

3Doodler EDU

Design Challenge

Adventure Games

Facilitator's Guide

🚩 The Challenge

Select a historical event or a literary work of fiction and design a board game using the 3Doodler and plastic strands to create game pieces, avatars and custom playing boards.

👁️ Overview

⌚ Total Time: 200 minutes (4 Class Periods)

This Challenge explores game theory and game play. Through the use of point and reward systems, role-playing games provide an opportunity for experimenting with mathematical variables and algorithms. The narrative provides an opportunity for investigations into history and storytelling. This Challenge as it is currently set up is more appropriate for participants with previous experience using the 3Doodler pens.

⌘ Challenge Background

💡 Take It Further

A role-playing game can also be based on a scientific process like the epic battle between white blood cells and infections. Any story that includes a confrontation or challenge can make a good board game.



Fig. 1



Fig. 2

What is your favorite game? Is it a board, card, role-playing or video game? Or do you prefer sports? Games are a pastime that has been with us since ancient times, and a fundamental way to challenge and learn. Role-playing games like Dungeons & Dragons, first created in the 1970s, tapped into the world of literature, fantasy and strategy. But role-playing games have their roots in 16th Century European theatre. Role-playing games are a great way to become immersed into a historical event or a literary adventure.

✂ 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.** A variety of role-playing board games (enough for each team to try one)
- H.** Extra paper and cardboard for making game boards and cards

☰ Challenge Organization

📷 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: Investigate

🕒 Total Time: 50 min.

🔍 Investigate (🕒50 min.)

Step 1: In teams of four, begin research by playing a role-playing board game. As you play the game, answer the following questions:

- What is the story behind the game?
- What is the game's reward system?
- Are the characters represented by an avatar or playing piece? What is their experience like in the game?
- How do you win or lose the game? How are points accumulated?
- Are there cards or dice used? What does each communicate?
- What is the history of the game?
- How can the 3Doodler and plastic strands become part of the game?

Step 2: Select a historical event or work of fiction that you have recently studied. How could a role-playing game be created to learn about this area of study? Who are the characters and what are the events that could play out? Write down some answers in your notes but do not start designing your game yet.

📝 Facilitator's Notes

In Class 1, provide enough different kinds of role-playing games for the groups to play. This could include board games, video games, Second Life games or physical games.

🖥️ Class 2: Design & Plan

🕒 Total Time: 50 min.

✍️ Design & Plan (🕒50 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: Based on the research into role-playing games and your selected historical or literary reference, your team will draw out a draft of your game board and a set of directions for how the game will work. This will include the game's story, reward system and scoring, characters or avatars and game pieces.

Step 2: Experiment with the 3Doodler and plastic strands to explore how they will be included as part of the game. You may use 3Doodled pieces in combination with paper or cardboard for the making of cards and/or game boards.

🖥️ Class 3: Build & Test

🕒 Total Time: 50 min.

🧩 Build & Test (🕒 50 min.)

Step 1: With your team, start building your role-playing game using the 3Doodler and plastic strands, along with any additional paper or cardboard. You may not have time to make every item from scratch. For example, to create playing cards, consider using an existing deck of cards and gluing new directions on them.

Step 2: As you build your game, test out how it works. If you need to adjust or modify the rules of play, this is the time to do it. The game needs to be completed by the end of this class so that another team can play it during the next phase.

📝 Facilitator's Notes

As teams begin to build their games, remind them that they will have to break up their tasks in order to avoid bottlenecks and finish the Challenge by the end of the session.

🖥️ Class 4: Play & Reflect

🕒 Total Time: 50 min.

🧩 Play & Reflect (🕒 50 min.)

Step 1: Each group will evaluate their classmates' games based on the following criteria:

- The role-playing game is based on the assigned historical event or literary reference.
- The role-playing game incorporates the use of the 3Doodler as an integral component.
- The directions and reward system are understandable and clearly written.
- The game includes a board, avatars and game pieces.
- The game was engaging, fun or challenging.

Step 2: Write up your critique and present your findings to the group.

Step 3: Provide feedback to your fellow groups using the "I Like, I Wonder, I Wish" model.

📝 Facilitator's Notes

Have teams place their games around the room. Randomly assign games to another team for play. Allow play to commence for the next thirty minutes. Leave the last twenty minutes for group reflection.

🔗 More Information:

For further information and about the history of role-playing games, visit:

- <http://www.darkshire.net/jhkim/rpg/theory/history/draft.html>

For further information and inspiration about the role-playing games' connection to creativity, visit:

- <http://goo.gl/6Rdoab>

🖼 Images:

Cover Page: <https://goo.gl/aTidqw>

Fig.1: <https://goo.gl/5ZSEBI>

Fig. 2: https://c2.staticflickr.com/8/7001/6475530771_245633ee51_b.jpg