

3Doodler EDU

Design Challenge

The Essential Doodle Toolbox Facilitator's Guide

🚩 The Challenge

Create a guide to demonstrate how the 3Doodler is an essential tool in your maker toolbox.

👁️ Overview

🕒 Total Time: 100 minutes (2 Class Periods)

This challenge should be conducted after participants have had some familiarity with using the 3Doodler pen and plastic. This is a legacy challenge where participants will construct a “best practices” field guide using videos or slideshows to coach new users on getting the most out of their 3Doodler pens.

⌘ Challenge Background

💡 Challenge Tip

Tackle this challenge after your group has some experience using the 3Doodler and various strands and share the group's knowledge with others



Fig.1



Fig.2

A toolbox can contain many things. In a traditional sense, a toolbox contains hammers, screwdrivers, pliers, a place to store tools. But a toolbox also refers to the skills or a set of expertise that we bring to a problem. In this latter case, our brain becomes the toolbox. The most useful tools in our toolbox are the ones that we can use for multiple tasks. A screwdriver can put in and take out screws. It can also open jars, act as a wedge, puncture and dig in the dirt. The more you know about a tool, and the more you play around with it, the more uses you can uncover.

✂ 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

📋 Challenge Organization

The Challenge is organized into two 50-minute classes. Use the first class to ideate and play with the 3Doodler pen and plastic strands. Class 2 will have you organizing a visual journal to include pictures, video and descriptions to guide new users to maximize their 3Doodler experience.

🖥️ Class 1: Investigate

🕒 Total Time: 50 min.

🔍 Investigate (🕒 50 min.)

📷 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!

In teams of two, use your combined experience with the 3Doodler pens and plastic to brainstorm as many uses for Doodling with the plastic strands and the techniques needed to create these uses. Write down and photograph the types of tools or supports needed to create these uses with the 3Doodler.

Consider these questions:

- How were tweezers or pliers used?
- What is the benefit of using clear plastic tape and paper drawing templates?
- What is the best way to integrate electronics into a 3Doodled work?
- Are materials such as bowls, cups or paper rolls helpful in making forms?
- What's the best way to weld pieces together?

📝 Facilitator's Notes

In Class 1, students can spend time writing and Doodling at the same time to keep their initial list of ideas. You may want to assign one question per group and combine the results to create one master toolbox guide.

🖥️ Class 2: Present, Reflect & Document

🕒 Total Time: 50 min.

🗣️ Present & Reflect (🕒 15 min.)

✂️ 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: Have each team place their use case examples on a table and have the group sort the examples by operation.

Step 2: Discuss which examples the group will include in the final document.

Step 3: Assign one technique per group to develop a step-by-step set of instructions.

Step 4: Make a group decision as to whether this will be a book with images and descriptions, a demonstration video, a step-by-step guide, or take in some other creative form.

Document (⌚ 35 min.)

Step 1: Each team will document their chosen technique from start to finish through photos and written descriptions or video and voice over script.

Step 2: Teams will create either a slideshow or a simple video of their technique for inclusion on a website, book or sharable PDF.

Facilitator's Notes

In Class 2, have participants decide if they will make a video or visual guide book. A template is attached at the end of this Challenge which can be copied and used for visual guide book.

Images:

Cover Page: https://upload.wikimedia.org/wikipedia/commons/0/08/Toolbox_%282226362564%29.jpg

Fig. 1: <http://www.publicdomainpictures.net/view-image.php?image=2441>

Fig. 2: https://pixabay.com/static/uploads/photo/2014/09/01/21/05/felt-pens-433170_960_720.jpg

The Essential Doodle Toolbox-Field Guide Template

Copy this page to increase the amount of tools to include.

<p>Tool 1</p> <p><i>Insert image here</i></p>	<p>Tool 2</p> <p><i>Insert image here</i></p>
<p>Description:</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>	<p>Description:</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>
<p>Tool 3</p> <p><i>Insert image here</i></p>	<p>Tool 4</p> <p><i>Insert image here</i></p>
<p>Description:</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>	<p>Description:</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>