

The logo features the word "3Doodler" in a blue, bubbly, 3D font with a white outline. To its right, "EDU" is written in a bold, yellow, sans-serif font. Below this, "Design Challenge" is written in a white, sans-serif font. The background is a green-tinted image of various 3D-printed letters and symbols, including a star, set against a background of a grid of letters.

# 3Doodler EDU

## Design Challenge

# What's in a Word?

## Participant's Guide

### 🚩 The Challenge

Using the 3Doodler and plastic strands, design a 3D font inspired by an emotion or a cultural reference.

## ⌘ Challenge Background

📝 Notes

### 💡 Challenge Tip

Look at how fonts have been designed throughout history to reflect changes in writing technology.



Fig. 1

	Textur	Rotunda	Schwa- bacher	Fraktur
a	ā	ꝶ	ꝶ	ꝶ
d	ð	ꝰ	ꝰ	ꝰ
g	Ꝣ	Ꝥ	Ꝥ	Ꝥ
n	Ꝩ	Ꝩ	Ꝩ	Ꝩ
o	Ꝯ	Ꝯ	Ꝯ	Ꝯ
A	Ꝫ	Ꝫ	Ꝫ	Ꝫ
B	Ꝭ	Ꝭ	Ꝭ	Ꝭ
H	ꝲ	ꝲ	ꝲ	ꝲ
S	ꝺ	ꝺ	ꝺ	ꝺ

Fig. 2

Although Johan Gutenberg (1398-1468) is credited with the invention of the printing press and movable type, he actually did not invent either. He *did improve upon* the printing process to make it easier and created the first typeface (or font) called Blackletter: a 300-character typeface meant to replicate hand-written calligraphy of the scribes. Many others followed, creating fonts that are still used today. Fonts help to express emotions—such as excitement, humor, or seriousness of the message—or an idea, such as nature, machines, or the future.

## ✂ Materials & Tools

### 🕒 Before You Start Doodling

We recommend using a DoodlePad or clear tape placed over paper as a foundation to keep your Doodles in place and so that you can peel them off with ease.



**A.** 3Doodler Pens and Plastic Strands of various colors (one per student, or have students work in pairs or small groups)

**B.** Tools (from your 3Doodler box) plus needle-nose pliers or scissors for snipping plastic ends

**C.** Clear plastic tape or DoodlePad for Doodling foundation

**D.** Paper for Doodling foundation and extra sketching/note-taking space

**E.** Drawing utensils (markers, pens or pencils)

**F.** Camera or video recording device to document the Challenge and results

**G.** Acrylic paints or stamp-pad ink for students to create a stamp

## 📅 Challenge Organization

📝 Notes

### 📷 Challenge Documentation

Take photos & videos of your process using a camera. Document what to do and what not to do. Share your experience with the online community using #3DoodlerEDU!

Challenges are organized into 50-minute periods so they can fit into a traditional classroom structure, or be combined into a single workshop with breaks in between activities. This Challenge is designed to have participants work in short sprints to quickly explore the concepts.

## 🖥️ Class 1: Imagine & Design

🕒 Total Time: 50 min.

### 🗨️ Imagine & Design (🕒 50 min.)



Fig. 3

### 🔪 Remember to Snip Those Ends

We recommend pliers or scissors for snipping plastic ends. Make sure to keep your plastic ends clean to prevent clogs and jams. Snip plastic after removing it from the 3Doodler pen to make sure it's clean for the next time.

**Step 1:** Select an emotion or an idea as a basis for your font.

**Step 2:** Look at photographs, art, the environment or history and select three images to serve as an inspirational reference.

**Step 3:** Select a word (3-5 letters in length) that best captures the emotion or idea. These letters will be the ones you will create for your font design.

**Step 4:** Draw your font with a pencil or black pen and use graph paper as a guide and a template for 3Doodling later. As you design your letters, think about how the letters could be three-dimensional. For example, if you were using a tree to represent nature, the "T" might be made like a trunk with branches. The letters should be no taller than 3" and no shorter than ½".

Handwriting practice lines consisting of horizontal dashed lines on a white background.





## 🔍 More Information:

For further information about the history of the printing press, visit:

- <http://www.historyguide.org/intellect/press.html>

For further information and inspiration about moveable type and the history of graphic design, visit:

- [http://www.designhistory.org/Type\\_milestones\\_pages/Gutenberg.html](http://www.designhistory.org/Type_milestones_pages/Gutenberg.html)

For further information and inspiration about font design, visit:

- <http://goo.gl/UB4Ych>
- <http://www.vandelaydesign.com/how-to-create-a-font/>

## 🖼 Images:

Cover Page: <https://goo.gl/3DmvnL>

Fig. 1: [https://upload.wikimedia.org/wikipedia/commons/f/f8/Printer\\_in\\_1568-ce.png](https://upload.wikimedia.org/wikipedia/commons/f/f8/Printer_in_1568-ce.png)

Fig. 2: [http://www.designhistory.org/Type\\_milestones\\_pages/Gutenberg.html](http://www.designhistory.org/Type_milestones_pages/Gutenberg.html)

Fig. 3: [https://pixabay.com/static/uploads/photo/2016/03/31/09/18/font-1292316\\_960\\_720.jpg](https://pixabay.com/static/uploads/photo/2016/03/31/09/18/font-1292316_960_720.jpg)