

AUTISMFIT

Promoting the Inclusion and Wellbeing of Youth with
Autism



GAME 5

LEVEL 1 + 2

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Introduction to Makey Software for Game Creation

This document provides an overview of Makey software - a tool that enables the creation of interactive and accessible games, which also can be beneficial for youth with autism. Designed to support interactive learning, Makey offers schools and parents a direct way to introduce **STEM-based projects** into classrooms and homes.

Since its inception in 2010, Makey has become a popular platform worldwide, known for its simplicity and extensive resources that make learning projects easy to find and implement.

This document will walk you through Makey's key features and capabilities, highlighting its potential for creating customizable, interactive games. With a focus on sensory engagement and adaptability, Makey is a powerful tool for developing games that are both educational and enjoyable.



Why Makey?

Makey software is a platform that simplifies **game creation**, making it accessible even for those **without a technical background**. With its user-friendly interface, visual scripting, and sensory customization, Makey is an ideal tool for developing interactive, multi-sensory experiences with an aim to diverse cognitive and sensory needs.

Key Features and Capabilities

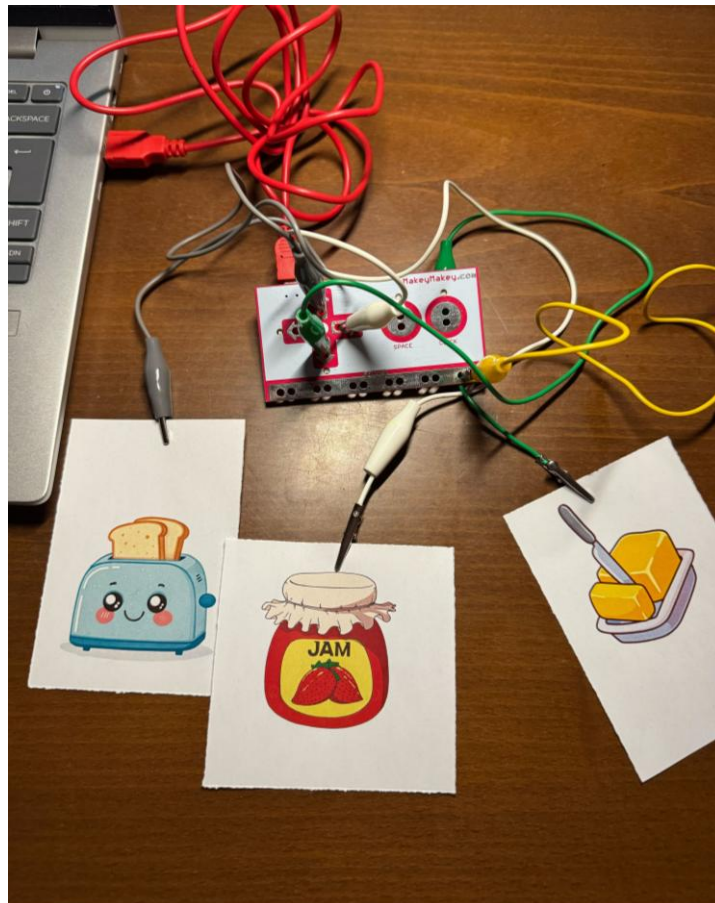
- **Customizable Sensory Inputs:** Makey supports various input types, such as sound, visuals, and touch, allowing us to adapt games to the sensory preferences of **youth with autism**.
- **Visual Scripting:** Instead of traditional coding, Makey uses visual **block coding**, enabling game creation through drag-and-drop logic blocks that simplify the design process.
- **Adaptable Game Elements:** Game components can be adjusted easily, sensory effects, and interactions, making it easy to create content that suits each **user's comfort level**.
- **Educational and Recreational Focus:** Makey supports a wide range of game types, from memory and matching games to interactive storytelling, all of which can be customized to improve development and social engagement.

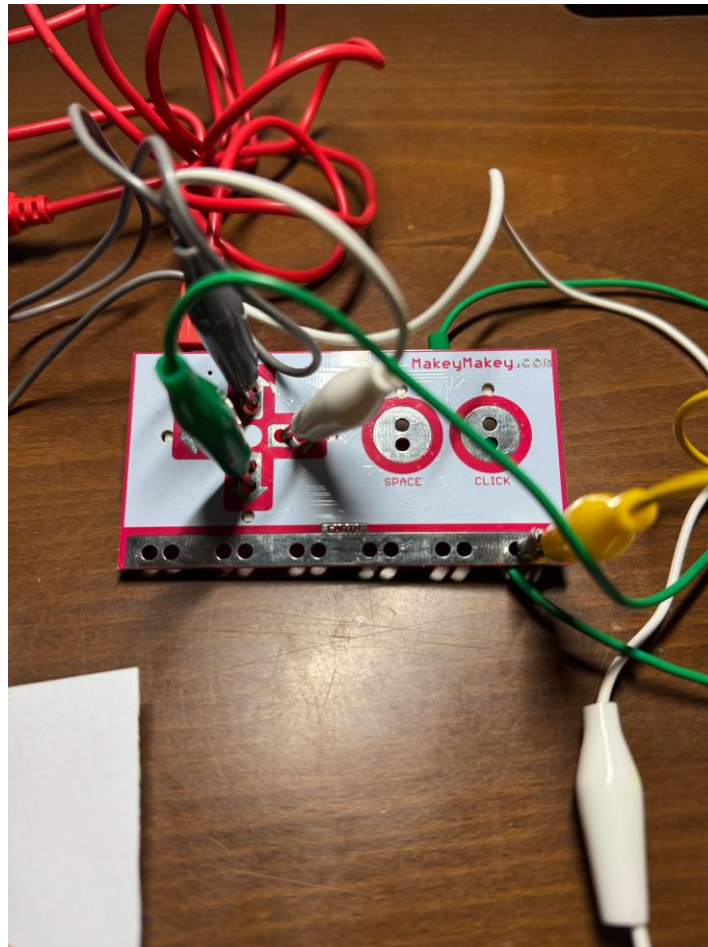
Makey Makey: A Fun Tool for Learning Nutrition

Makey Makey makes learning about nutrition interactive and memorable. Transforming everyday objects like fruits and vegetables into touch-responsive inputs, allows young people to directly interact with healthy foods, strengthening recognition and familiarity.

This hands-on, gamified experience helps students understand **food groups**, **build balanced meals**, and **learn healthy habits in a fun**, engaging way that encourages long-lasting positive choices.

Setup Makey Makey





Setup Makey Makey for the Toast Builder Game

To set up your Makey Makey for this activity:

1. **Plug the Makey Makey** into the USB port of your computer.
2. **Connect one alligator clip to the ground** (marked “Earth” or “GND” on the Makey Makey).
The player must hold or touch the ground cable at all times for the interaction to work.
3. **Connect the other alligator clips** to the following Makey Makey inputs:
 - **Up arrow (↑)** → Toaster
 - **Down arrow (↓)** → Butter
 - **Right arrow (→)** → Jam
4. **Attach the other end of each clip** to the corresponding objects (or conductive models/images representing them):
 - **Toaster** connected to **Up (↑)**
 - **Butter** connected to **Down (↓)**
 - **Jam** connected to **Right (→)**
5. **Open the Scratch project** on the computer. When the player touches one of the connected objects, Makey Makey sends a signal to the computer just like pressing a keyboard key. This triggers the corresponding action in the game, allowing the player to build the toast step by step. 🍞

Experiment 5: Toast Builder: Butter & Jam Challenge

Experiment Explanation

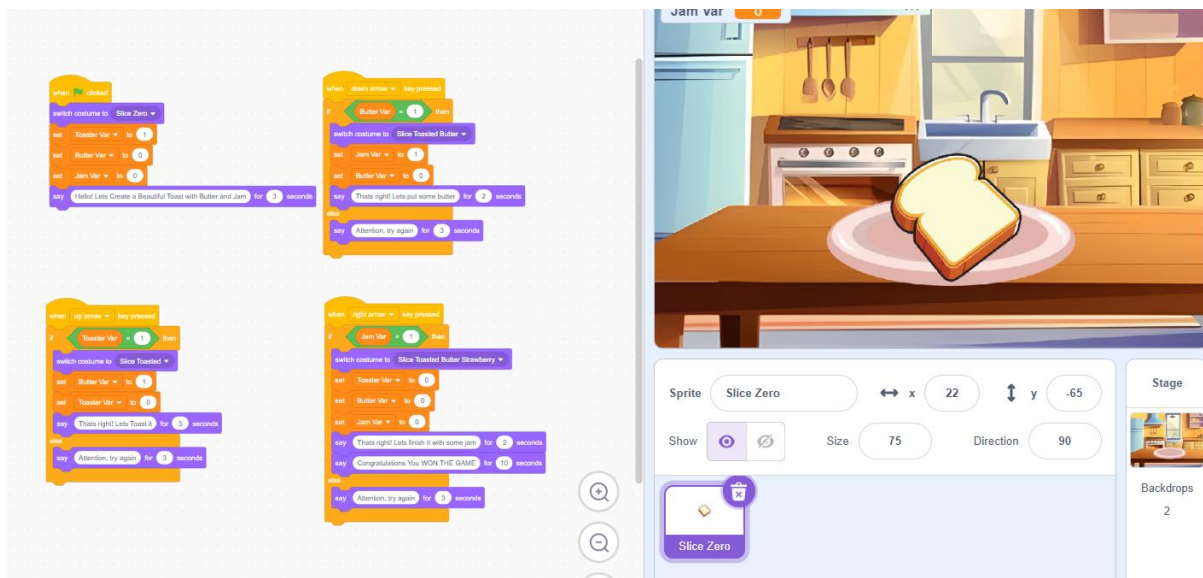


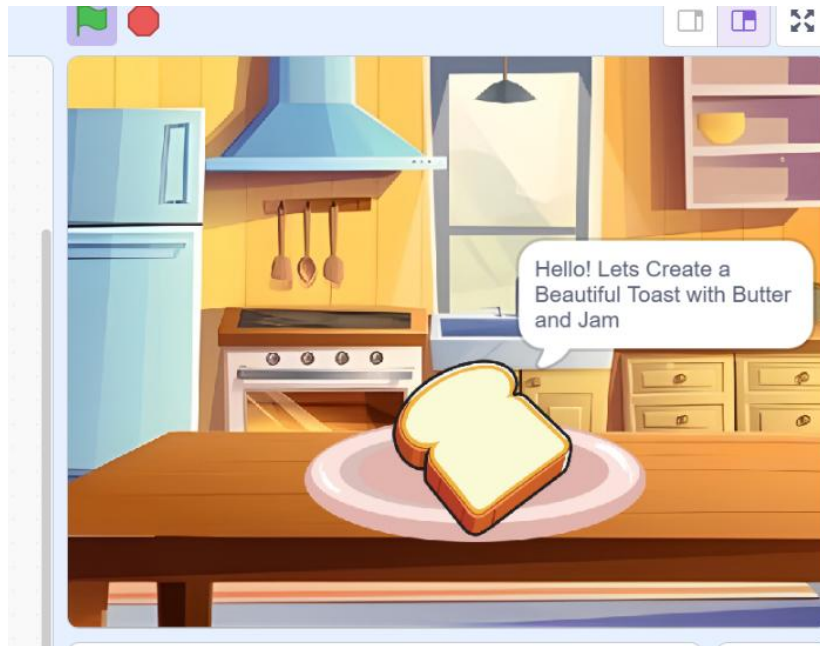
- Goal: Encourage players to prepare a simple breakfast by building a toast step by step using Makey Makey and Scratch. Players learn sequencing and basic food preparation while interacting with the game in a fun and engaging way.

- Setup: Toaster (↑), Butter (↓), Jam (→) connected to the Makey Makey board.

- Interaction: In this game, the toast preparation appears on the screen as Scratch sprites. Players interact by touching the objects connected to the Makey Makey board. Each object is linked to a specific key: touching Toaster (↑) triggers the appearance of toasted bread, touching Butter (↓) adds butter on the toast, and touching Jam (→) completes the toast with butter and jam. This step-by-step interaction combines physical input with immediate visual feedback, allowing players to see the toast being prepared in the correct order. If a player selects an ingredient in the wrong order, the game displays a message such as “Try again”, encouraging them to repeat the sequence until the correct order is followed.

- Why This Is Engaging: The game is engaging because it combines hands-on interaction with clear visual feedback. Players physically touch the objects to complete each step of the toast-making process, making the activity memorable and interactive. The progressive appearance of the toast ingredients helps players understand sequencing and cause-and-effect. The “try again” feedback mechanism also supports learning by allowing players to correct mistakes and practice the correct order, while encouraging curiosity and discussion about simple food preparation and healthy breakfast choices in a safe and playful environment.







Coding Overview

- **Each key trigger:** Each object is connected to a specific Makey Makey key. When the player touches an object, the corresponding key is triggered and the Scratch sprite updates the toast on the screen. Touching **Toaster (↑)** makes the toasted bread appear, touching **Butter (↓)** adds butter to the toast, and touching **Jam (→)** completes the toast with butter and jam. This allows the game to guide the player through the toast-making process step by step with immediate visual feedback.
- **The code uses simple:** The Scratch code uses basic **when key pressed** blocks to detect which Makey Makey input was activated. The program changes the sprite's costume to show each stage of the toast preparation (toasted bread → toast with butter → toast with butter and jam). This simple structure makes the game easy to understand and modify, allowing additional ingredients, sounds, or visual effects to be added if desired.

Outcome

- Players can **express their personal taste preferences** for different fruits and snacks.
- Players receive **instant visual and audio feedback** through Scratch sprites responding with “Yum!”, “Hmm...”, or “No thanks.”
- Encourages **hands-on interaction**, making learning about healthy foods fun and engaging.
- Promotes **discussion and reflection** about likes, dislikes, and trying new foods.
- Teaches **basic coding concepts** such as key detection, conditionals (if-else), and variables in a visual and interactive way.
- Can be **expanded easily** with more foods, reactions, or visual elements like emojis or charts.