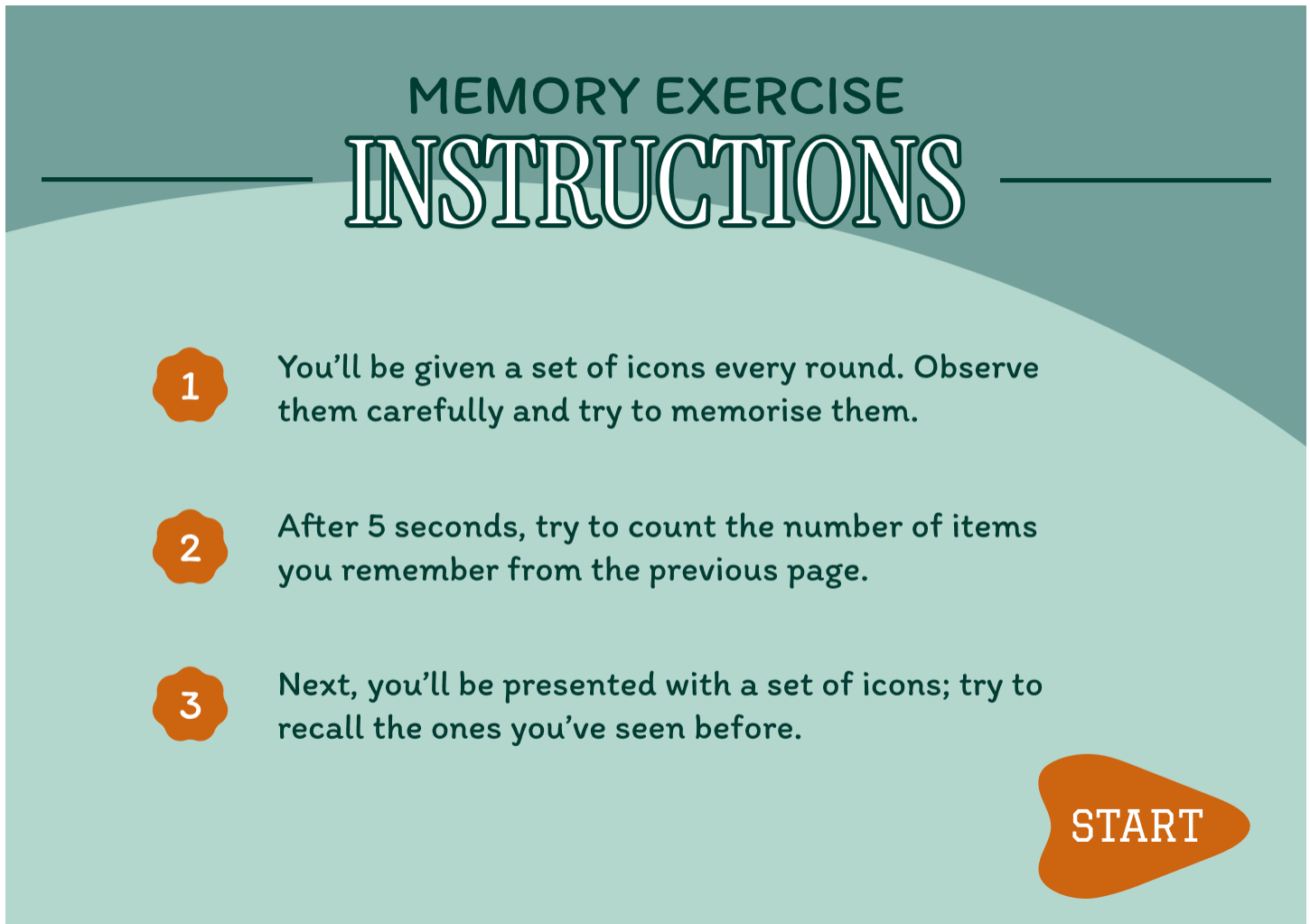


**EXPERIMENT 1:**  
**CHUNKING, RECOGNITION AND RECALL**

Design a UI where users recall visual elements (e.g., icons or text chunks). Evaluate the effect of chunking on user memory.

FRAME 1: INSTRUCTION PAGE



Chunking is a cognitive strategy that breaks down information into smaller, manageable units, making it easier to process and retain. The Memory Recall Task instruction page effectively utilizes chunking in the following ways:

1. Clear and Sequential Numbering

- The instructions are broken down into six steps, making it easier to follow.
- Each step presents one key action in a structured manner, reducing cognitive overload.

2. Logical Grouping of Information

- Observation Phase (Step 1) → Users learn about what they will see and what they should do.
- Memorization Strategy (Step 2) → Encourages users to focus on remembering items.
- Recall Phase (Step 3) → Explains how users will recall information.

### 3. Visual Hierarchy and Design Elements

- Bold, large title ("MEMORY EXERCISE") → Grabs attention and clearly states the task.
- Bullet points and spacing → Reduce clutter, enhancing readability.
- Highlighted "START" button → Signals the next step, keeping navigation intuitive.

### 4. Time Constraint Reinforcement

- The steps explicitly state that the user has 5 seconds to view the page.
- This reinforces expectations while subtly urging users to focus.

### 5. Simplicity and Clarity

- Instructions use short, direct sentences, avoiding unnecessary complexity.
- The active voice makes it more engaging and action-oriented.

## FRAME 2: CHUNKING PAGE



This screen represents the Chunking Phase of a Memory Recall Task, where users observe and memorize different icons within a limited time. Below is a breakdown of its key components:

### 1. Purpose of the Screen

This is the visual memory encoding phase, where users view and group items mentally before recalling them.

## 2. Key Elements and UI Components

- Countdown Timer (Top Left - Red Circle: "00:05") Indicates that users have 5 seconds to observe and memorize the displayed items.  
The bright orange color and bold text create urgency, ensuring users stay focused.
- Grid of Icons  
Various icons are displayed in a 6x3 grid format.  
These icons are visually distinct yet grouped by similarities, encouraging chunking strategies like:
  - o Categorizing by theme (e.g., activities, food, transportation).
  - o Grouping similar colors or backgrounds (e.g., pink, blue, or yellow tiles).
  - o Associating shaped icons (e.g., circles, rectangles).

## 3. How the Chunking Phase Works

- Users scan the grid and look for patterns or related items to create mental chunks.
- The countdown timer limits observation time, forcing quick memory strategies.
- Once time is up, users transition to the recall phase, where they must identify previously seen items.

## 4. Cognitive and UX Benefits of Chunking

- Enhances short-term memory by allowing users to recall groups of information instead of individual elements.
- Reduces cognitive overload by helping users organize data efficiently.
- Improves pattern recognition, making recall easier and more accurate.

### FRAME 3: RECALL PAGE



This screen represents the Selection Phase of a Memory Recall Task, where users recall and choose the items they remember from the previous Chunking Phase. Below is a breakdown of its components:

#### 1. Purpose of the Screen

- This is the memory retrieval stage, where users select the items they remember seeing in the previous phase.
- The goal is to test the effectiveness of chunking and short-term memory retention.

#### 2. Key Elements and UI Components

- Title & Instructions
  - "NOW TRY TO RECOGNISE!:" – Clear instruction guiding the user to choose remembered items.
- Grid of Icon Choices
  - A set of seven icons are presented as multiple-choice options.
  - Some icons were previously displayed, while others are distractors (new icons added to confuse users).
  - Users must identify which icons appeared in the Chunking Phase.
- "RESULTS" Button (Bottom Center)
  - Once users have made their selections, they press "SUBMIT" to confirm their recall choices.

#### 3. How the Selection Phase Works

- Users analyze the displayed icons and recall which ones they saw in the Chunking Phase.
- They select the remembered icons using the radio buttons below each option.
- Some icons are distractors, testing whether the user's memory is accurate or if they mistakenly recall incorrect icons.
- Clicking "RESULTS" finalizes their choices, leading to a results or feedback screen.

#### 4. Cognitive and UX Benefits

- Tests memory accuracy by comparing user selections with previously displayed items.
- Incorporates distractors to evaluate how well users distinguish real vs. false memories.
- User-friendly interface with clear selection mechanics (radio buttons).
- Gamified elements (bee character, bright colors) make the task engaging.



This screen represents the Score & Feedback Phase of the Memory Recall Task, where users receive their performance evaluation based on the selections made in the previous Recall Phase.

#### 1. Purpose of the Screen

- Provides feedback on recall accuracy by showing the number of correct answers.
- Allows users to decide their next action (continue, restart, or exit).

#### 2. Key Elements & UI Components

- Title & Score Display
  - "YOUR RESULTS" –Indicates that the user's performance is being displayed.
  - A scoreboard with the user's score (5/7) in bold, showing correct answers out of total attempts.
  - "Good job!" – Positive reinforcement to the user, improving their overall experience and making the interaction feel more personable.
- Retry Button (Right Side)

#### 3. How This Phase Works

- The game evaluates the user's selections from the Recall Phase.
- It calculates the accuracy score (5/7 in this case) and displays it.
- Users review their performance and can exit or choose to play again if they wish.

#### 4. Cognitive & UX Benefits

- Instant feedback helps users track their memory performance.
- Multiple options (Continue, Restart, Exit) give users control over their learning experience.
- Visual & gamified elements make the task engaging and less stressful.

#### PROTOTYPE LINK:

<https://www.figma.com/proto/A4P2b8ubGvHglehntFIUym/Chunking?node-id=1-2&t=gk2cX74y80fLFpMy-0&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=1%3A2>