# Switcharoo: Switch-Accessible Tablet App

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**HuskyADAPT**
Accessible Design And Play Technology

## 🚩 Our Mission

A way to address the lack of accessible and engaging tools for children with diverse abilities so that they can develop motor and cognitive skills through playful, inclusive learning experiences.
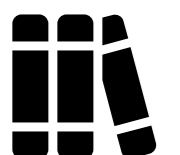
## 📖 Research & Needs Finding

Although **play** is incredibly important for a child's growth and development, there are currently limited games that offer accessible play opportunities. We sought out to address this problem through...

**Ethnographic observations** at a local school to understand how children engage within the classroom setting.

**Interviews** with educators to gather learning themes within the curriculum that we could incorporate into the games.
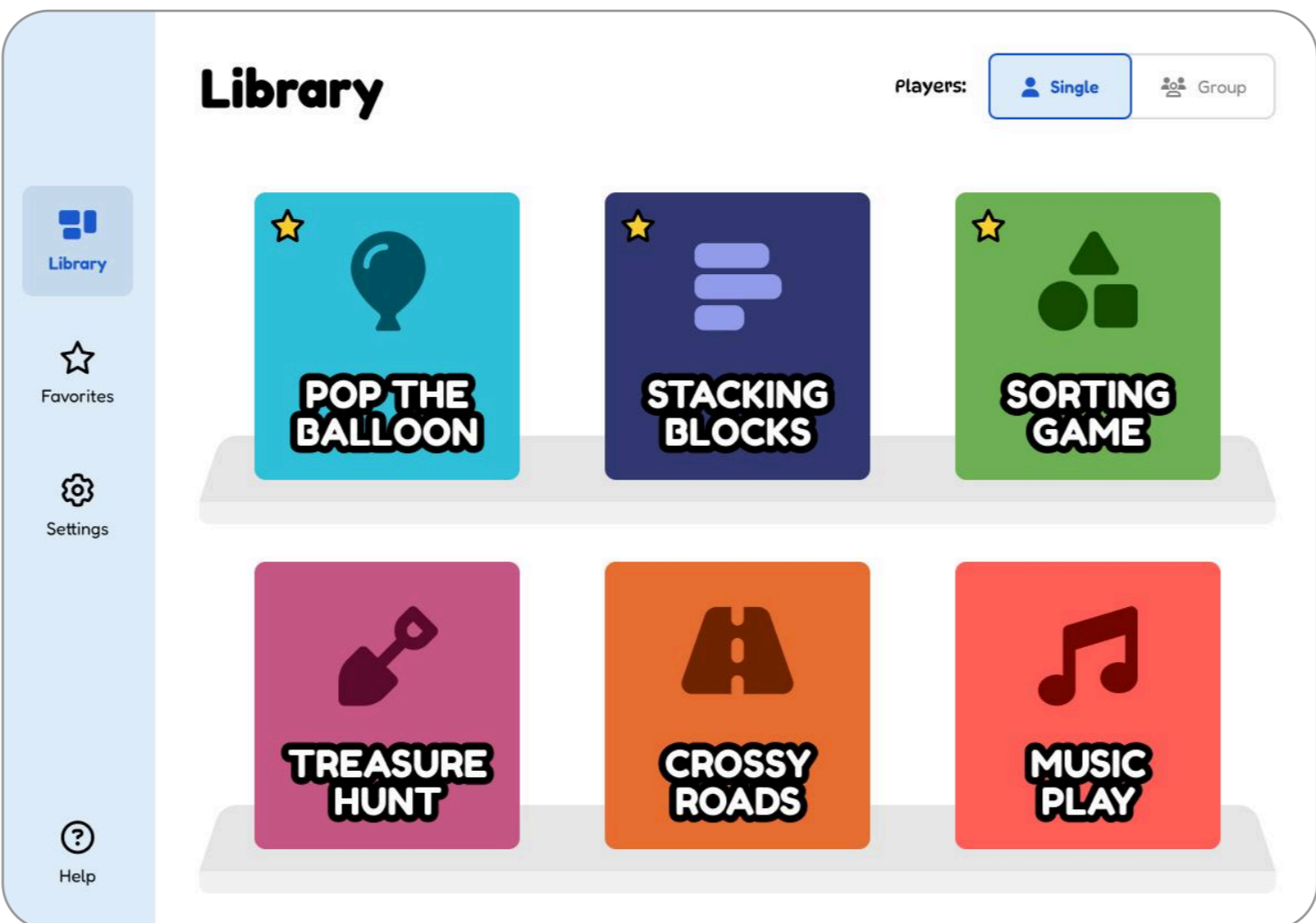
**Secondary research** to review how existing switch-accessible games are limited and inaccessible to children with disabilities.
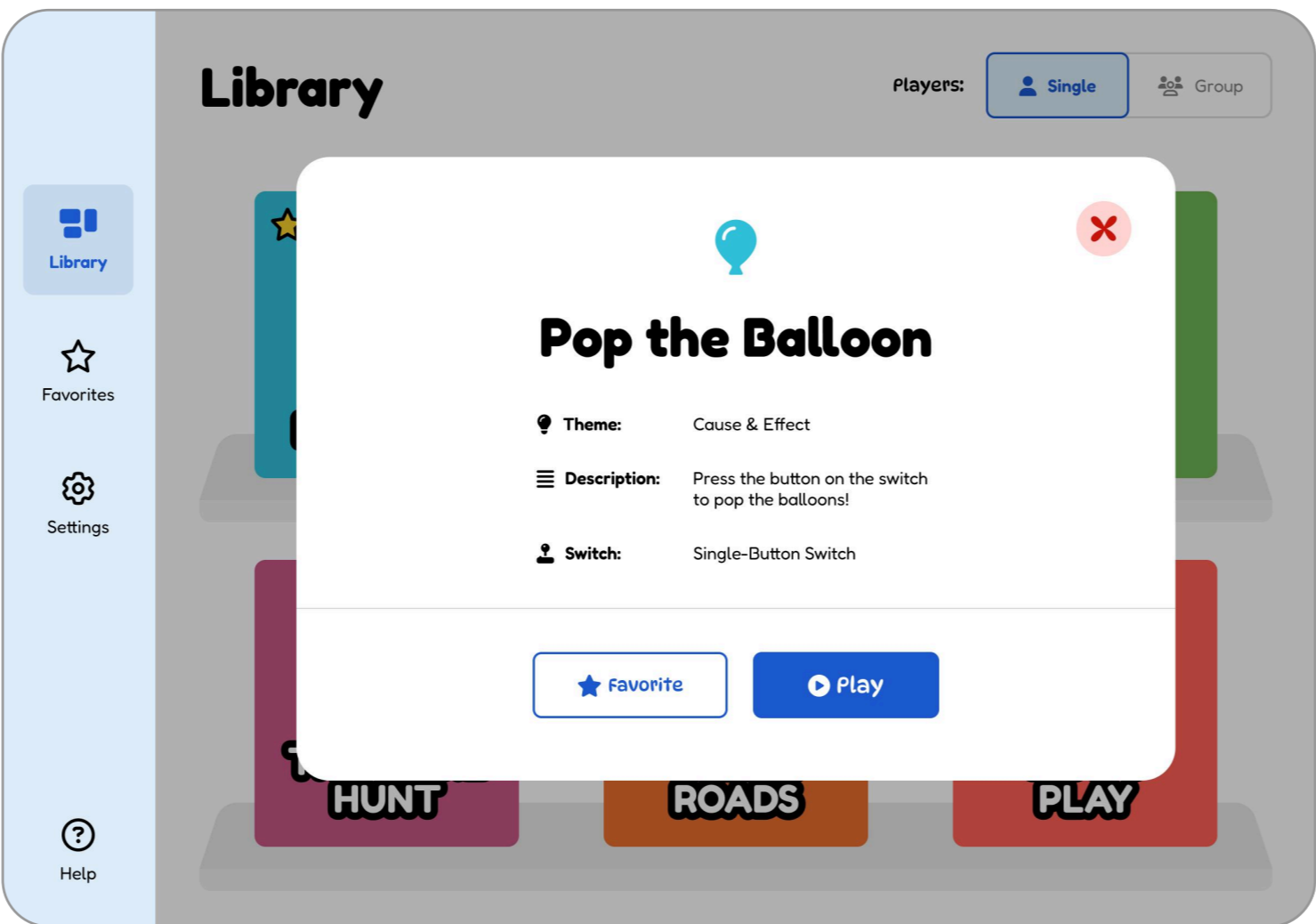
## 🎯 Design Goals

1. Align game experiences with **learnings themes** and the **developmental goals** of children.
2. Provide educators and caregivers with a **supportive**, **effortless, low-cost** tool.
3. Prioritize **user autonomy**, **simplicity**, and **accessibility**.
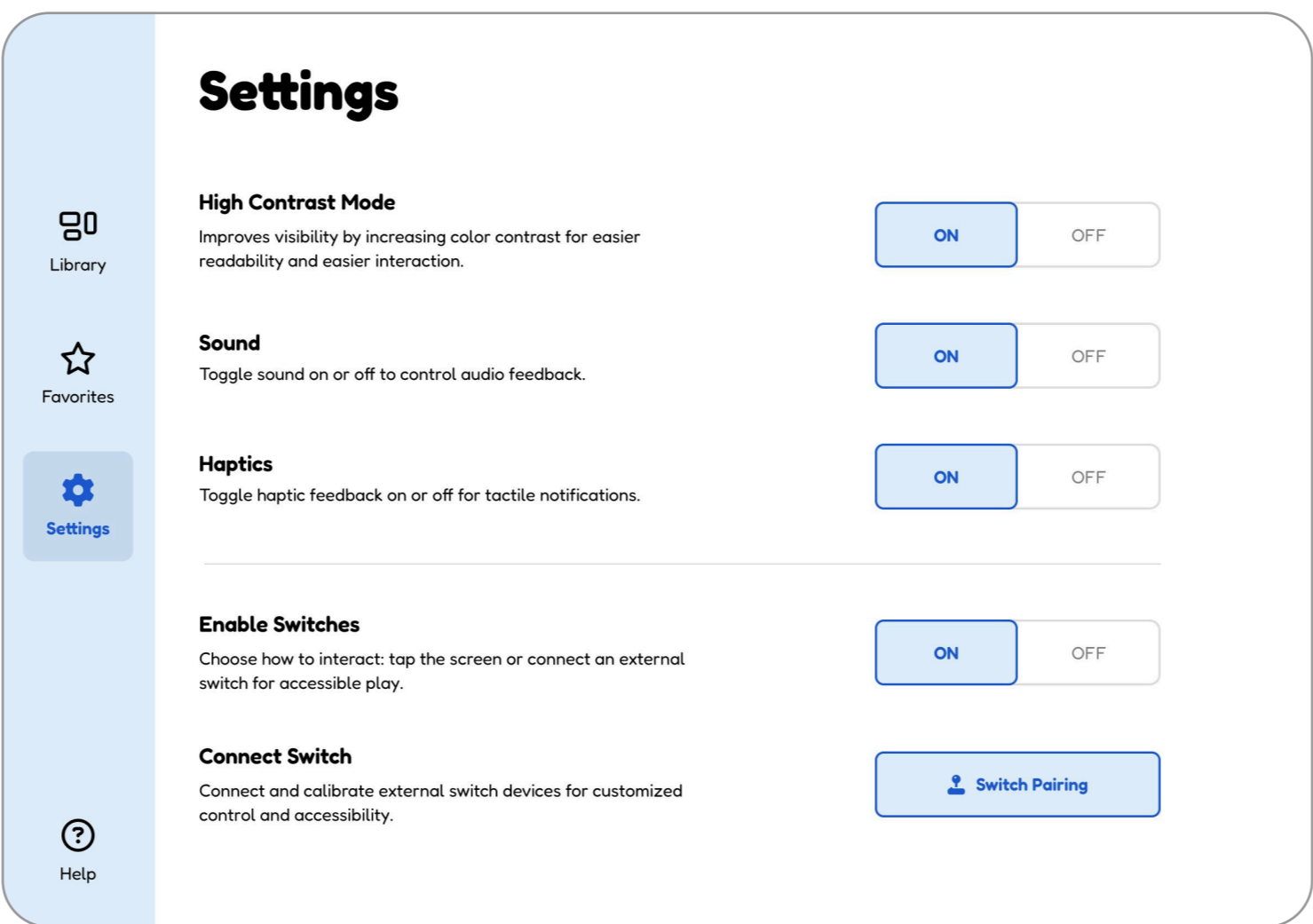
## ▦ Dashboard Design



### Grid-Based Library

- Large, color- and symbol-coded game tiles with star icons to mark favorites.
- A player toggle (Single/Group)
- A left-side menu for quick access to **Library**, **Favorites**, **Settings**, and **Help**.
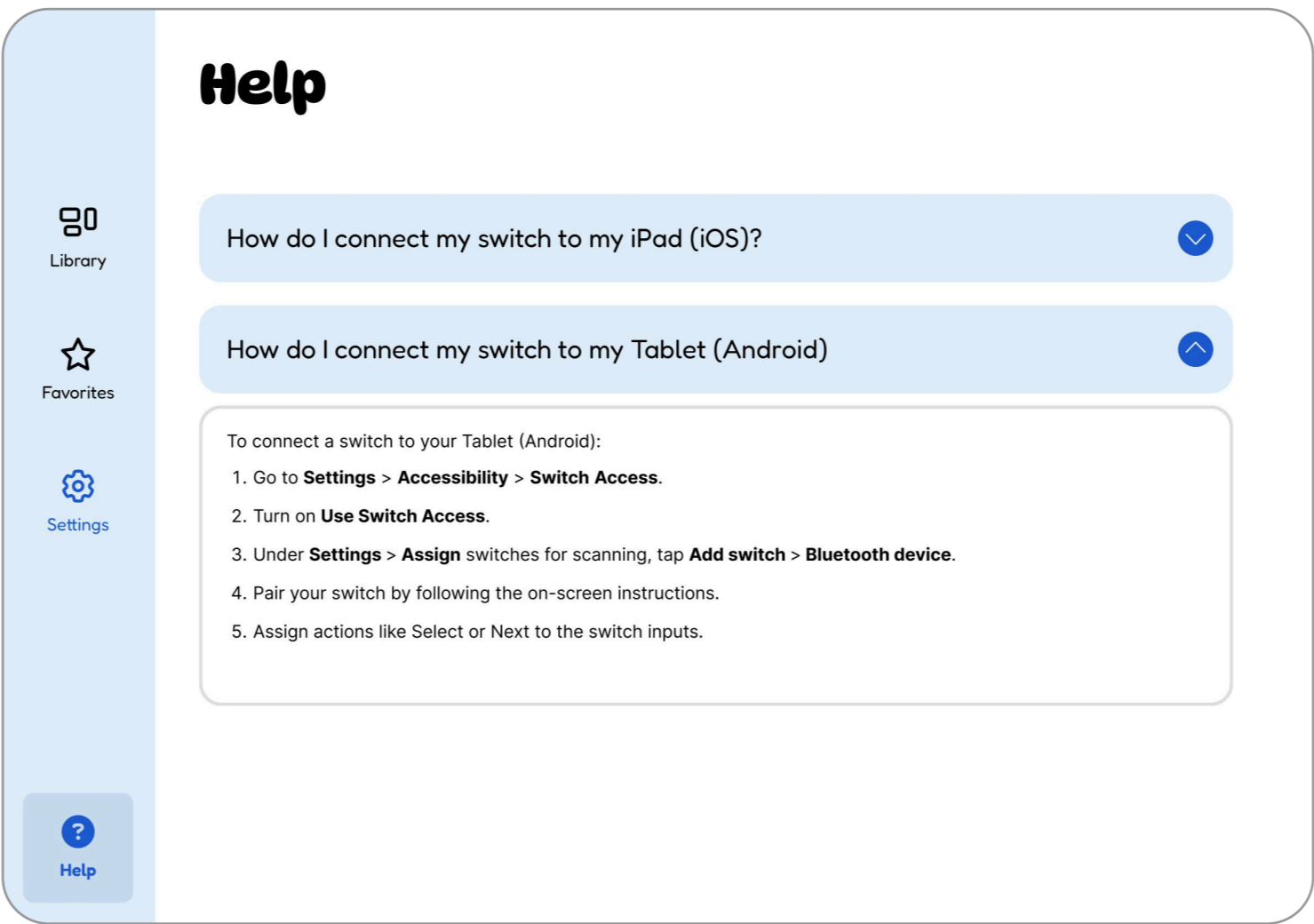


### Game Overview Modal

- Tapping a game opens a pop-up with the game's learning **theme**, clear **description**, required **switch type**, an option to favorite, and to play.
- Enables teachers and therapists to quickly preview game goals and switch info to select appropriate content.
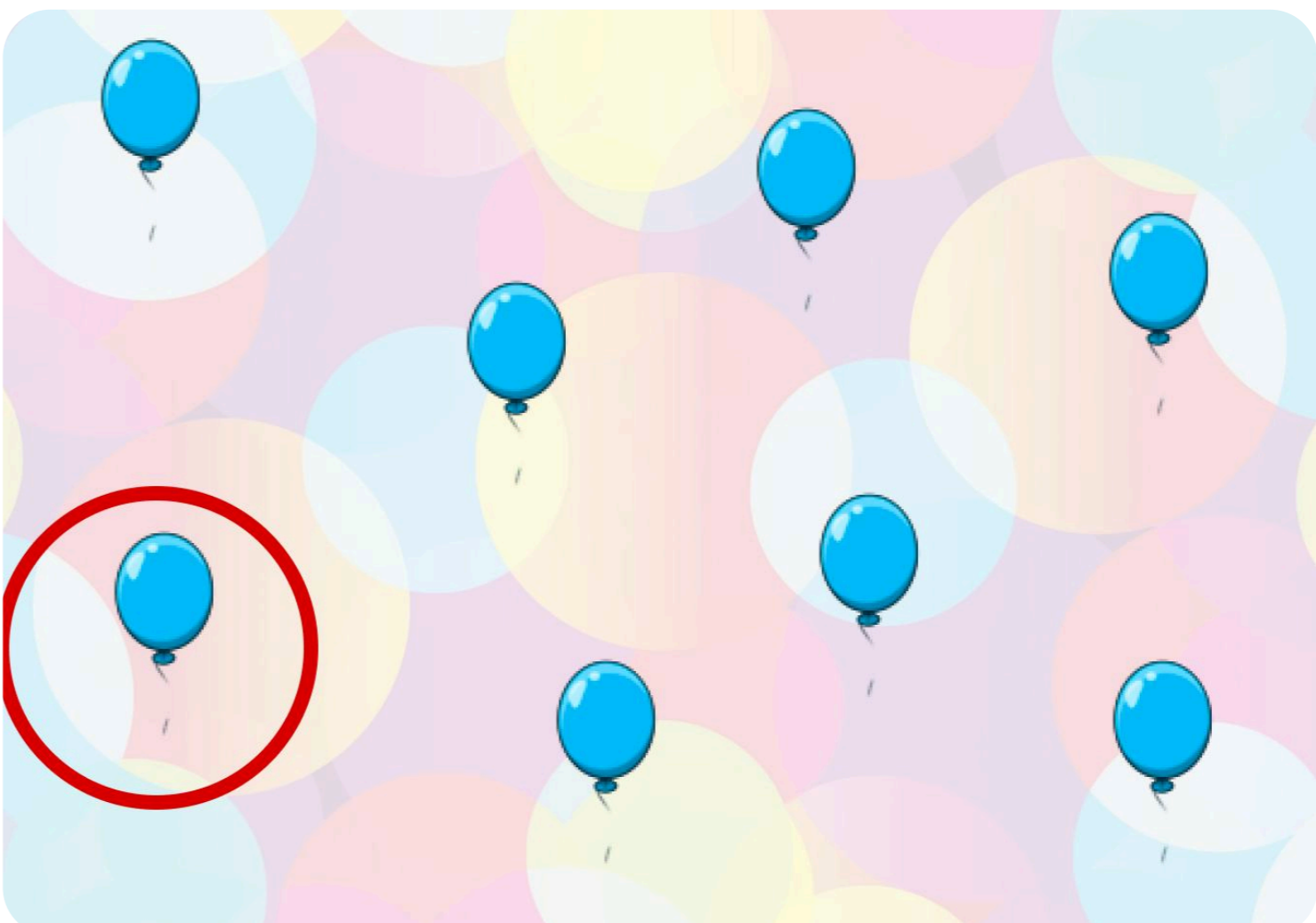


### Settings

- Educators and caregivers can tailor settings like **high-contrast mode**, **sound**, and **haptics** to support each child's unique sensory and cognitive profile.
- Supports **screen tap** and external **switch use**, with easy pairing and calibration.
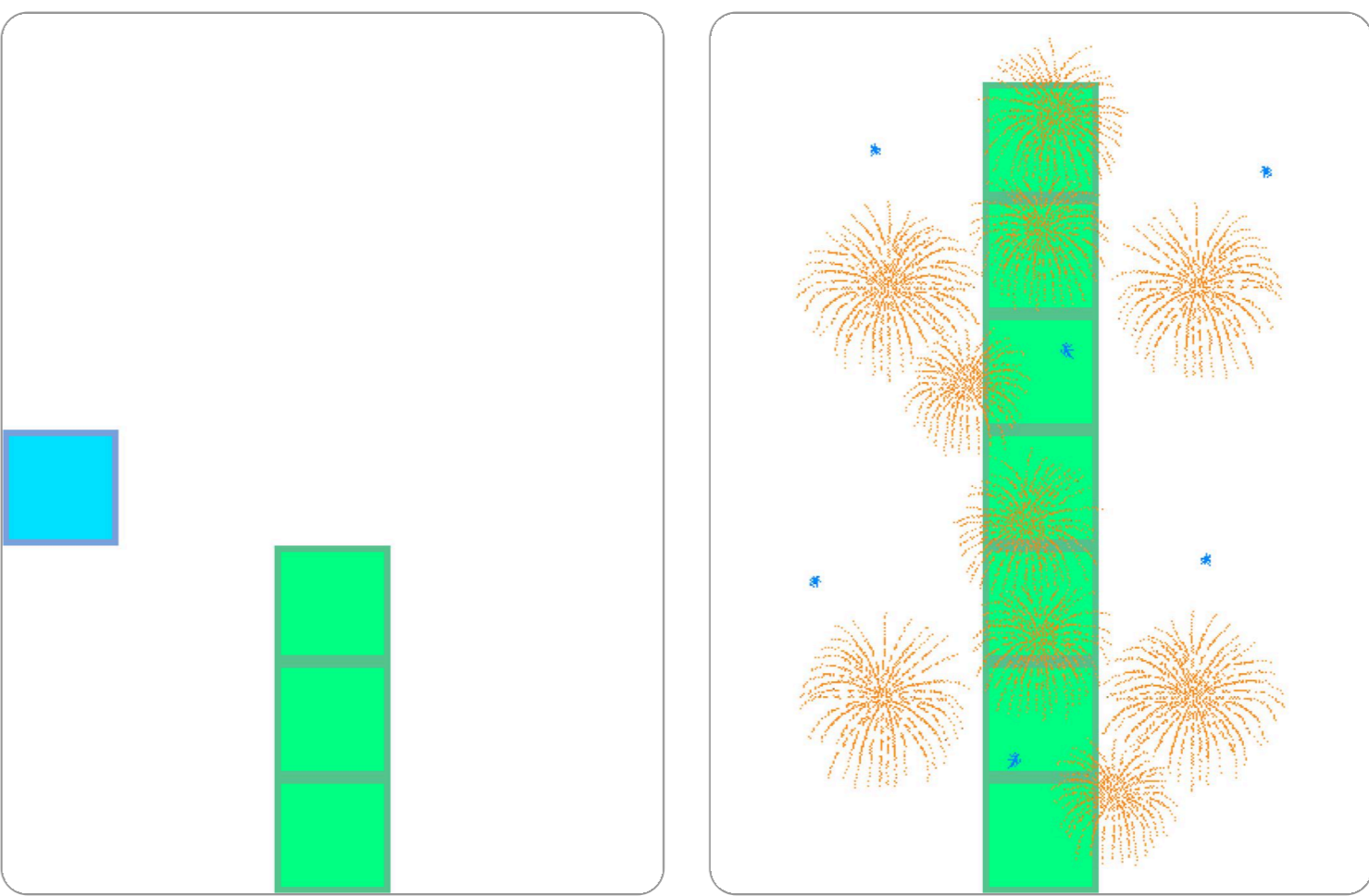


### Help Center

- Provides step-by-step answers to common **setup** and **troubleshooting** questions, including enabling switch access, using high contrast mode, and fixing connection issues.
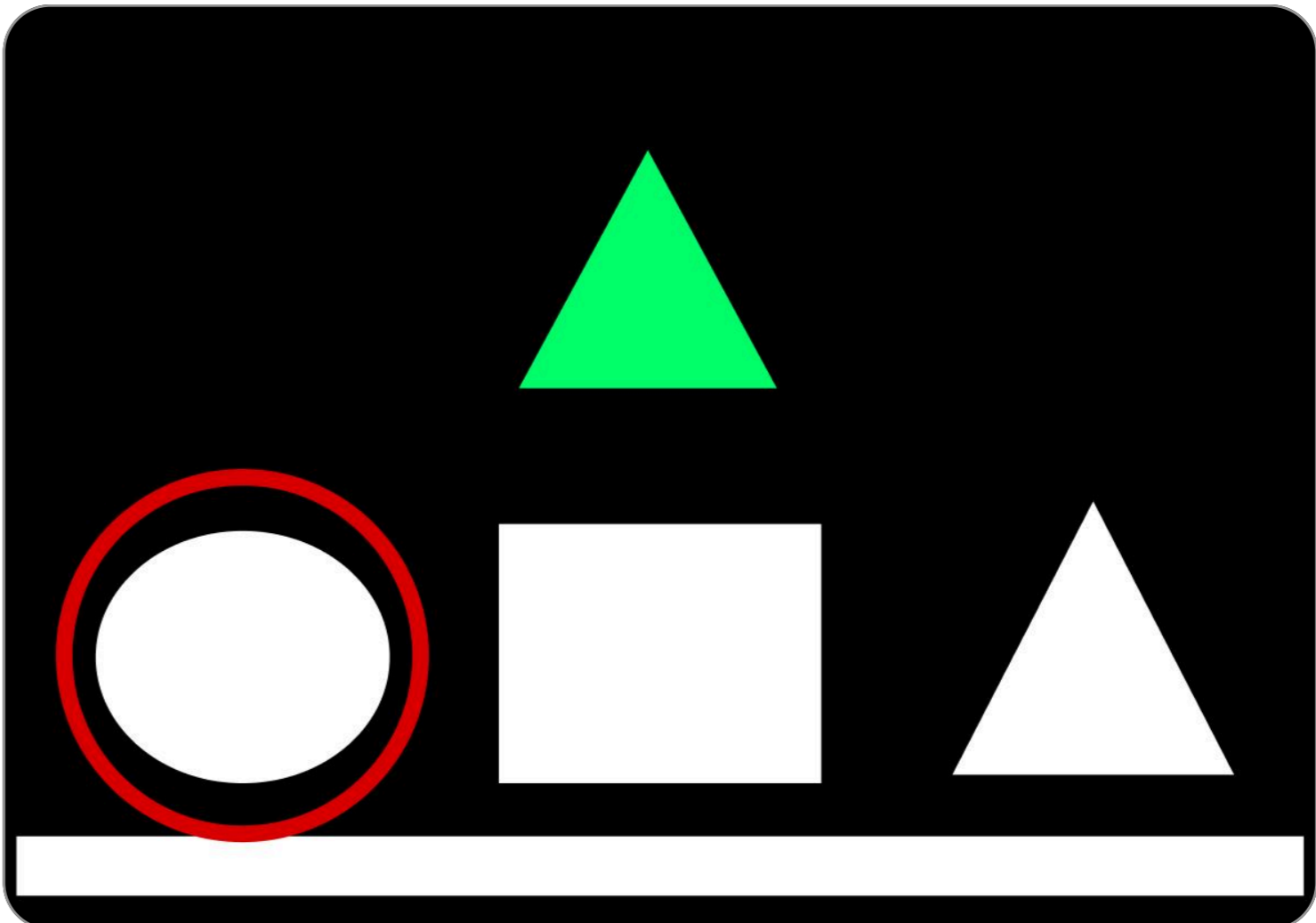
## 👤 Functional Games



### Pop the Balloon

- Theme: Cause and Effect
- Press the button on the switch to pop the balloons!
- Some games will implement a **scanning pattern** that will automatically move a selector across interactive elements.



### Stacking Blocks

- Theme: Timing
- Press the button on the switch to stack the blocks as tall as you can!
- Games will include **feedback and haptics** in response towards successful play.
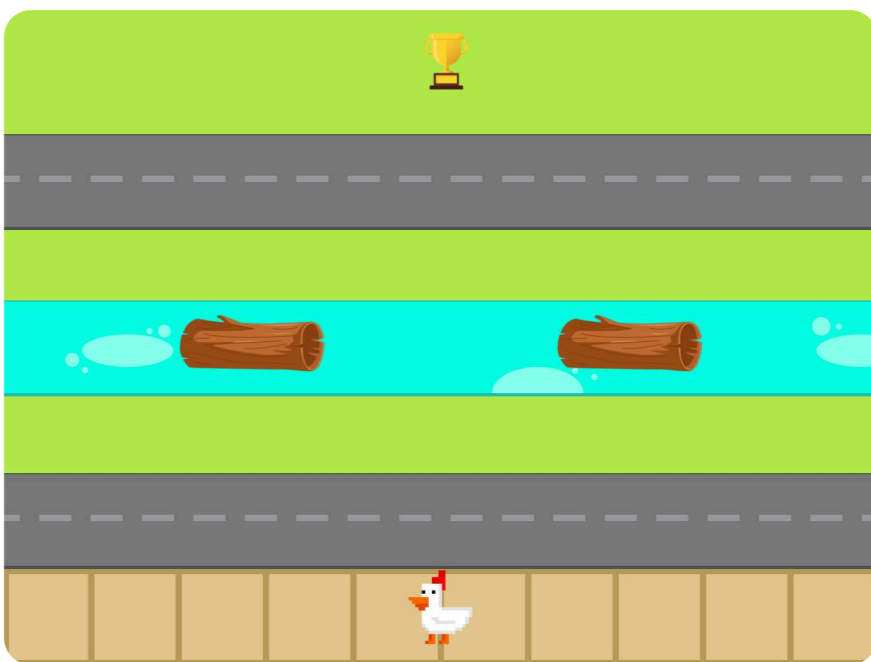


### Sorting Game

- Theme: Classification
- Press the button on the switch to sort objects into the correct categories!
- **High contrast mode** will be available for all the games on the app.

## </> In Development Games



**Treasure Hunt**



**Crossy Roads**



**Music Play**

These games are still prototypes and aren't fully functional with switches yet! But these games involve group play and cover developmental themes such as timing, motor planning, exploration, and creativity.