

Name:

Date:

Class:

## Simon Decoded Worksheet

### Design Challenge:

Your team is part of an engineering firm that has been tasked to make an analog version of Simon that can be used anywhere, at any time.

### Research:

Take some time to play Simon online. ([Click here to play.](#)) Record your observations and what you learn about the game. As you explore the game, you are engaging in decomposition, pattern recognition, and abstraction.

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**Brainstorm:**

Record all possible solutions. Go wild and write down as many ideas as you can think of!

**Select a Solution:**

Select one solution to prototype. Keep in mind the materials available and explain why your group chose this solution.

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**Testing and Debugging:**

Test your solution with your group. Identify any errors and make necessary adjustments. Note your changes here.

**Final Design:**

Record your final design solution here. Be detailed: What are the rules of your game? How does it achieve the design challenge?

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### Play the Game!

Use the tables and directions below as a template for your gameplay. Create new tables as needed to record data of your games.

1. Assign roles:

Role	Name
<b>Randomizer (Dealer)</b>	
<b>Scorekeeper</b>	
<b>Player</b>	

2. Have the randomizer shuffle the cards as many times as they want.
3. Have the scorekeeper write down the order of the first 10 colors in the table below.
4. Have the scorekeeper set the stopwatch to zero.
5. Have the scorekeeper start the stopwatch when the player begins.
6. Stop the stopwatch when the player answers with a color not in its proper color sequence (CS).
7. Record the time.

CS #1	CS #2	CS #3	CS #4	CS #5	CS #6	CS #7	CS #8	CS #9	CS #10	END TIME

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**Reflection Questions:**

1. What happens as the sequence becomes longer?
2. What do you think would happen if more colored cards were added?
3. When did it become more complicated for you to keep up with the sequence, and why?
4. Does it require more mental focus to remember the sequences?
5. Explain what method(s) you used to memorize the color patterns.
6. How do you think your brain is like a computer?