

AUTISMFIT

Promoting the Inclusion and Wellbeing of Youth with
Autism



GAME 8

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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.

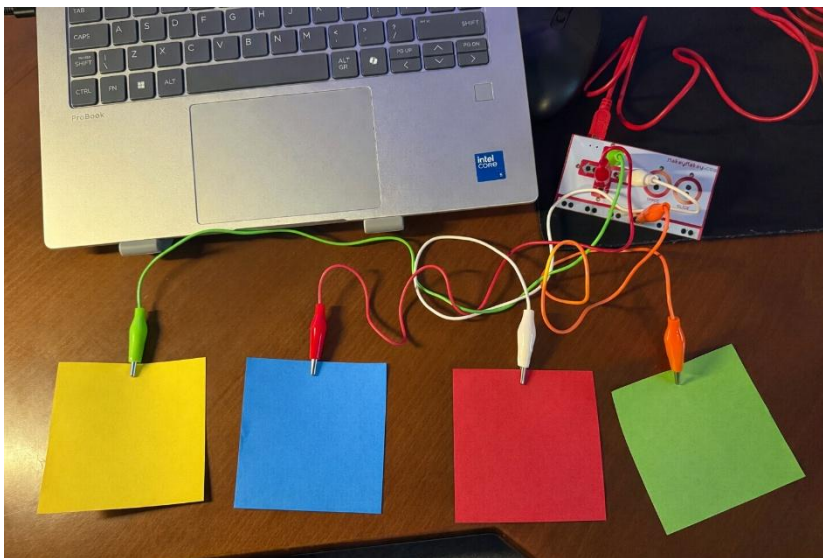
Key Features and Capabilities

- **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 turns nutrition learning into an interactive and memorable experience. By converting everyday fruits and vegetables into touch-responsive controls, young people actively engage with healthy foods, building stronger recognition and familiarity. This hands-on, game-based approach supports understanding of food groups, balanced meals, and healthy habits in a fun, engaging way that encourages lasting positive choices.

Setup Makey Makey



1. Plug the Makey Makey into the USB port of your computer.
2. Connect one alligator clip to the ground (marked "Earth" on the bottom of the Makey Makey). The player must hold the metal end of this cable for the circuit to complete when they touch a character.
3. Connect four additional alligator clips to the arrow inputs on the front of the device.
4. Attach the other end of each clip to your Color People characters:
 - Up Arrow (↑): Yellow Paper / Happy
 - Down Arrow (↓): Blue Paper / Sad
 - Left Arrow (←): Green Paper / Calm
 - Right Arrow (→): Red Paper / Excited

Experiment 4: Emotion Path

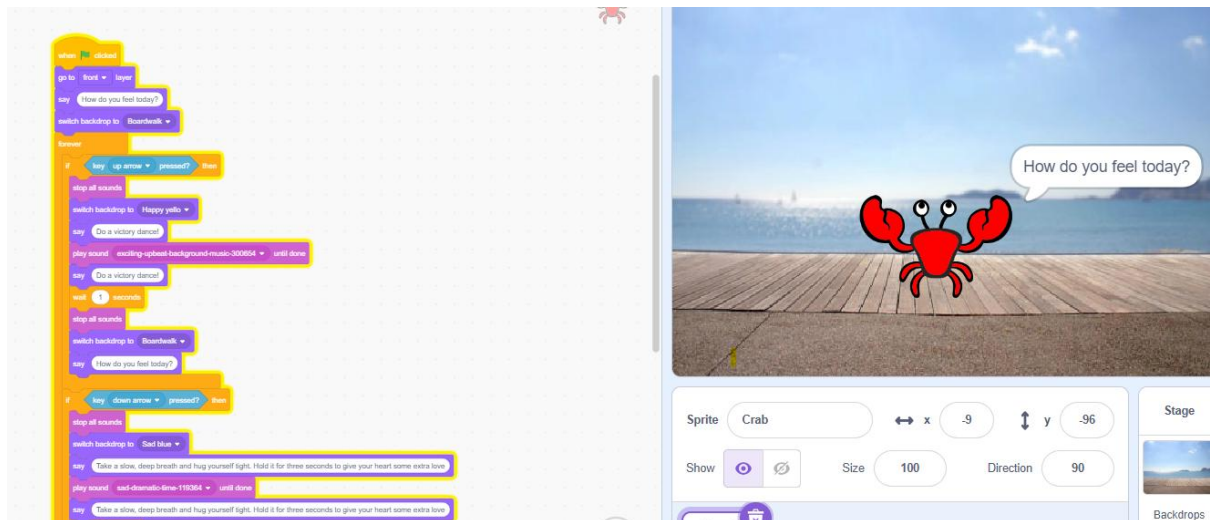
Experiment Explanation

- **Goal:**
Invite players to identify and express their emotions in a supportive, interactive way using Makey Makey and Scratch. The experience replaces rating snacks with a connection to "Color People" characters, allowing players to explore their feelings and receive gentle encouragement through synchronized sound and physical actions.
- **Setup:** The characters include Yellow/Happy, Blue/Sad, Green/Calm, and Red/Excited. Each character is connected to the Makey Makey arrow inputs with the Up Arrow (↑) assigned to Sunny, the Down Arrow (↓) to Blue, the Left Arrow (←) to Zen, and the Right Arrow (→) to Sparky.
- **Interaction:** In this activity, the four Color People act as emotional guides on the screen as Scratch sprites while players interact by touching the actual colored papers connected to the Makey Makey board. Each touch triggers a unique emotional response, such as Sunny (↑) triggering a cheerful jingle, Zen (←) playing peaceful sounds, Sparky (→) triggering upbeat music, or Blue (↓) prompting a gentle chime with the message, "Take a slow, deep breath and hug yourself tight. Hold it for three seconds to give your heart some extra love»
- **Why This Is Engaging:** This project is highly engaging because it transforms abstract emotions into a tactile, sensory experience that helps players ground themselves in the present moment. The immediate audio feedback and suggested physical actions, like the self-hug, provide emotional reinforcement that helps players feel seen and supported. This approach encourages self-reflection and empathy in a safe, playful environment, making the process of understanding moods both memorable and meaningful.

Coding Overview

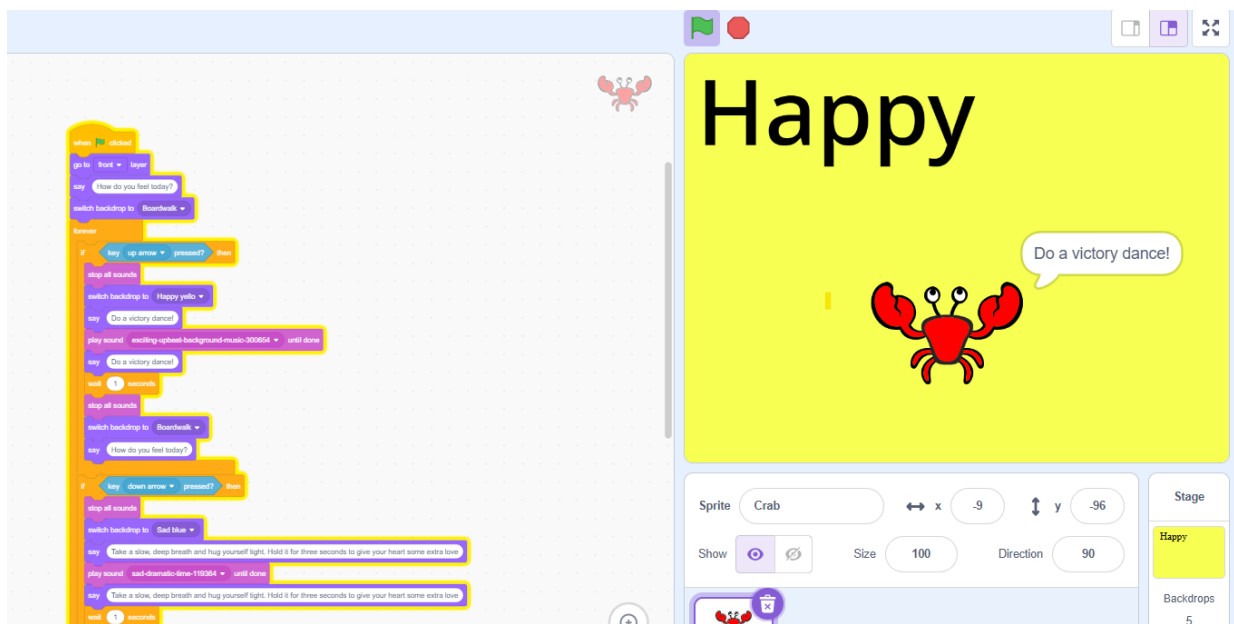
Each emotion trigger: Every color person is connected to a specific Makey Makey input. When the player touches a the crocodile connection of each paper, the corresponding arrow key is triggered, and the Scratch sprite responds with a supportive message such as "Feeling happy is great!" "Do a victory dance!" or "Hug yourself tight." This setup allows the game to immediately recognize the player's emotional choice and provide instant, empathetic feedback.

The code uses simple logic: The Scratch project utilizes straightforward "when key pressed" blocks to detect which emotion was selected, trigger a unique sound effect, and display the character's reaction. This accessible coding approach makes it easy to modify the experience, such as adding new feeling zones or customizing the supportive phrases for each player.

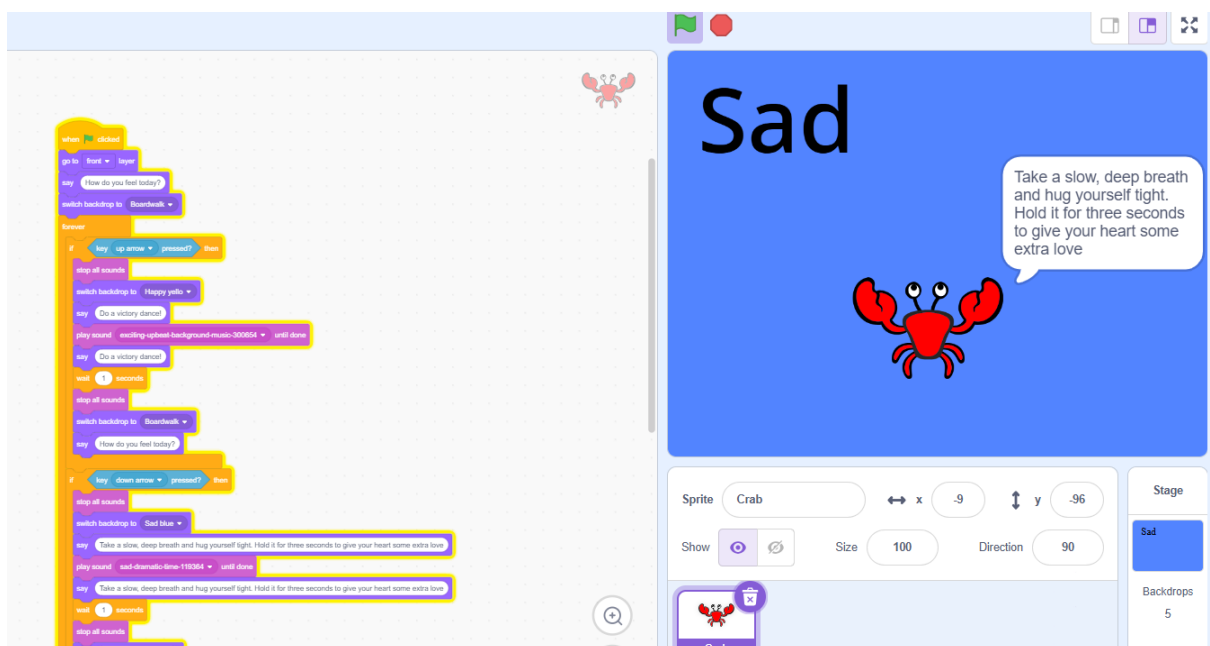


The initial state of the program shows a red crab on a wooden pier with a speech bubble saying "How do you feel today?". The script on the left includes the following blocks:

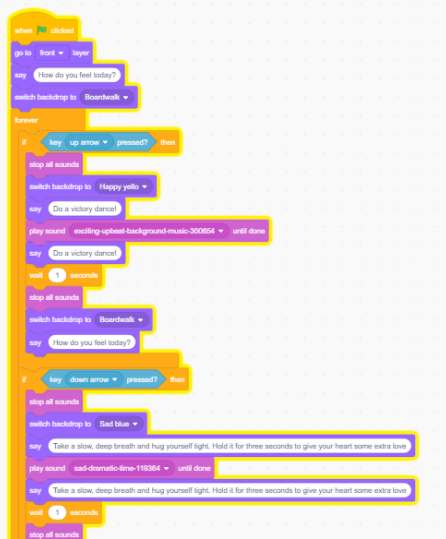
- when clicked
- go to: forest layer
- say: How do you feel today?
- switch backdrop to: Boardwalk
- when green flag is clicked
- if key up arrow pressed? then
 - stop all sounds
 - switch backdrop to: Happy yellow
 - say: Do a victory dance!
 - play sound: exciting-upbeat-background-music-300854 until done
 - say: Do a victory dance!
 - wait 1 seconds
 - stop all sounds
 - switch backdrop to: Boardwalk
 - say: How do you feel today?
- if key down arrow pressed? then
 - stop all sounds
 - switch backdrop to: Sad blue
 - say: Take a slow, deep breath and hug yourself tight. Hold it for three seconds to give your heart some extra love
 - play sound: sad-dramatic-theme-119384 until done
 - say: Take a slow, deep breath and hug yourself tight. Hold it for three seconds to give your heart some extra love
 - wait 1 seconds



The 'Happy' state shows a yellow background with the word "Happy" in large black text. The crab has a speech bubble saying "Do a victory dance!". The script on the left is identical to the initial state, but the 'if key down arrow pressed?' block is not visible in this view.



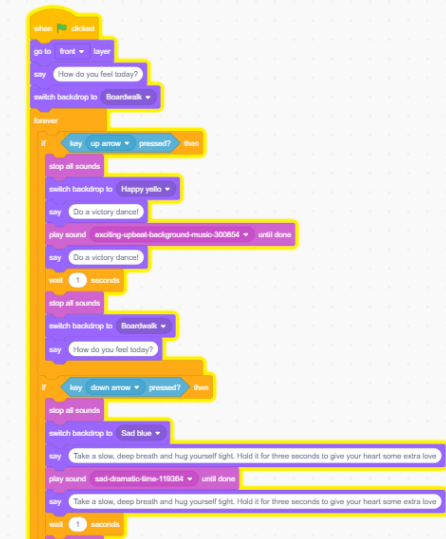
The 'Sad' state shows a blue background with the word "Sad" in large black text. The crab has a speech bubble saying "Take a slow, deep breath and hug yourself tight. Hold it for three seconds to give your heart some extra love". The script on the left is identical to the initial state, but the 'if key up arrow pressed?' block is not visible in this view.



Calm

You feel peaceful and quiet. Calm is a nice place to be.

Sprite: Crab x: -9 y: -96
Show: [eye icon] Size: 100 Direction: 90
Stage: Calm
Backdrops: 5



Excited

Whoa! That's a lot of energy! Lets dance

Sprite: Crab x: -9 y: -96
Show: [eye icon] Size: 100 Direction: 90
Stage: Excited
Backdrops: 5

Outcome

- Players can express their personal emotions by touching the "Color People" character that matches how they feel.
- Players receive instant visual and audio feedback as Scratch sprites respond with supportive messages like "Feeling happy is great!" or "Hug yourself tight."
- The activity encourages hands-on interaction, making the process of exploring and understanding moods fun and engaging.
- It promotes discussion and reflection about emotional well-being, personal feelings, and how to respond to different moods.
- The project teaches basic coding concepts such as key detection and conditionals in a visual and interactive way.
- The system can be expanded easily with more emotion zones, different supportive phrases, or visual elements like emojis to deepen the experience.