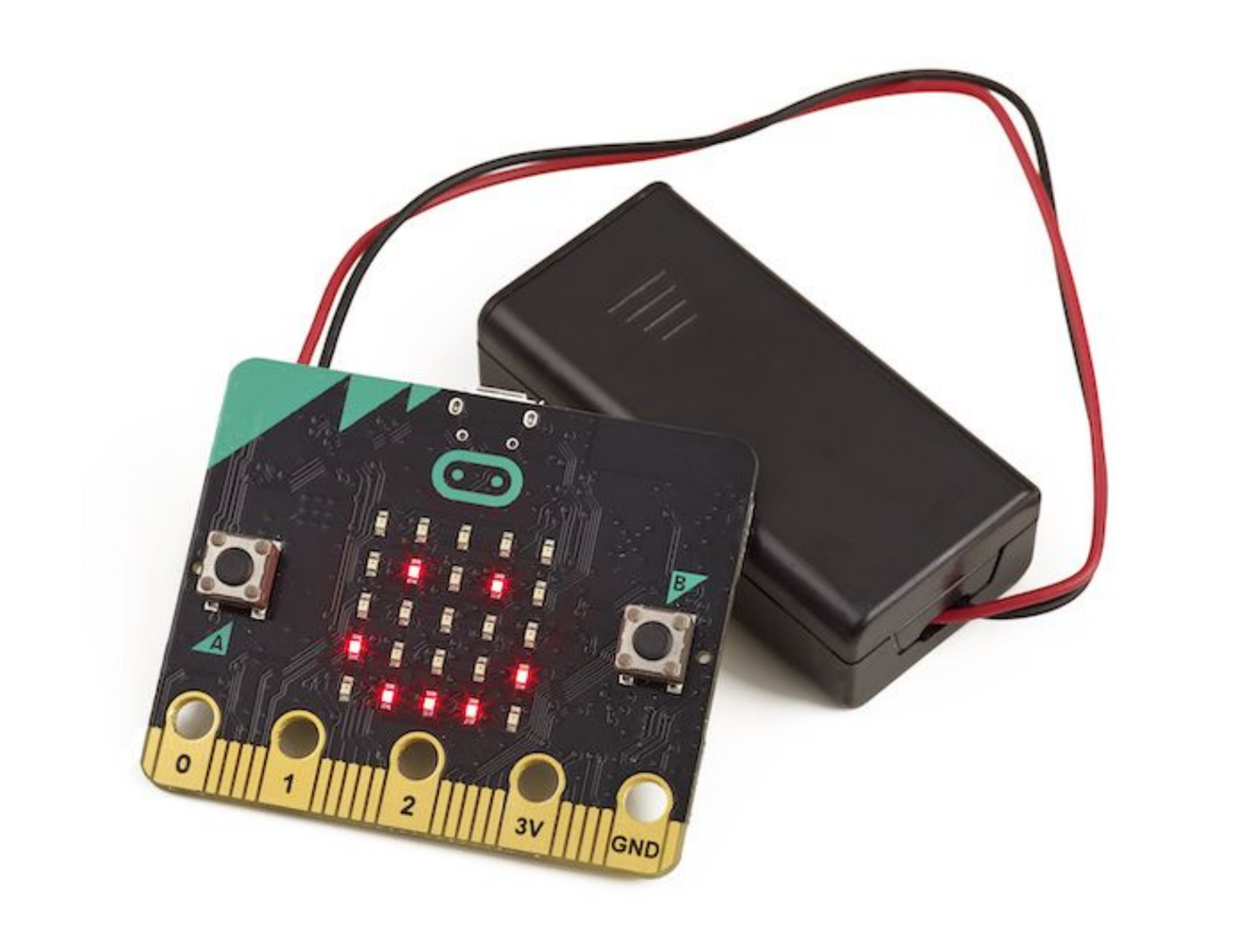
What can we do with Vinyl Cutter?



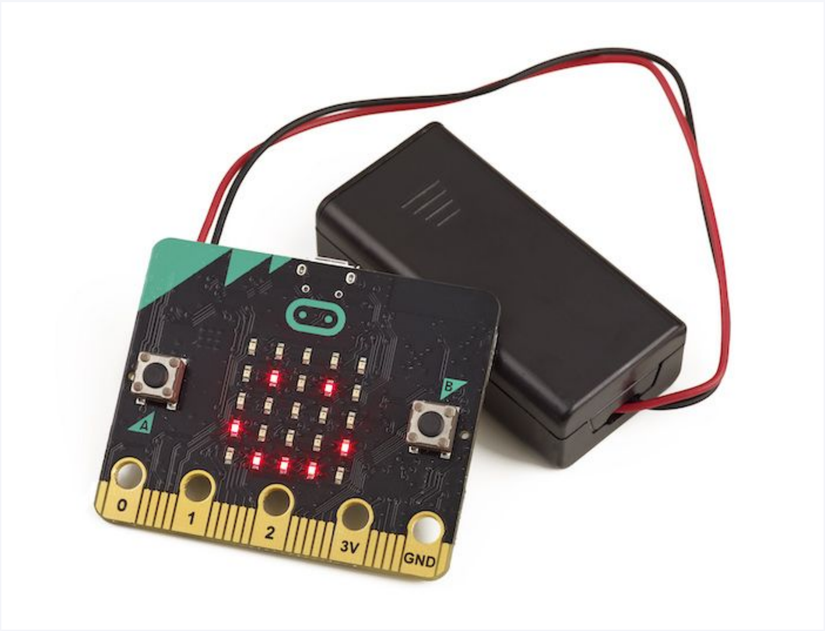


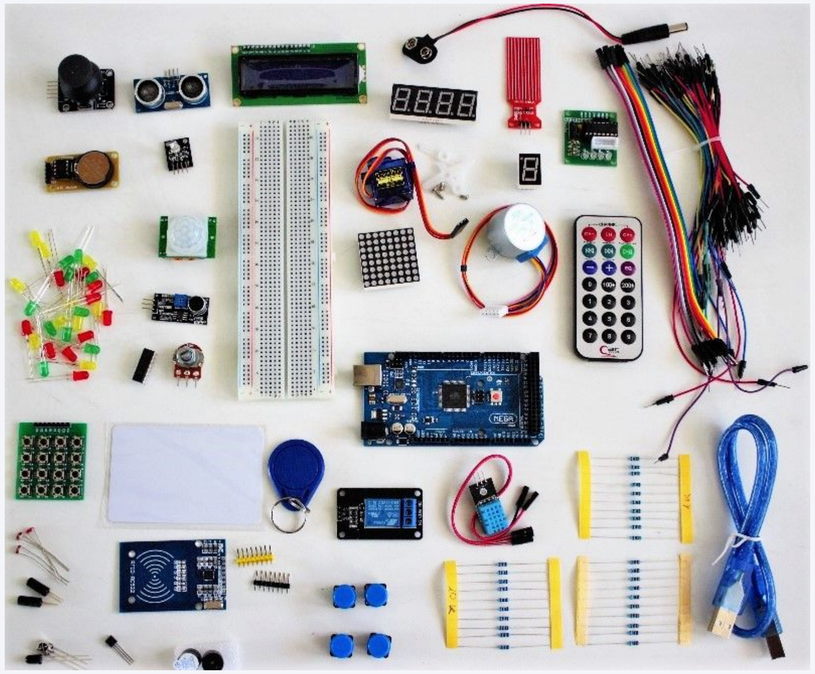
Source: Instructables.com

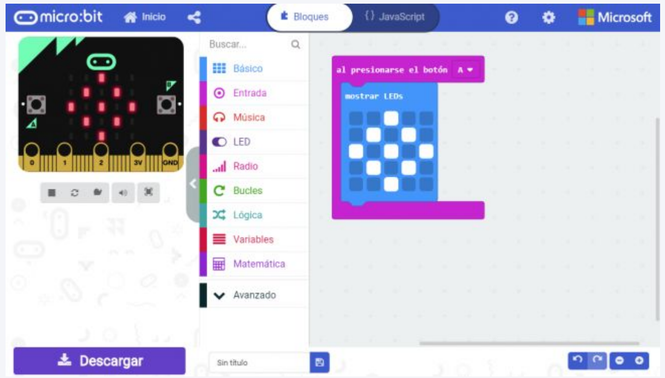
GUESS... ¿name and branch of this tool?



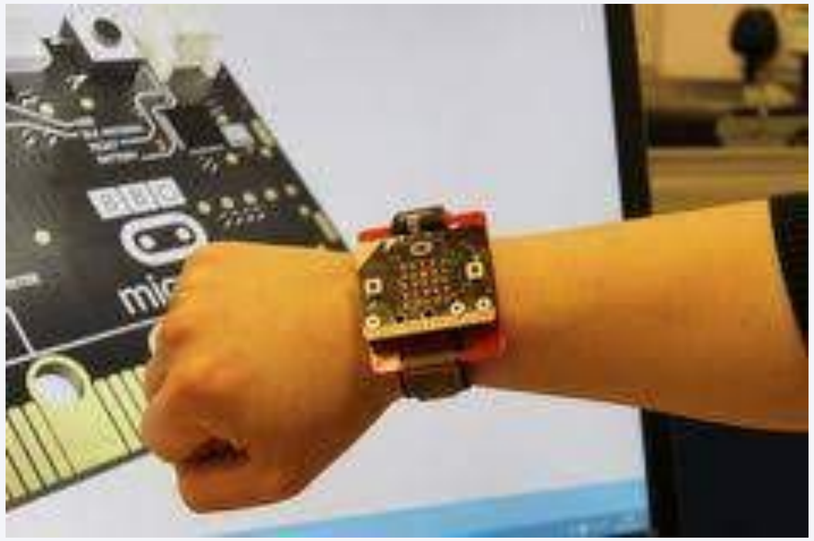
Similar Microcontrollers & other robotic kits

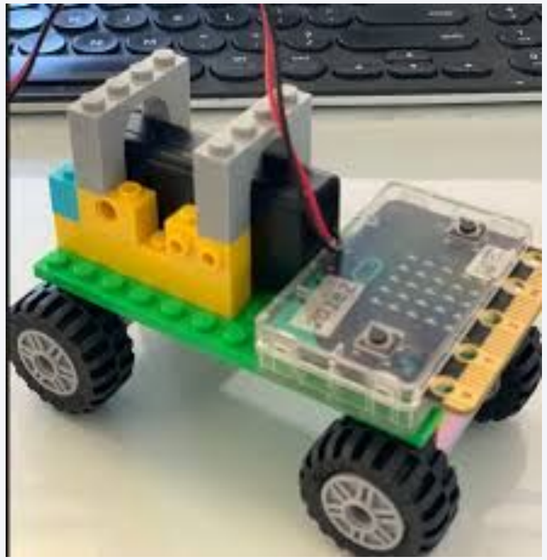


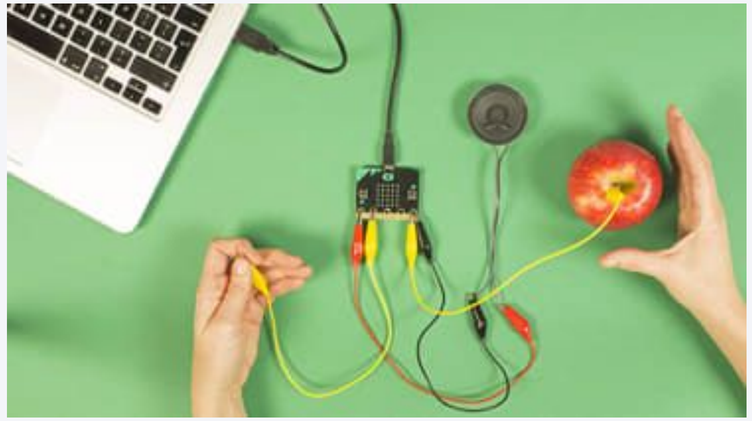


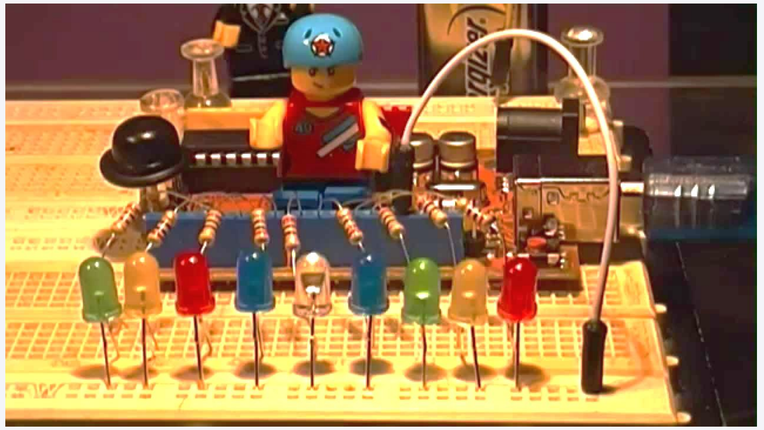


What can we do with Microcontrollers & robotics kits?







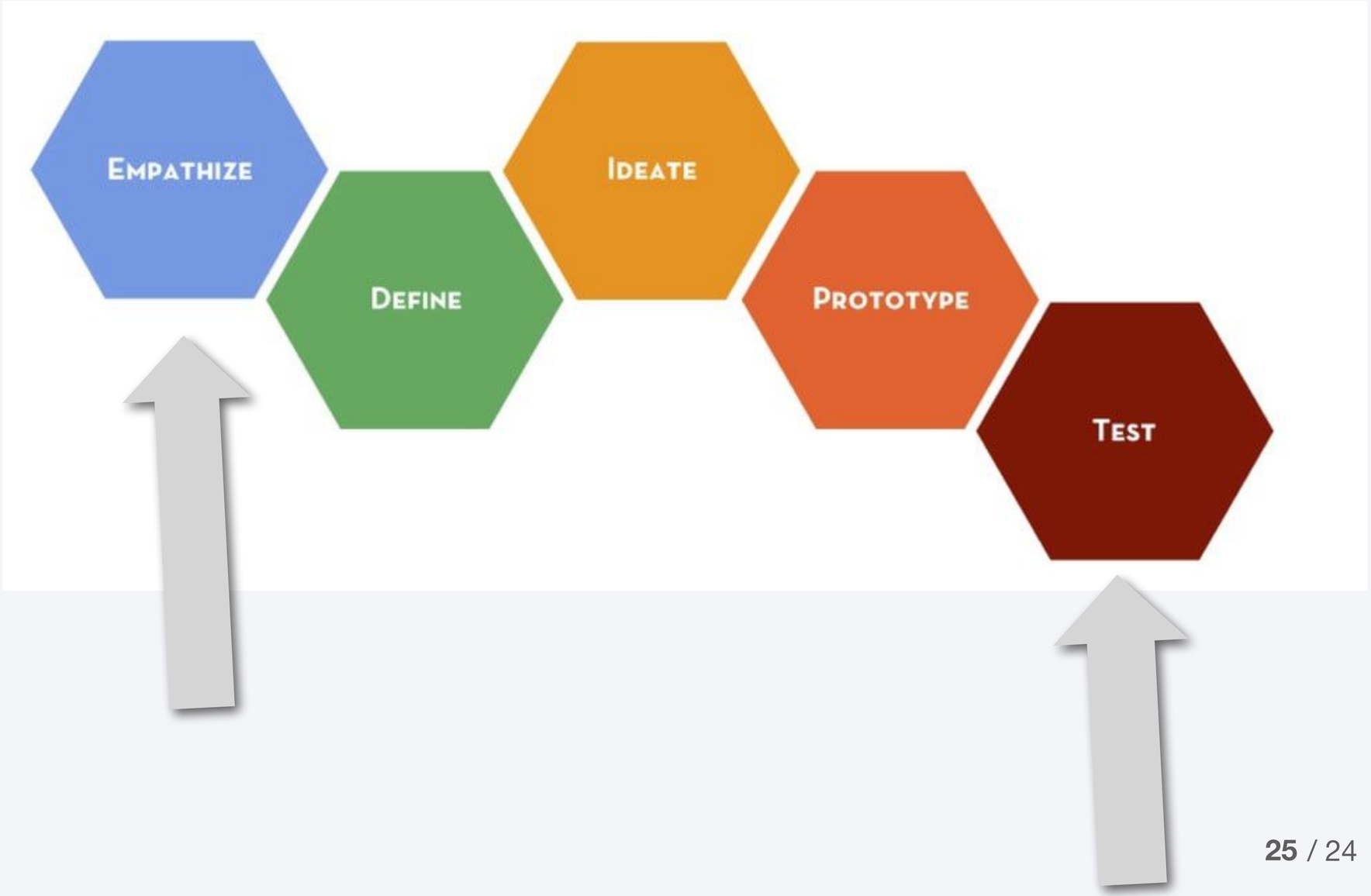


GUESS... ¿name and branch of this tool?

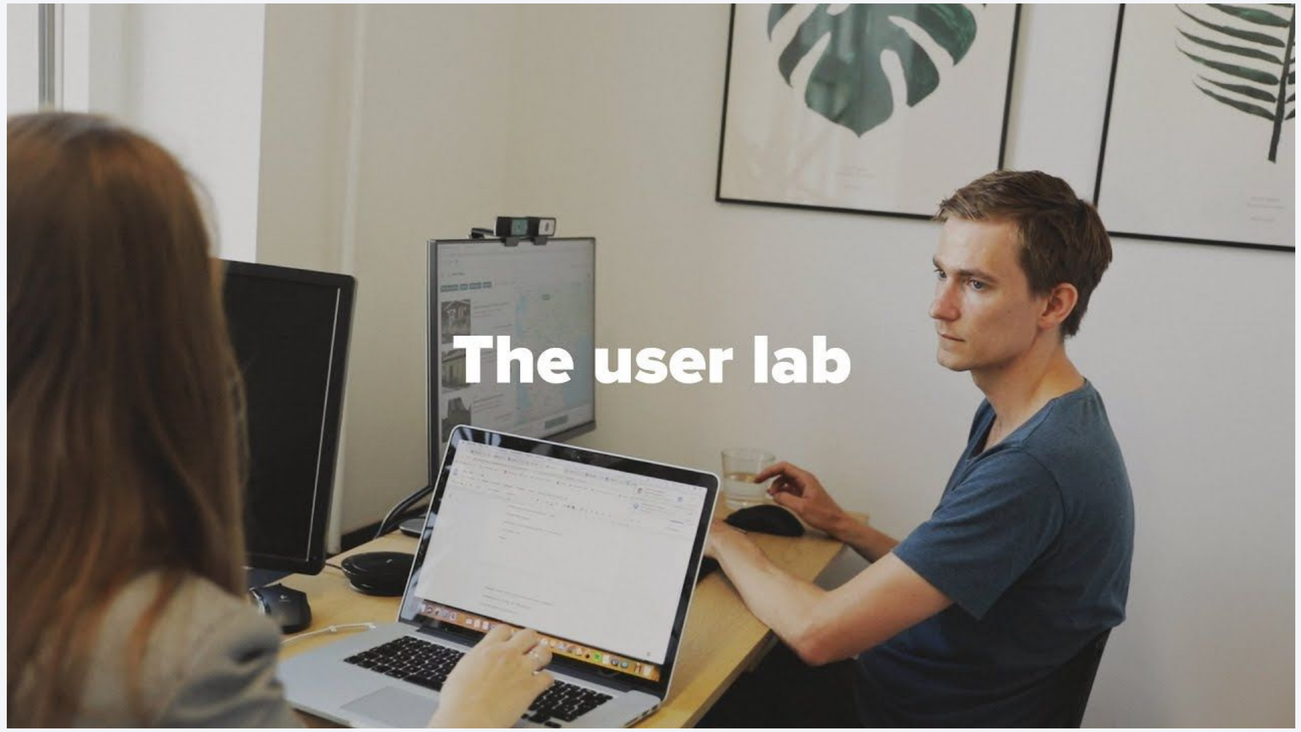
What can we do with Vídeo, Audio, Photo…?

GUESS... ¿name and branch of this tool/protocol?

What can we do with User Testing protocols?



What can we do with User Testing protocols?



Before starting the next phase

Why do we follow this stages?

ACTION PLAN: INTRODUCTION

✓ **Our result:**

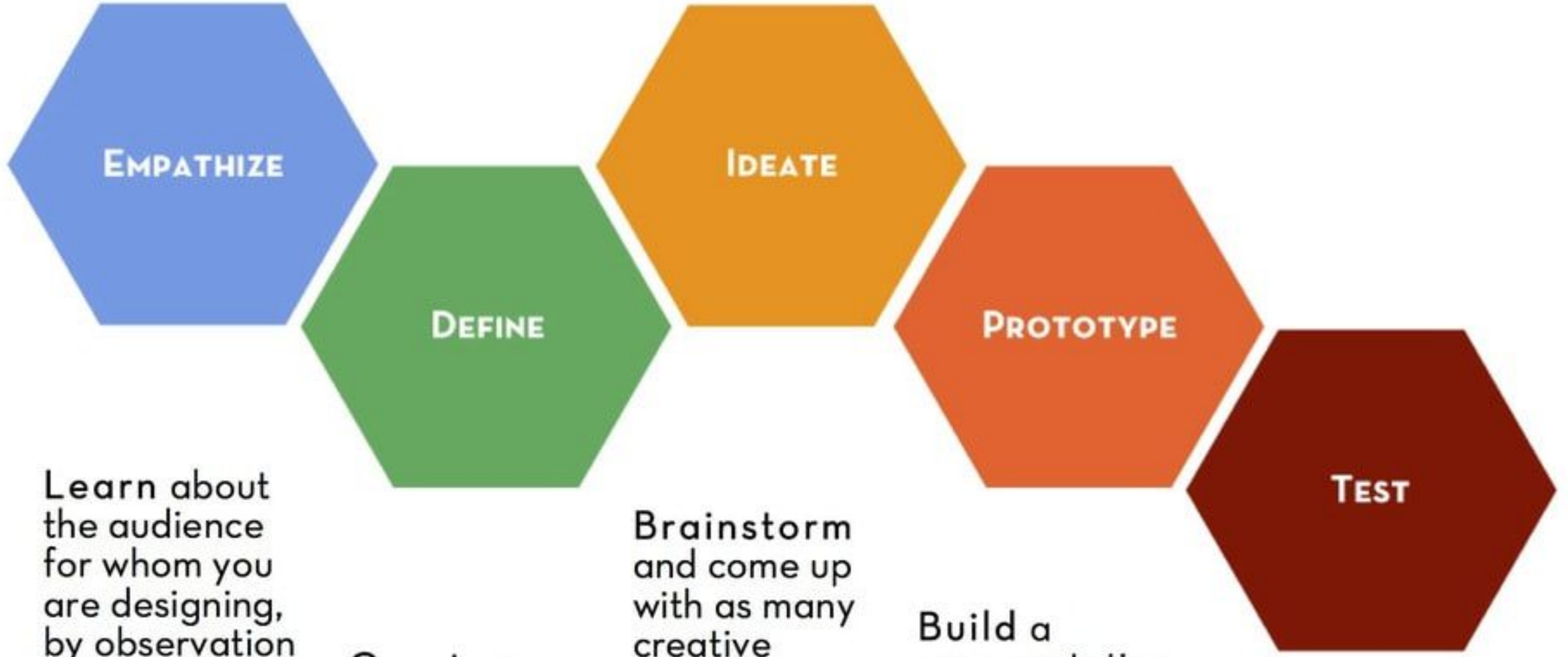
- Action Plan to create a STEAM-Lab in my School
- Next week we will share with colleagues in the training our Action Plan (“under construction”)

✓ **Our process:**

- You’ve already done “Contextualize Phase”
- Inspired in Design Thinking

DESIGN THINKING PROCESS

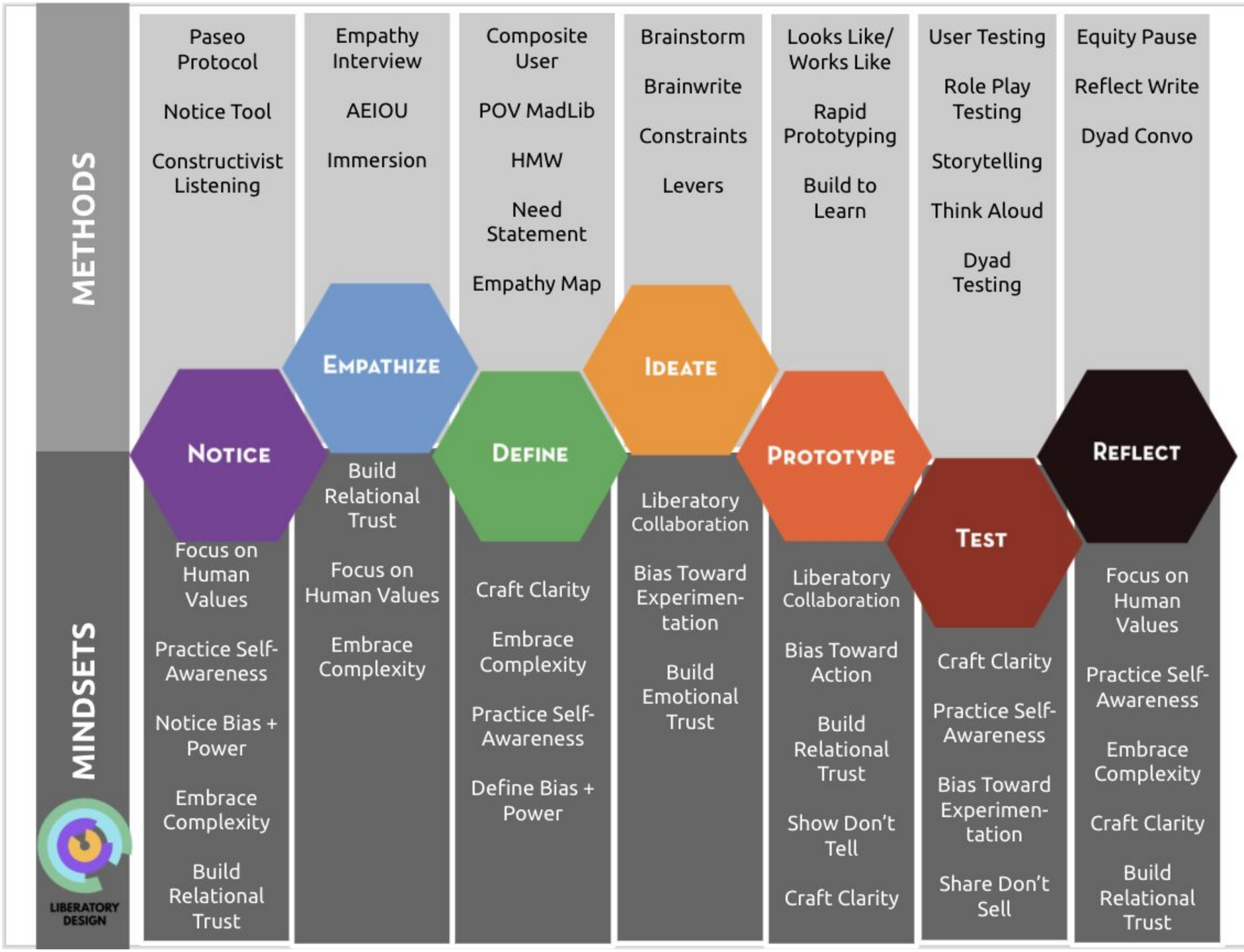
- ✓ Developed since 70s at Stanford University (California, USA)
- ✓ Creative methodology to build products, services and innovation
- ✓ Iterative learning
- ✓ Human-centered design



Source: https://dschool.stanford.edu/

DESIGN THINKING

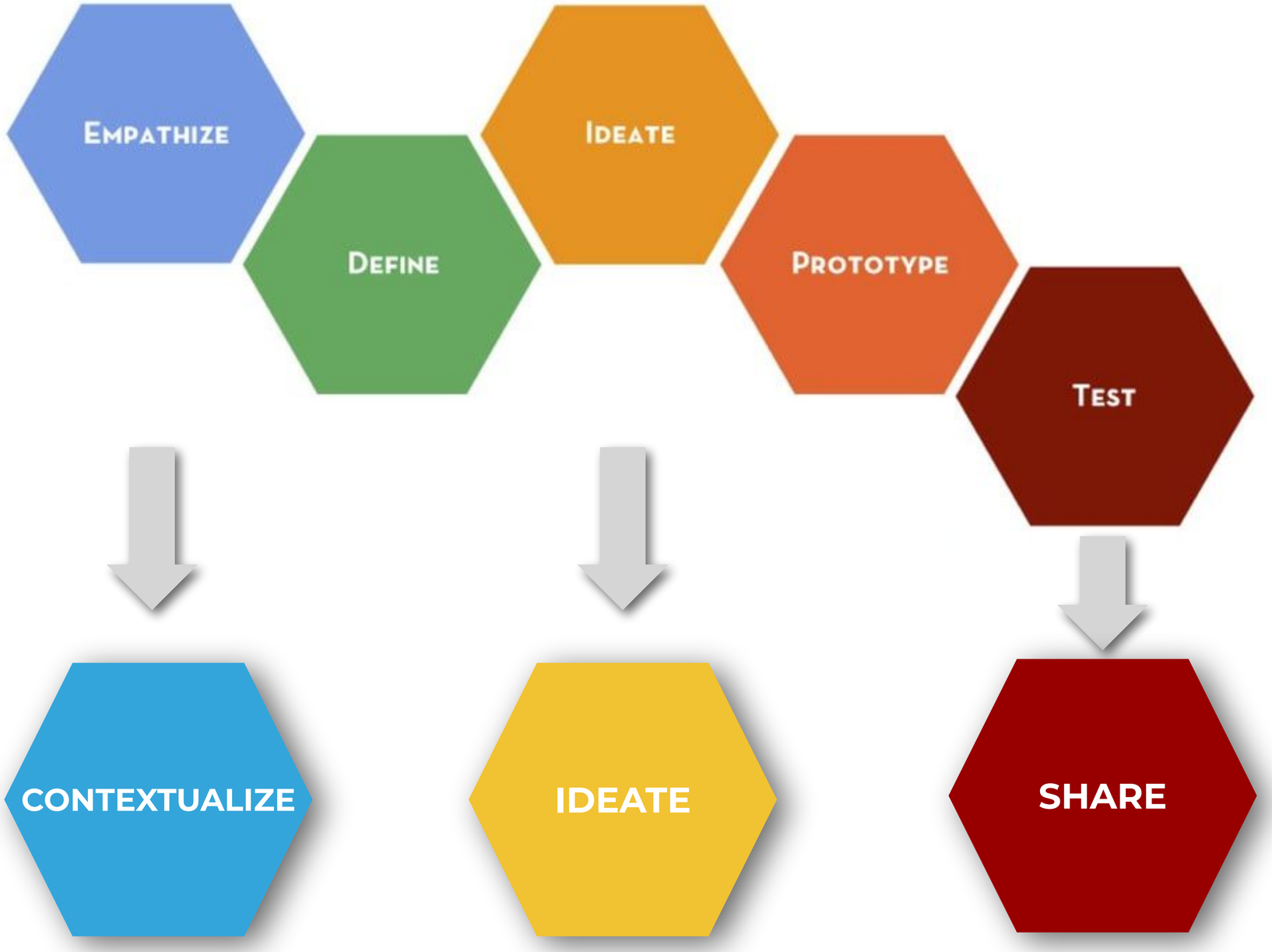
- ✓ Each stage has its own methods/ techniques
- ✓ And his mindsets



Source: https://nochesdemedia.com/2020/09/06/recursos-para-aplicar-la-metodologia-de-design-thinking-a-tus-proyectos-parte-ii/

Our process to create the “STEAM-Lab Action Plan”

inspired in
Design Thinking



Crea STEAM

Let’s work on Ideate Phase

Let’s start to design
our STEAM-Lab Space

How to distribute the space…?

- noise / silent
- work / share / creativity / storage
- colors / areas / level of knowledge

Darunsikkhalai School_Nalin Tutiyaphuengprasert_Thailandia