# Circuit 4C: "DIY Who Am I?" Game

"DIY Who Am I?" is based on the popular Hedbanz game or HeadsUp! app. It's a fun party game in which a player holds an LCD screen to his/her forehead, and other players give hints to help the player with the LCD guess the word on the screen.

**YOU NEED**


LCD DISPLAY


POTENTIOMETER


PUSH BUTTON


PIEZO BUZZER


20 JUMPER WIRES

AA BATTERY HOLDER

DUAL LOCK TAPE

4 AA BATTERIES (NOT INCLUDED)

SCISSORS

## NEW COMPONENTS

**4XAA BATTERY HOLDER:** Included in your kit is a 4-cell AA battery holder. The 5-inch cable is terminated with a standard barrel jack connector. The connector mates with the barrel jack on the RedBoard, allowing you to easily make your project battery powered.

## NEW CONCEPTS

**BUTTON DEBOUNCE:** When working with momentary buttons, it is usually necessary to add button debouncing to your code. This is because the code that is meant to execute when the button is pressed may execute faster than you can press and release the button (microcontrollers are fast!). The simplest way to debounce a button is to add a small delay to the end of your code. This sketch adds a 500 millisecond delay at the end of `loop()` to account for this. This simple addition will prevent a word from getting skipped when you press the button for the game.

For a more complex example of button debouncing, in the Arduino IDE open **File** > **Examples** > **02.Digital** > **Debounce.**

**STRINGS:** Strings are used to print words and even sentences to an LCD or the Serial Monitor. Strings are actually just an array of characters with a null character at the end to let the program know where the end of the string is.

**ARRAY OF STRINGS:** In circuit 2A you used an array of characters to represent musical notes. In this program, you'll want to make an array of strings. Strings use multiple characters to make words, so you'll need to use a little trick to put them in an array. The trick is to use a pointer. When you declare your array, you'll use an asterisk (*) after the `char` data type, as follows:

```
const char* arrayOfStrings =
{"Feynman" "Sagan", "Tyson",
"Nye"};
```