



# ***DECODE FOR TROUBLE USER GUIDE***

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# INTRODUCTION

START DATE & TYPE OF PROJECT	END DATE & ACCOMPLISHED
November 18th, 2023  Accelerometer Game Application on Mobile Platforms  Partner Project: Rahul Solleti and Jai Nukala	December 5th, 2023  Created functional application that's able to transition between both games.



*Decode For Trouble is an educational children's game with two components. The first component helps children match uppercase and lowercase letters. Players tilt a device to move an uppercase letter on screen using the accelerometer. Random strings of lowercase letters fall from above, and players must collide with the letters in the correct order. Getting the order right earns players higher dice rolls in the second part. The second part is a "Trouble"- style board game where players roll dice to advance two pieces to the end. The dice roll range increases based on performance in the first part. If one player's piece lands on another's, the opposing piece goes back to start. The goal is to get both pieces to the end first. The game helps develop letter recognition, motor skills, logic, and strategy. The two connected games provide a fun, engaging experience for early learning.*



# Purpose of Linguistic Lenses



The first component, where players match falling lowercase letters to a controlled uppercase character, aims to develop alphabet familiarity and visual processing skills in young children. Getting the proper letter sequence correct also allows kids to earn higher dice rolls, incentivizing engagement with this educational activity. Its purpose is to provide a fun way for children to improve letter recognition abilities.

The second component involves a competitive board game requiring strategic thinking to navigate pieces according to dice rolls earned from performance in the first section. Its purpose is to motivate children to thoroughly engage with the learning aspect of letter matching in order to gain an advantage in the fun, sabotage-filled race to the finish. This friendly competition makes advancing educational concepts enjoyable and entices replayability.





# Opening the Application

## System Requirements

LeafLife is solely an Android application that is optimized for Android tablets. You are still able to use the application on mobile phones.

## Installation Process

To install Decode For Trouble on your Android device, locate the application file in the downloaded ZIP folder. Transfer the file to your device if opening the ZIP contents on a computer.

Attempt launching the Decode For Trouble file once transferred. If blocked by security permissions, head to your device Settings. Navigate to the Special App Access, Advanced, or Security menu depending on your Android OS. Seek out and enable the "Install Unknown Apps" option, allowing third party software installation on your device.

With restrictions lifted, navigating back to the Decode For Trouble app file should now allow successful launch. The educational game will persist on your device unless manually uninstalled.

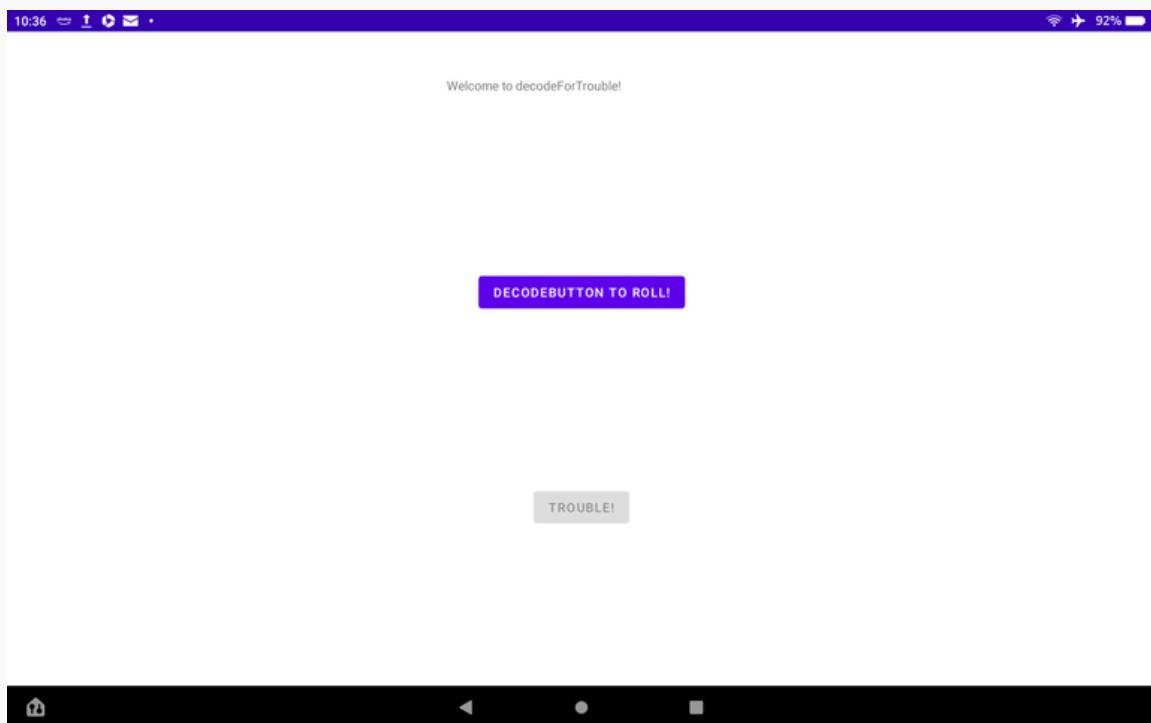
For assistance regarding Decode For Trouble functionality, optimization, or any other inquiries, contact our support team at [DecodeForTrouble@learning.com](mailto:DecodeForTrouble@learning.com). We aim to promptly resolve any issues you may encounter to provide a smooth user experience learning through play.



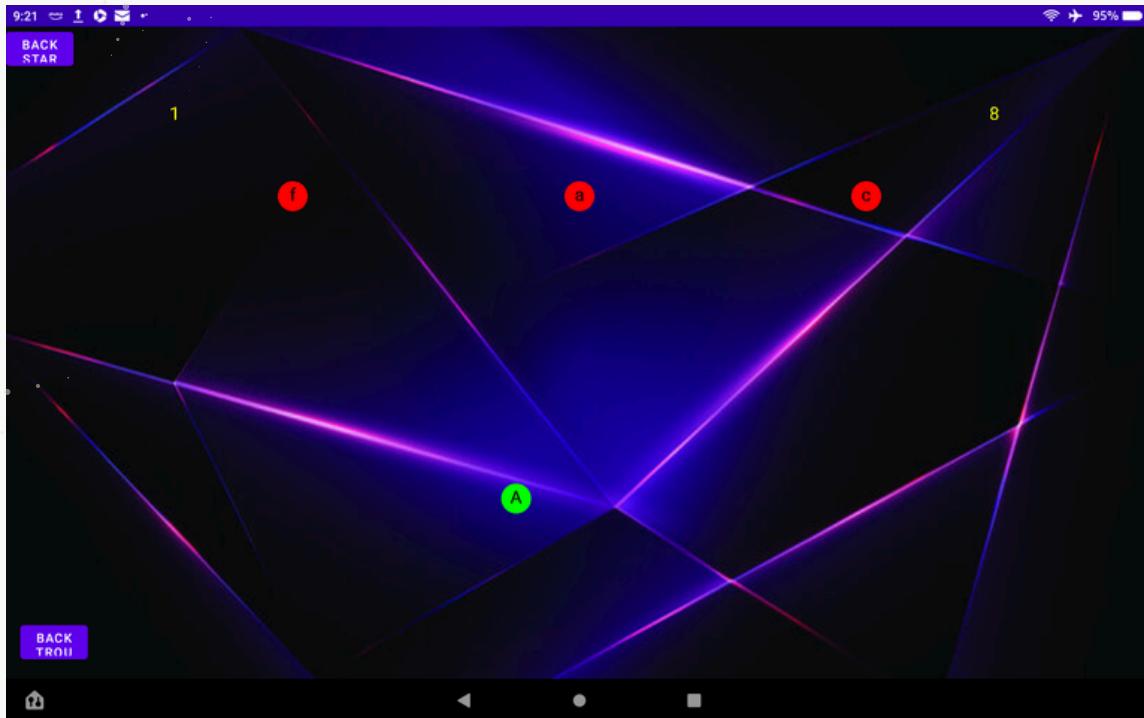
# How to get Started?

**NOTE:**

**TURN THE CONTROL LOCK TO HORIZONTAL SCREEN BEFORE YOU OPEN THE APPLICATION.**



As you open the application, this will be the starting screen. As you can see the DeCode Button to Roll is highlighted as it indicates you to press on the button to get started. The Trouble Game does not work yet because the performance and functionality of the Trouble Game relies on the Letter Game (which is launched by pressing the DeCode Button to Roll). Once button is pressed the Letter Game is Launched!



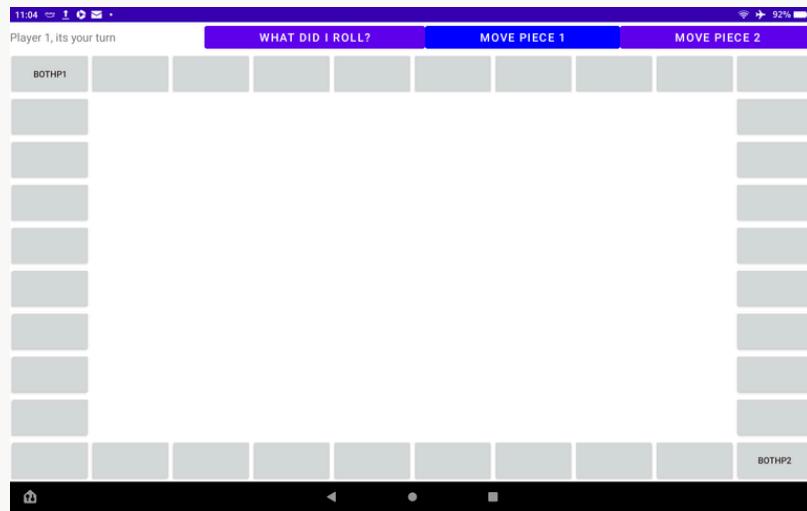
As you start the game, this will how the game first appears as the letters fall in rows with 3 lowercase letters coming down at the same time.

The user has the ability to control the Green Uppercase letter using the accelerometer by tilting the tablet.

The Yellow Number to the top left corner of the screen indicates the player score, which automatically starts at 1 and increases by 1 based on every correct answer. The Number to the top right corner of the screen is a stopwatch that counts up to 30 seconds. Once the stopwatch reaches 30 seconds, the game will automatically pause.

From here, press the bottom left corner of the screen that says “BACK TROUBLE.”

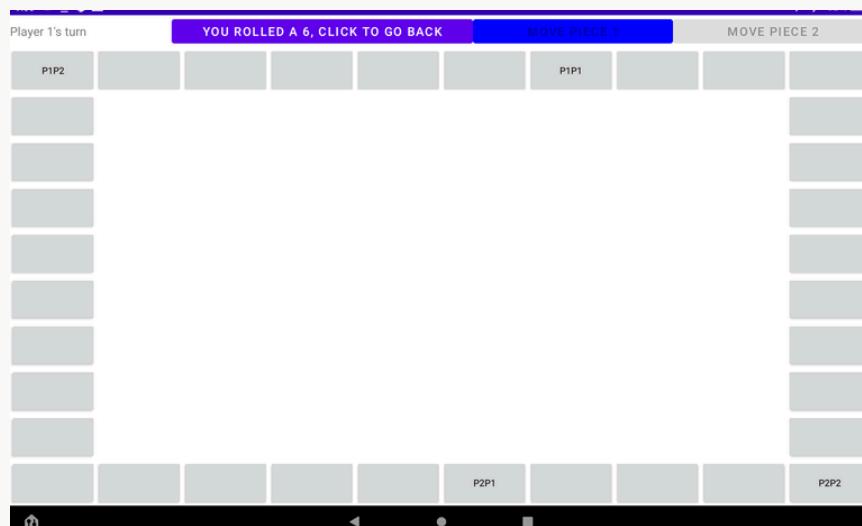
This will take you to the Trouble Game Board Page.



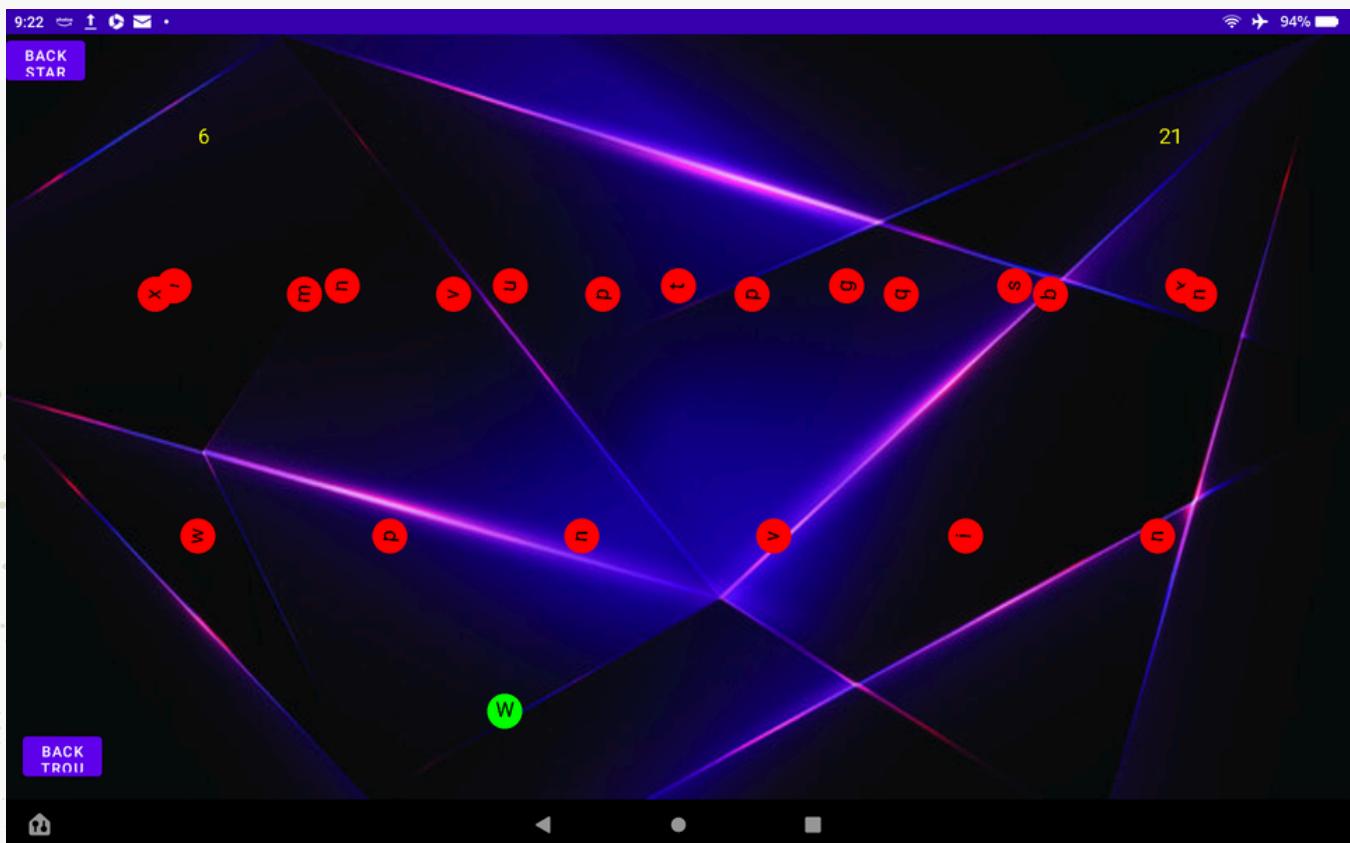
This is how the Board Game Design appears. The Player 1 starts at top left corner of the board game design while the Player 2 starts at the bottom right corner of the board game. Each starting base consists of two pieces for both players, meaning that Player 1 has two pieces to get back to the base, as Player 2 has the same.

Now that you know how the game works, you start off by clicking the “What Did I Roll” button to get started. This should now display what you rolled based on how well you scored. For example, if you got 6 matching letters, then you roll a 6. From there, you can select “Move Piece 1” or “Move Piece 2,” depending on which piece you want to move.

Below is how the game could look like Mid-Game:



Once the “Click To Go Back” button is pressed on, the game will automatically transition back to the Letter Game for Player 2. Player 2 will have 30 seconds to play the game and gather as many points as they possibly can. As shown below, the game gets harder once more points are scored. For example, Level 3 with rotating letters falling down faster is captured below:



With this pattern the game will continue until both pieces of either player reach the last base. This will mark the end of the game and the user will be displayed with a button to go back to the Main Screen play all over again.



Decode For Trouble

# Frequently Asked Questions

**Question:** Do both players need the app installed to play the Trouble board game?

**Answer:** The Trouble component supports pass-and-play multiplayer on one device. Simply tap which character you want to move when it's your turn!

**Question:** My child is struggling to match some of the faster falling letters. Is there any way to adjust the speed?

**Answer:** Not Exactly. The Faster Falling Letters only appear if the user is performing well. So if your child is facing trouble with the fast falling letters, they will spend more time with the easier and slower falling levels before getting there according to DeCode for Trouble Algorithm.

**Question:** My child loves the accelerometer controls. Are there any other games with similar features?

**Answer:** We plan to expand the series with phonics and spelling versions utilizing accelerometer controls. Stay tuned for Decode For Sounds and Decode For Words releasing later this year!

**Question:** Will my child lose their earned dice rolls if they exit in the middle of the board game?

**Answer:** No way! DeCode auto saves progress so you can pick up right where you left off. (This applies unless the user manually refreshed the app.)



# DeCode for Trouble

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