User Test Notes: Amelie (Rising 9th Grader, Los Angeles)

Test 1: describe() in starter code

Initial Exploration

- Amelie immediately focused on the describe() function and the comment: *“Help blind people know what you're doing on the screen.”*
- She interpreted the function as: *“Helping people who can’t see what you’re doing know what it looks like. It’s referring to the gray canvas.”*
- She said the code inside the parentheses (e.g., background(220)) is *“what gets drawn.”*

Understanding code

- She guessed that 220 might be *“how much space it’s gonna draw for you.”*
- Upon running the code, she observed: *“It made a gray box... a 400 by 400 pixel gray canvas.”*
- When asked why it was gray, she referred to both the visual output and the color picker: *“It says to be gray right here in the describe and it has the gray square.”*
- When asked how she would change the background color, she went to the word “gray” in the `describe()` function. She changed the color to “red”, which created a color-picker option for her. She opened the color picker and chose a red again.

Initial state:

```
function setup() {
  createCanvas(400, 400);

  // Help blind or low-vision screen reader users understand your sketch.
  describe("A 400 by 400 pixel gray canvas.");
}

function draw() {
  background(220);
}
```

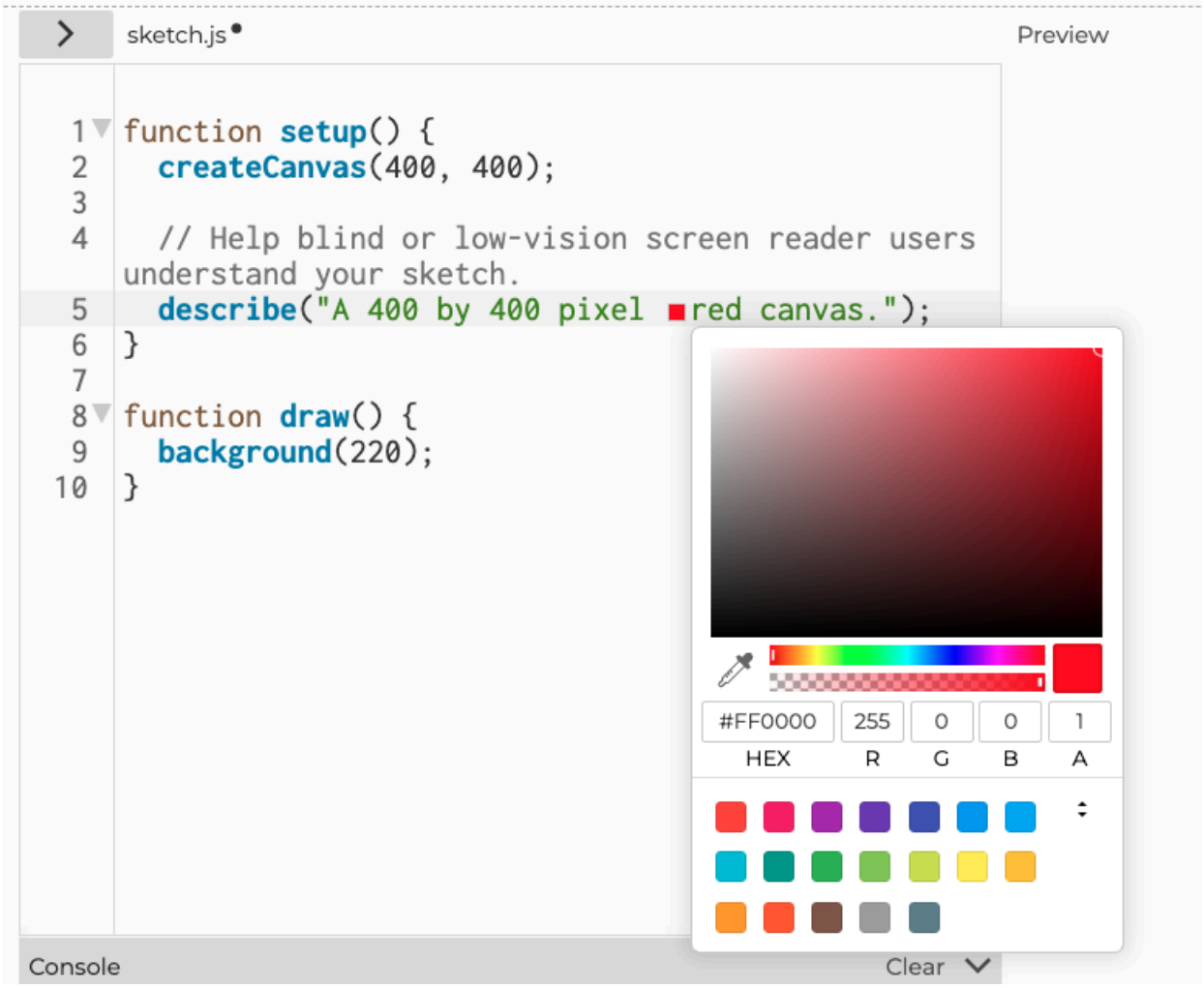
Changed the color to red:

```
function setup() {
  createCanvas(400, 400);

  // Help blind or low-vision screen reader users understand your sketch.
  describe("A 400 by 400 pixel red canvas.");
}

function draw() {
  background(220);
}
```

Got curious about the red square and clicked it:



Was given a RGB code:

```
1
2  function setup() {
3    createCanvas(400, 400);
4
5    // Help blind or low-vision screen reader users understand
   your sketch.
6    describe("A 400 by 400 pixel ■rgb(213,67,67) canvas.");
7  }
8
9  function draw() {
10   background(220);
11 }
```

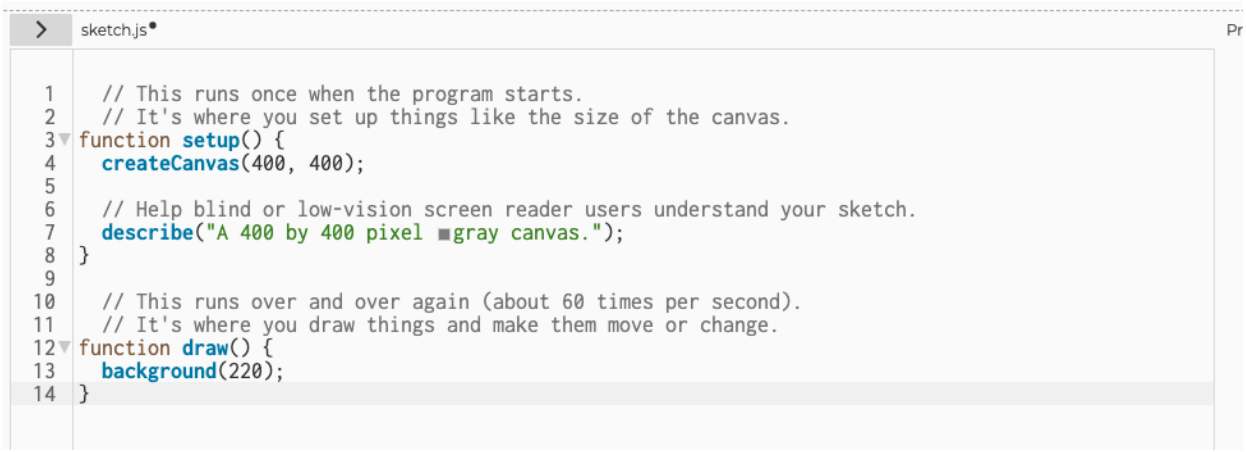
Troubleshooting / Getting Stuck

- Tried changing the background color using the color picker linked to describe().
- Pressed "Run" but canvas remained gray. She began to feel unsure and stuck.
- Tried editing the draw() function manually. She entered new color values from the color picker that she chose in the `describe()` function: rgb(213,67,67).
- The cookie banner blocked the console, which she attempted to read for feedback.
- Experimented with changing the 220 value directly. When she entered 4, the canvas turned black.
- Tried pasting a hex code in place of the number, which didn't work. Expressed frustration and confusion.

Understanding describe() and Screen Readers

- When asked what the describe() comment was referring to, she paused and said: *"Helping them know what you made the computer do."*
- Thought a screen reader might be: *"A person that can read on screens."*
- Asked: *"Is the description for someone who doesn't know how to read code, so they know what it's doing?"*
- Said she would benefit from more comments written in plain English to help explain the structure of

I mocked this up for her and she said, enthusiastically, "*Yes, this is what I would want. Otherwise I have no idea what setup and function draw does."*



Note: When she went back to her code, she realized that the describe function needed to be updated to say that she made a black screen instead of a gray screen. She felt worried that if she didn't update the describe function that the blind person would have the wrong information.

Test 2: Working with Coordinates

- Noticed the coordinate display followed the mouse: *"I think this is showing where the mouse is on the canvas, its x and y coordinates."*
- Connected it to math class: *"I've seen these on graphs. It shows you certain points on your screen."*
- Drew a circle and experimented with changing the x and y values.
- I prompted her to try and draw three different circles on the screen. At first, she tried to click and drag the circle on the canvas, but realized she had to manually type new coordinates:
  "The only way to move the circle is to type a different number, right?"

Frustrations & Suggestions

- After successfully drawing three different circles, I asked her what would make this feature easier to use. She expressed that she wanted a way to "freeze" or save the x/y values so she could move her mouse and still type them in: *"I wish the numbers stayed so I could move my mouse around... I might forget."*
- She found a work around by moving the mouse on the screen, leaving the mouse there, then moving to her keyboard to type in the code. She used her up/down arrow keys to navigate her code editor.
- She found the coordinate system counterintuitive:
  "If you're used to a graph, you expect y to be on the left and x on the bottom. I would have expected a coordinate ruler on the edges."

Test 3: Public / Private A-B Testing

- Preferred Version A of the interface: "*It's simpler and the color is brighter, so it's easier to see when something is private vs. public."*