

Working Memory- Sternberg Paradigm

Working Memory: Definition

Working memory is the short-term system that temporarily holds and manipulates information for quick mental tasks.

Sternberg Task- Definition:

- In the Sternberg paradigm, the computer first shows participants a short list of items (the memory set).
- After a short delay, a single item (the probe) appears on screen.
- The participant presses one key if the probe was in the memory set (positive probe) and another key if it was not (negative probe).

For tech team's reference:

1. Task Overview

- **Main rounds:** 15 sets of stimuli presented sequentially.
- **Probe Rounds:** 30–65 per memory set depending on span and population.

Main Trials (Learning Rounds)-Definition:

- These are the “study” or “learning” rounds of the task.
- In each main trial, participants see a short list (set) of items one after another and are asked to remember them.
- Example: They might see $A \rightarrow D \rightarrow F$ (for adolescents) or $K7 \rightarrow C9 \rightarrow R2$ (for adults).

Probe Trials (Testing Rounds)- Definition:

- These are the “testing” rounds that come after each main round.
- Participants are shown single items (probes) one by one and must decide whether the item was in the memory set or not.
- For each probe:
 - If it was in the memory set → Positive probe (press “Yes”)
 - If it was not in the memory set → Negative probe (press “No”)

Examples:

- Memory set = A, D, F → Probe = D → *Positive*
- Memory set = A, D, F → Probe = G → *Negative*

2. Main Rounds Stimuli

- **Adolescents:** Letters only (A–Z), **memory set sizes** = 1, 3, 5 letters, sequential & alternating presentation (1→3→5)
- **Adults:** Alphanumeric (e.g., K7, C9), **memory set sizes** = 2, 4, 6 digits, sequential & alternating presentation (2→4→6)

3. Probe Round Numbers by Span

- **Adolescents:**
 - 1-letter → 30 probe trials

- 3-letter → 50 probe trials
- 5-letter → 50 probe trials
- **Adults:**
 - 2-alphanumeric digits → 30 probe trials
 - 4-alphanumeric digits → 65 probe trials
 - 6-alphanumeric digits → 65 probe trials

4. Rounds Flow

1. The participant first reads the **Main Task Instructions**.

Adolescents (14 to 18):

“Welcome to the Memory Challenge Game! You will see a set of letters appear on the screen **one by one**. After a short pause, you will be shown a letter and need to decide whether it was part of the set you just saw. If you saw it before, press **Yes**; if not, press **No**. Take your time and try to respond as quickly as you can. Don’t worry if it seems tricky at first — we’ll start with a few practice rounds to get you ready.”

Adults (18 to 22):

“Welcome to the Memory Challenge Game! You will see sequences of letter-number pairs (**for example: A1, C3**) appear on the screen **one by one**. After a few seconds, you will be shown a series of letter-number pairs and need to decide if it was part of the sequence you just saw. if you saw it before, press **Yes**; if not, press **No**. This is just a practice round, so relax and get used to how the game works!”

2. Participants complete **practice trials**

Practice Task Trial Flow – Adolescents (14–18 years)

- **Memory Set Spans:** 1-letter
- **Presentation:** Letters will be presented one by one.
- **Trial Steps:**

1. **Fixation Cross:** “+” for 0.3 s
2. **Memory Set:** Present a 1, letter stimuli for 1.1s
3. **Retention Interval:** Blank screen for 1 s
4. **Probe Display:** Centered letter with Yes/No buttons, remains visible until response or time-out each for 6 seconds.

a) **Participant Response:** Chosen option highlighted in light blue

b) **No Response:** Display “Time is up!” for 1 s

5. **Fixation Cross:** “+” for 0.3 s

6. **Next :**

- Repeat steps 4-5 for all probe trials of the current stimuli.

Feedback Rules for practice task:

(a) Correct Response (Probe matches memory set and participant presses correctly):

- Show message: “Correct! You remembered it right.”
- Duration: 1 s

(b) Incorrect Response (Pressed wrongly or missed correct probe):

- Show message: “That’s okay—try to remember the set carefully.”

- Duration: 1.5 s

(c) No Response / Delay Alert:

If no response within the allowed response window (2.5 s for adolescents, 2 s for adults):

- Play **soft alert tone**
- Show text: **“Please press your choice quickly!”**
- Duration: 1 s

4. General Feedback Between Practice Blocks

After each practice block (e.g., 10–12 trials):

- If **accuracy $\geq 70\%$** :
Show: **“Great work! You’re getting the hang of it.”**
- If **accuracy $< 70\%$** :
Show: **“Let’s try again! Focus and respond a bit faster.”**

Duration: 2 s before moving to the next block.

Practice Task Flow Table - Adolescents Version (to be displayed in the interface in same order)

Memory Set	Trial No.	Probe	Type	Options	Time given for each stimulus
K					1.1 seconds
	1	K	Positive	Yes / No	6 s
	2	A	Negative	Yes / No	6 s

	3	M	Negative	Yes / No	6 s
	4	K	Positive	Yes / No	6 s
	5	R	Negative	Yes / No	6 s
	6	K	Positive	Yes / No	6 s
	7	L	Negative	Yes / No	6 s
	8	B	Negative	Yes / No	6 s
	9	K	Positive	Yes / No	6 s
	10	K	Positive	Yes / No	6 s
	11	T	Negative	Yes / No	6 s
	12	C	Negative	Yes / No	6 s
	13	K	Positive	Yes / No	6 s
	14	K	Positive	Yes / No	6 s
	15	K	Positive	Yes / No	6 s
	16	D	Negative	Yes / No	6 s
	17	K	Positive	Yes / No	6 s

	18	S	Negative	Yes / No	6 s
	19	K	Positive	Yes / No	6 s
	20	F	Negative	Yes / No	6 s

Practice Task Trial Flow – Adults (18–22 years)

- **Memory Set Spans:** 2-alphanumeric digits
- **Presentation:** Letters will be presented one by one.
- **Trial Steps:**

5. **Fixation Cross:** “+” for 0.3s

6. **Memory Set:** Present a 2, alphanumeric stimuli for 1.1 s

7. **Retention Interval:** Blank screen for 1 s

8. **Probe Display:** Centered letter with Yes/No buttons, remains visible until response or time-out, each for 4.5 seconds.

c) **Participant Response:** Chosen option highlighted in light blue

d) **No Response:** Display “Time is up!” for 1 s

5. **Fixation Cross:** “+” for 0.3 s

6. **Next :**

- Repeat steps 4-5 for all probe trials of the current stimuli.

Practice Task Flow Table - Adults Version (to be displayed in the interface in same order)

Memory Set	Trial No.	Probe	Type	Options	Time displayed for each stimulus
C9 B3					1.3 seconds each.
	1	C9	Positive	Yes / No	4.5 seconds
	2	A1	Negative	Yes / No	4.5 seconds
	3	B3	Positive	Yes / No	4.5 seconds
	4	D4	Negative	Yes / No	4.5 seconds
	5	F2	Negative	Yes / No	4.5 seconds
	6	C9	Positive	Yes / No	4.5 seconds
	7	H8	Negative	Yes / No	4.5 seconds
	8	B3	Positive	Yes / No	4.5 seconds
	9	K7	Negative	Yes / No	4.5 seconds
	10	C9	Positive	Yes / No	4.5 seconds
	11	B3	Positive	Yes / No	4.5 seconds

	12	L1	Negative	Yes / No	4.5 seconds
	13	D4	Negative	Yes / No	4.5 seconds
	14	C9	Positive	Yes / No	4.5 seconds
	15	B3	Positive	Yes / No	4.5 seconds
	16	F2	Negative	Yes / No	4.5 seconds
	17	C9	Positive	Yes / No	4.5 seconds
	18	B3	Positive	Yes / No	4.5 seconds
	19	H8	Negative	Yes / No	4.5 seconds
	20	A1	Negative	Yes / No	4.5 seconds
	21	C9	Positive	Yes / No	4.5 seconds
	22	B3	Positive	Yes / No	4.5 seconds
	23	K7	Negative	Yes / No	4.5 seconds
	24	D4	Negative	Yes / No	4.5 seconds
	25	C9	Positive	Yes / No	4.5 seconds

3. After practice, a **one-line instruction** appears, where participants are then directed to the main task.

Adolescents (14–18 years)

“Great job finishing the practice! Now get ready for the real task. Tap ‘**Let’s Go!**’ below and the game begins!””

Adults (18–22 years)

“Great job finishing the practice! Now get ready for the real task. Tap ‘**Let’s Go!**’ below and the game begins!””

4. Participants then proceed to the Main Task

Main Task Round level Flow – Adolescents (14–18 years)

- **Memory Set Spans:** 1-letter, 3-letter, 5-letter
- **Presentation:** Letters will be presented one by one in an alternating digit span presentation (1→3→5)
- **Trial Steps:**
 1. **Fixation Cross:** “+” for 0.3s
 2. **Memory Set:** Present a 1, letter stimuli for 1.1s
 3. **Retention Interval:** Blank screen for 1s
 4. **Probe Display:** Centered letter with Yes/No buttons, remains visible until response or time-out each for 6 seconds.
- e) **Participant Response:** Chosen option highlighted in light blue
- f) **No Response:** Display “Time is up!” for 1 s

5. Fixation Cross: “+” for 0.3 s

6. Next :

- Repeat steps 4-5 for all probe trials of the current stimuli.
- After completing all probes of 1-letter span, move to 3-letter span,

- **Trial Steps:**

7. Fixation Cross: “+” for 0.3 s

8. Memory Set: Present a 3 letters stimuli for 1.1 s

9. Retention Interval: Blank screen for 1 s

10. Probe Display: Centered letter with Yes/No buttons, remains visible until response or time-out each for 6 seconds.

- a) **Participant Response:** Chosen option highlighted in light blue.
- b) **No Response:** Display “Time is up!” for 1s.

11 . Fixation Cross: “+” for 0.3 s

12. Next :

- a. Repeat steps 10-11 for all probe trials of the current stimuli.
- After completing all probes of 3-letter span, move to 5-letter span

- **Trial Steps:**

13. Fixation Cross: “+” for 0.3 s

14. Memory Set: Present a 5 letters stimuli for 1.1 s

15. Retention Interval: Blank screen for 1s

16. Probe Display: Centered letter with Yes/No buttons, remains visible until response or time-out each for 6 seconds.

a) Participant Response: Chosen option highlighted in light blue.

b) No Response: Display “Time is up!” for 1 s.

17 . Fixation Cross: “+” for 0.3 s

- **18) Next :**
Repeat steps 16-17 for all probe trials of the current stimuli
- After completing all probes of 5-letter span, we move alternating back to back presentations of 1-letter span (1-6), then 3letter - span (7-12) and 5-span (13-18) and so on until all the display of the main stimuli and its respective probe stimuli are completed.

Main Task Flow Table Adolescents Version- 1st triad of stimuli (1,3,5) (to be displayed in the computer interface in the same order)

- **Instructions for Adolescents:**
“Now it’s time for the full game! You will see a set of letters appear on the screen one by one. After a short pause, you will see a series of letters and need to decide whether it was part of the set you just saw. Use the Yes or No buttons to make your

choice. The number of letters may gradually increase, making the game more challenging. Stay sharp and have fun!”

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	G				1.1 seconds	1
1		G	Positive	Yes / No	6 s	1
2		A	Negative	Yes / No	6 s	1
3		G	Positive	Yes / No	6 s	1
4		G	Positive	Yes / No	6 s	1
5		G	Positive	Yes / No	6 s	1
6		P	Negative	Yes / No	6 s	1
7		S	Negative	Yes / No	6 s	1

8		G	Positive	Yes / No	6 s	1
9		K	Negative	Yes / No	6 s	1
10		G	Positive	Yes / No	6 s	1
11		D	Negative	Yes / No	6 s	1
12		G	Positive	Yes / No	6 s	1
13		P	Negative	Yes / No	6 s	1
14		G	Positive	Yes / No	6 s	1
15		S	Negative	Yes / No	6 s	1
16		K	Negative	Yes / No	6 s	1
17		G	Positive	Yes / No	6 s	1

18		D	Negative	Yes / No	6 s	1
19		M	Negative	Yes / No	6 s	1
20		G	Positive	Yes / No	6 s	1
21		G	Positive	Yes / No	6 s	1
22		S	Negative	Yes / No	6 s	1
23		K	Negative	Yes / No	6 s	1
24		G	Positive	Yes / No	6 s	1
25		D	Negative	Yes / No	6 s	1
26		M	Negative	Yes / No	6 s	1
27		G	Positive	Yes / No	6 s	1

28		G	Positive	Yes / No	6 s	1
29		S	Negative	Yes / No	6 s	1
30		G	Positive	Yes / No	6 s	1

Trial No.	Memory Set	Probe	Type	Options	Time Displayed during each Stimulus	Letter Span
	A F R				1.1 seconds each	
31		D	Negative	Yes/No	6 s	3
32		R	Positive	Yes / No	6 s	3

33		A	Positive	Yes / No	6 s	3
34		Z	Negative	Yes / No	6 s	3
35		K	Negative	Yes / No	6 s	3
36		M	Negative	Yes / No	6 s	3
37		G	Negative	Yes / No	6 s	3
38		F	Positive	Yes / No	6 s	3
39		R	Positive	Yes / No	6 s	3
40		A	Positive	Yes / No	6 s	3
41		L	Negative	Yes / No	6 s	3
42		P	Negative	Yes / No	6 s	3

43		F	Positive	Yes / No	6 s	3
44		R	Positive	Yes / No	6 s	3
45		B	Negative	Yes / No	6 s	3
46		A	Positive	Yes / No	6 s	3
47		K	Negative	Yes / No	6 s	3
48		M	Negative	Yes / No	6 s	3
49		F	Positive	Yes / No	6 s	3
50		J	Negative	Yes / No	6 s	3
51		D	Negative	Yes / No	6 s	3
52		A	Positive	Yes / No	6 s	3

53		R	Positive	Yes / No	6 s	3
54		P	Negative	Yes / No	6 s	3
55		F	Positive	Yes / No	6 s	3
56		K	Negative	Yes / No	6 s	3
57		S	Negative	Yes / No	6 s	3
58		B	Negative	Yes / No	6 s	3
59		F	Positive	Yes / No	6 s	3
60		M	Negative	Yes / No	6 s	3
61		A	Positive	Yes / No	6 s	3
62		L	Negative	Yes / No	6 s	3

63		D	Negative	Yes / No	6 s	3
64		F	Positive	Yes / No	6 s	3
65		K	Negative	Yes / No	6 s	3
66		A	Positive	Yes / No	6 s	3
67		R	Positive	Yes / No	6 s	3
68		M	Negative	Yes / No	6 s	3
69		F	Positive	Yes / No	6 s	3
70		R	Positive	Yes / No	6 s	3
71		D	Negative	Yes / No	6 s	3
72		B	Negative	Yes / No	6 s	3

73		A	Positive	Yes / No	6 s	3
74		F	Positive	Yes / No	6 s	3
75		K	Negative	Yes / No	6 s	3
76		R	Positive	Yes / No	6 s	3
77		P	Negative	Yes / No	6 s	3
78		A	Positive	Yes / No	6 s	3
79		R	Positive	Yes / No	6 s	3
80		F	Positive	Yes / No	6 s	3

Trial No.	Memory Set	Probe	Type	Options	Time Displayed during each stimulus	Letter Span
	B D H L Q				1.1 seconds each	
81		H	Positive	Yes/No	6 s	5
82		F	Negative	Yes / No	6 s	5
83		R	Negative	Yes / No	6 s	5
84		L	Positive	Yes / No	6 s	5
85		A	Negative	Yes / No	6 s	5
86		D	Positive	Yes / No	6 s	5
87		R	Negative	Yes / No	6 s	5

88		H	Positive	Yes / No	6 s	5
89		T	Negative	Yes / No	6 s	5
90		T	Negative	Yes / No	6 s	5
91		K	Negative	Yes / No	6 s	5
92		L	Positive	Yes / No	6 s	5
93		D	Positive	Yes / No	6 s	5
94		M	Negative	Yes / No	6 s	5
95		Q	Positive	Yes / No	6 s	5
96		P	Negative	Yes / No	6 s	5
97		I	Negative	Yes / No	6 s	5
98		S	Negative	Yes / No	6 s	5
99		B	Positive	Yes / No	6 s	5
100		L	Positive	Yes / No	6 s	5
101		E	Negative	Yes / No	6 s	5

102		G	Negative	Yes / No	6 s	5
103		H	Positive	Yes / No	6 s	5
104		Q	Positive	Yes / No	6 s	5
105		C	Negative	Yes / No	6 s	5
106		B	Positive	Yes / No	6 s	5
107		T	Negative	Yes / No	6 s	5
108		L	Positive	Yes / No	6 s	5
109		H	Positive	Yes / No	6 s	5
110		P	Negative	Yes / No	6 s	5
111		D	Positive	Yes / No	6 s	5
112		F	Negative	Yes / No	6 s	5
113		Q	Positive	Yes / No	6 s	5
114		O	Negative	Yes / No	6 s	5
115		K	Negative	Yes / No	6 s	5

116		B	Positive	Yes / No	6 s	5
117		M	Negative	Yes / No	6 s	5
118		L	Positive	Yes / No	6 s	5
119		D	Positive	Yes / No	6 s	5
120		R	Negative	Yes / No	6 s	5
121		U	Negative	Yes / No	6 s	5
122		F	Negative	Yes / No	6 s	5
123		H	Positive	Yes / No	6 s	5
124		B	Positive	Yes / No	6 s	5
125		L	Positive	Yes / No	6 s	5
126		H	Positive	Yes / No	6 s	5
127		M	Negative	Yes / No	6 s	5
128		H	Positive	Yes / No	6 s	5
129		Q	Positive	Yes / No	6 s	5

130		C	Negative	Yes / No	6 s	5
-----	--	---	----------	----------	-----	---

Main Task Flow Table Adolescents Version- 2nd triad of stimuli (1,3,5) (to be displayed in the computer interface in the same order)

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	E				1.1 seconds each	
131		F	Negative	Yes / No	6 s	1
132		E	Positive	Yes / No	6 s	1
133		E	Positive	Yes / No	6 s	1
134		A	Negative	Yes / No	6 s	1
135		G	Negative	Yes / No	6 s	1

136		E	Positive	Yes / No	6 s	1
137		H	Negative	Yes / No	6 s	1
138		E	Positive	Yes / No	6 s	1
139		E	Positive	Yes / No	6 s	1
140		J	Negative	Yes / No	6 s	1
141		K	Negative	Yes / No	6 s	1
142		E	Positive	Yes / No	6 s	1
143		L	Negative	Yes / No	6 s	1
144		E	Positive	Yes / No	6 s	1
145		E	Positive	Yes / No	6 s	1

146		Q	Negative	Yes / No	6 s	1
147		N	Negative	Yes / No	6 s	1
148		O	Negative	Yes / No	6 s	1
149		E	Positive	Yes / No	6 s	1
150		P	Negative	Yes / No	6 s	1
151		E	Positive	Yes / No	6 s	1
152		Q	Negative	Yes / No	6 s	1
153		E	Positive	Yes / No	6 s	1
154		E	Positive	Yes / No	6 s	1
155		E	Positive	Yes / No	6 s	1

156		S	Negative	Yes / No	6 s	1
157		T	Negative	Yes / No	6 s	1
158		E	Positive	Yes / No	6 s	1
159		E	Positive	Yes / No	6 s	1
160		V	Negative	Yes / No	6 s	1

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	S J M				1.1 seconds each	
161		S	Positive	Yes/No	6 s	3

162		A	Negative	Yes/No	6 s	3
163		N	Negative	Yes/No	6 s	3
164		K	Negative	Yes/No	6 s	3
165		M	Positive	Yes/No	6 s	3
166		B	Negative	Yes/No	6 s	3
167		C	Negative	Yes/No	6 s	3
168		S	Positive	Yes/No	6 s	3
169		J	Positive	Yes/No	6 s	3
170		D	Negative	Yes/No	6 s	3
171		R	Negative	Yes/No	6 s	3
172		E	Negative	Yes/No	6 s	3
173		F	Negative	Yes/No	6 s	3
174		S	Positive	Yes/No	6 s	3
175		M	Positive	Yes/No	6 s	3

176		H	Negative	Yes/No	6 s	3
177		J	Positive	Yes/No	6 s	3
178		M	Positive	Yes/No	6 s	3
179		I	Negative	Yes/No	6 s	3
180		S	Positive	Yes/No	6 s	3
181		J	Positive	Yes/No	6 s	3
182		K	Negative	Yes/No	6 s	3
183		M	Positive	Yes/No	6 s	3
184		L	Negative	Yes/No	6 s	3
185		P	Negative	Yes/No	6 s	3
186		M	Positive	Yes/No	6 s	3
187		J	Positive	Yes/No	6 s	3
188		S	Positive	Yes/No	6 s	3
189		Q	Negative	Yes/No	6 s	3

190		S	Positive	Yes/No	6 s	3
191		J	Positive	Yes/No	6 s	3
192		R	Negative	Yes/No	6 s	3
193		M	Positive	Yes/No	6 s	3
194		V	Negative	Yes/No	6 s	3
195		S	Positive	Yes/No	6 s	3
196		A	Negative	Yes/No	6 s	3
197		M	Positive	Yes/No	6 s	3
198		U	Negative	Yes/No	6 s	3
199		V	Negative	Yes/No	6 s	3
200		S	Positive	Yes/No	6 s	3
201		W	Negative	Yes/No	6 s	3
202		J	Positive	Yes/No	6 s	3
203		M	Positive	Yes/No	6 s	3

204		X	Negative	Yes/No	6 s	3
205		Y	Negative	Yes/No	6 s	3
206		S	Positive	Yes/No	6 s	3
207		Z	Negative	Yes/No	6 s	3
208		J	Positive	Yes/No	6 s	3
209		M	Positive	Yes/No	6 s	3
210		A	Negative	Yes/No	6 s	3

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
------------------	-------------------	----------------------------------	------------------------	-----------------------	--------------------

	F N I R V			1.1 seconds each	
211		I (Positive)	Yes/No	6 s	5
212		P (Negative)	Yes/No	6 s	5
213		R (Positive)	Yes/No	6 s	5
214		V (Positive)	Yes/No	6 s	5
215		F (Positive)	Yes/No	6 s	5
216		T (Negative)	Yes/No	6 s	5
217		C (Negative)	Yes/No	6 s	5
218		L (Negative)	Yes/No	6 s	5

219		N (Positive)	Yes/No	6 s	5
220		H (Negative)	Yes/No	6 s	5
221		V (Positive)	Yes/No	6 s	5
222		I (Positive)	Yes/No	6 s	5
223		R (Positive)	Yes/No	6 s	5
224		G (Negative)	Yes/No	6 s	5
225		Z (Negative)	Yes/No	6 s	5
226		U (Negative)	Yes/No	6 s	5
227		F (Positive)	Yes/No	6 s	5
228		O (Negative)	Yes/No	6 s	5
229		K (Negative)	Yes/No	6 s	5

230		N (Positive)	Yes/No	6 s	5
231		Y (Negative)	Yes/No	6 s	5
232		S (Negative)	Yes/No	6 s	5
233		V (Positive)	Yes/No	6 s	5
234		J (Negative)	Yes/No	6 s	5
235		R (Positive)	Yes/No	6 s	5
236		X (Negative)	Yes/No	6 s	5
237		I (Positive)	Yes/No	6 s	5
238		N (Positive)	Yes/No	6 s	5
239		T (Negative)	Yes/No	6 s	5
240		B (Negative)	Yes/No	6 s	5

241		A (Negative)	Yes/No	6 s	5
242		Q (Negative)	Yes/No	6 s	5
243		V (Positive)	Yes/No	6 s	5
244		R (Positive)	Yes/No	6 s	5
245		N (Positive)	Yes/No	6 s	5
246		F (Positive)	Yes/No	6 s	5
247		W (Negative)	Yes/No	6 s	5
248		E (Negative)	Yes/No	6 s	5
249		C (Negative)	Yes/No	6 s	5
250		F (Positive)	Yes/No	6 s	5
251		I (Positive)	Yes/No	6 s	5

252		L (Negative)	Yes/No	6 s	5
253		M (Negative)	Yes/No	6 s	5
254		V (Positive)	Yes/No	6 s	5
255		O (Negative)	Yes/No	6 s	5
256		R (Positive)	Yes/No	6 s	5
257		F (Positive)	Yes/No	6 s	5
258		X (Negative)	Yes/No	6 s	5
259		V (Positive)	Yes/No	6 s	5
260		I (Positive)	Yes/No	6 s	5

Main Task Flow Table Adolescents Version- 3rd triad of stimuli (1,3,5) (to be displayed in the same order)

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	K			1.1 seconds	
261		K (Positive)	Yes/No	6 s	1
262		D (Negative)	Yes/No	6 s	1
263		K (Positive)	Yes/No	6 s	1
264		K (Positive)	Yes/No	6 s	1
265		L (Negative)	Yes/No	6 s	1
266		B (Negative)	Yes/No	6 s	1
267		K (Positive)	Yes/No	6 s	1
268		K (Positive)	Yes/No	6 s	1
269		K (Positive)	Yes/No	6 s	1

270		G (Negative)	Yes/No	6 s	1
271		Z (Negative)	Yes/No	6 s	1
272		T (Negative)	Yes/No	6 s	1
273		K (Positive)	Yes/No	6 s	1
274		K (Positive)	Yes/No	6 s	1
275		K (Positive)	Yes/No	6 s	1
276		M (Negative)	Yes/No	6 s	1
277		F (Negative)	Yes/No	6 s	1
278		K (Positive)	Yes/No	6 s	1
279		J (Negative)	Yes/No	6 s	1
280		Y (Negative)	Yes/No	6 s	1

281		K (Positive)	Yes/No	6 s	1
282		K (Positive)	Yes/No	6 s	1
283		X (Negative)	Yes/No	6 s	1
284		U (Negative)	Yes/No	6 s	1
285		E (Negative)	Yes/No	6 s	1
286		K (Positive)	Yes/No	6 s	1
287		O (Negative)	Yes/No	6 s	1
288		H (Negative)	Yes/No	6 s	1
289		K (Positive)	Yes/No	6 s	1
290		K (Positive)	Yes/No	6 s	1

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	I S V			1.1 seconds each	
291		S (Positive)	Yes/No	6 s	3
292		V (Positive)	Yes/No	6 s	3
293		R (Negative)	Yes/No	6 s	3
294		P (Negative)	Yes/No	6 s	3
295		S (Positive)	Yes/No	6 s	3
296		A (Negative)	Yes/No	6 s	3
297		J (Negative)	Yes/No	6 s	3
298		I (Positive)	Yes/No	6 s	3

299		V (Positive)	Yes/No	6 s	3
300		Q (Negative)	Yes/No	6 s	3
301		G (Negative)	Yes/No	6 s	3
302		H (Negative)	Yes/No	6 s	3
303		S (Positive)	Yes/No	6 s	3
304		V (Positive)	Yes/No	6 s	3
305		I (Positive)	Yes/No	6 s	3
306		N (Negative)	Yes/No	6 s	3
307		S (Positive)	Yes/No	6 s	3
308		R (Negative)	Yes/No	6 s	3
309		B (Negative)	Yes/No	6 s	3

310		V (Positive)	Yes/No	6 s	3
311		W (Negative)	Yes/No	6 s	3
312		Y (Negative)	Yes/No	6 s	3
313		O (Negative)	Yes/No	6 s	3
314		Z (Negative)	Yes/No	6 s	3
315		I (Positive)	Yes/No	6 s	3
316		V (Positive)	Yes/No	6 s	3
317		C (Negative)	Yes/No	6 s	3
318		V (Positive)	Yes/No	6 s	3
319		S (Positive)	Yes/No	6 s	3
320		D (Negative)	Yes/No	6 s	3

321		V (Positive)	Yes/No	6 s	3
322		I (Positive)	Yes/No	6 s	3
323		Y (Negative)	Yes/No	6 s	3
324		I (Positive)	Yes/No	6 s	3
325		K (Negative)	Yes/No	6 s	3
326		S (Positive)	Yes/No	6 s	3
327		X (Negative)	Yes/No	6 s	3
328		S (Positive)	Yes/No	6 s	3
329		V (Positive)	Yes/No	6 s	3
330		I (Positive)	Yes/No	6 s	3
331		L (Negative)	Yes/No	6 s	3

332		M (Negative)	Yes/No	6 s	3
333		F (Negative)	Yes/No	6 s	3
334		I (Positive)	Yes/No	6 s	3
335		V (Positive)	Yes/No	6 s	3
336		E (Negative)	Yes/No	6 s	3
337		P (Negative)	Yes/No	6 s	3
338		J (Negative)	Yes/No	6 s	3
339		S (Positive)	Yes/No	6 s	3
340		I (Positive)	Yes/No	6 s	3

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
------------------	-------------------	-----------------------------------	------------------------	-----------------------	--------------------

	B X E S O			1.1 seconds each	
341		E (Positive)	Yes/No	6 s	5
342		L (Negative)	Yes/No	6 s	5
343		O (Positive)	Yes/No	6 s	5
344		S (Positive)	Yes/No	6 s	5
345		X (Positive)	Yes/No	6 s	5
346		H (Negative)	Yes/No	6 s	5
347		S (Positive)	Yes/No	6 s	5
348		B (Positive)	Yes/No	6 s	5

349		Q (Negative)	Yes/No	6 s	5
350		D (Negative)	Yes/No	6 s	5
351		O (Positive)	Yes/No	6 s	5
352		X (Positive)	Yes/No	6 s	5
353		E (Positive)	Yes/No	6 s	5
354		Z (Negative)	Yes/No	6 s	5
355		S (Positive)	Yes/No	6 s	5
356		A (Negative)	Yes/No	6 s	5
357		K (Negative)	Yes/No	6 s	5
358		O (Positive)	Yes/No	6 s	5
359		T (Negative)	Yes/No	6 s	5

360		B (Positive)	Yes/No	6 s	5
361		U (Negative)	Yes/No	6 s	5
362		W (Negative)	Yes/No	6 s	5
363		X (Positive)	Yes/No	6 s	5
364		C (Negative)	Yes/No	6 s	5
365		E (Positive)	Yes/No	6 s	5
366		V (Negative)	Yes/No	6 s	5
367		G (Negative)	Yes/No	6 s	5
368		S (Positive)	Yes/No	6 s	5
369		X (Positive)	Yes/No	6 s	5
370		O (Positive)	Yes/No	6 s	5

371		Y (Negative)	Yes/No	6 s	5
372		R (Negative)	Yes/No	6 s	5
373		B (Positive)	Yes/No	6 s	5
374		E (Positive)	Yes/No	6 s	5
375		J (Negative)	Yes/No	6 s	5
376		P (Negative)	Yes/No	6 s	5
377		M (Negative)	Yes/No	6 s	5
378		S (Positive)	Yes/No	6 s	5
379		Q (Negative)	Yes/No	6 s	5
380		F (Negative)	Yes/No	6 s	5
381		X (Positive)	Yes/No	6 s	5

382		E (Positive)	Yes/No	6 s	5
383		Z (Negative)	Yes/No	6 s	5
384		O (Positive)	Yes/No	6 s	5
385		S (Positive)	Yes/No	6 s	5
386		B (Positive)	Yes/No	6 s	5
387		K (Negative)	Yes/No	6 s	5
388		L (Negative)	Yes/No	6 s	5
389		N (Negative)	Yes/No	6 s	5
390		V (Negative)	Yes/No	6 s	5

Main Task Flow Table Adolescents Version- 4th triad of stimuli (1,3,5) (to be displayed in the same order)

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	U			1.1 seconds	
391		U (Positive)	Yes/No	6 s	1
392		U (Positive)	Yes/No	6 s	1
393		K (Negative)	Yes/No	6 s	1
394		U (Positive)	Yes/No	6 s	1
395		U (Positive)	Yes/No	6 s	1
396		G (Negative)	Yes/No	6 s	1
397		F (Negative)	Yes/No	6 s	1
398		U (Positive)	Yes/No	6 s	1

399		D (Negative)	Yes/No	6 s	1
400		M (Negative)	Yes/No	6 s	1
401		B (Negative)	Yes/No	6 s	1
402		U (Positive)	Yes/No	6 s	1
403		U (Positive)	Yes/No	6 s	1
404		C (Negative)	Yes/No	6 s	1
405		U (Positive)	Yes/No	6 s	1
406		R (Negative)	Yes/No	6 s	1
407		Y (Negative)	Yes/No	6 s	1
408		U (Positive)	Yes/No	6 s	1
409		U (Positive)	Yes/No	6 s	1

410		H (Negative)	Yes/No	6 s	1
411		U (Positive)	Yes/No	6 s	1
412		L (Negative)	Yes/No	6 s	1
413		U (Positive)	Yes/No	6 s	1
414		S (Negative)	Yes/No	6 s	1
415		U (Positive)	Yes/No	6 s	1
416		U (Positive)	Yes/No	6 s	1
417		Z (Negative)	Yes/No	6 s	1
418		Q (Negative)	Yes/No	6 s	1
419		U (Positive)	Yes/No	6 s	1
420		N (Negative)	Yes/No	6 s	1

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	G Q T			1.1 seconds each	
421		S (Negative)	Yes/No	6 s	3
422		F (Negative)	Yes/No	6 s	3
423		G (Positive)	Yes/No	6 s	3
424		T (Positive)	Yes/No	6 s	3
425		Q (Positive)	Yes/No	6 s	3
426		H (Negative)	Yes/No	6 s	3
427		M (Negative)	Yes/No	6 s	3
428		T (Positive)	Yes/No	6 s	3

429		G (Positive)	Yes/No	6 s	3
430		D (Negative)	Yes/No	6 s	3
431		Z (Negative)	Yes/No	6 s	3
432		Q (Positive)	Yes/No	6 s	3
433		C (Negative)	Yes/No	6 s	3
434		G (Positive)	Yes/No	6 s	3
435		Y (Negative)	Yes/No	6 s	3
436		Q (Positive)	Yes/No	6 s	3
437		T (Positive)	Yes/No	6 s	3
438		Q (Positive)	Yes/No	6 s	3
439		B (Negative)	Yes/No	6 s	3

440		O (Negative)	Yes/No	6 s	3
441		G (Positive)	Yes/No	6 s	3
442		V (Negative)	Yes/No	6 s	3
443		T (Positive)	Yes/No	6 s	3
444		Q (Positive)	Yes/No	6 s	3
445		I (Negative)	Yes/No	6 s	3
446		E (Negative)	Yes/No	6 s	3
447		G (Positive)	Yes/No	6 s	3
448		L (Negative)	Yes/No	6 s	3
449		G (Positive)	Yes/No	6 s	3
450		T (Positive)	Yes/No	6 s	3

451		K (Negative)	Yes/No	6 s	3
452		S (Negative)	Yes/No	6 s	3
453		Q (Positive)	Yes/No	6 s	3
454		P (Negative)	Yes/No	6 s	3
455		H (Negative)	Yes/No	6 s	3
456		T (Positive)	Yes/No	6 s	3
457		Q (Positive)	Yes/No	6 s	3
458		J (Negative)	Yes/No	6 s	3
459		U (Negative)	Yes/No	6 s	3
460		G (Positive)	Yes/No	6 s	3
461		Q (Positive)	Yes/No	6 s	3

462		T (Positive)	Yes/No	6 s	3
463		A (Negative)	Yes/No	6 s	3
464		X (Negative)	Yes/No	6 s	3
465		Z (Negative)	Yes/No	6 s	3
466		T (Positive)	Yes/No	6 s	3
467		G (Positive)	Yes/No	6 s	3
468		Q (Positive)	Yes/No	6 s	3
469		F (Negative)	Yes/No	6 s	3
470		M (Negative)	Yes/No	6 s	3

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	C G M Q W			1.1 seconds each	
471		M (Positive)	Yes/No	6 s	5
472		Q (Positive)	Yes/No	6 s	5
473		H (Negative)	Yes/No	6 s	5
474		D (Negative)	Yes/No	6 s	5
475		W (Positive)	Yes/No	6 s	5
476		Z (Negative)	Yes/No	6 s	5

477		G (Positive)	Yes/No	6 s	5
478		C (Positive)	Yes/No	6 s	5
479		L (Negative)	Yes/No	6 s	5
480		Y (Negative)	Yes/No	6 s	5
481		M (Positive)	Yes/No	6 s	5
482		W (Positive)	Yes/No	6 s	5
483		Q (Positive)	Yes/No	6 s	5
484		K (Negative)	Yes/No	6 s	5
485		X (Negative)	Yes/No	6 s	5
486		P (Negative)	Yes/No	6 s	5
487		G (Positive)	Yes/No	6 s	5

488		B (Negative)	Yes/No	6 s	5
489		O (Negative)	Yes/No	6 s	5
490		C (Positive)	Yes/No	6 s	5
491		R (Negative)	Yes/No	6 s	5
492		G (Positive)	Yes/No	6 s	5
493		Q (Positive)	Yes/No	6 s	5
494		E (Negative)	Yes/No	6 s	5
495		S (Negative)	Yes/No	6 s	5
496		M (Positive)	Yes/No	6 s	5
497		U (Negative)	Yes/No	6 s	5
498		C (Positive)	Yes/No	6 s	5

499		T (Negative)	Yes/No	6 s	5
500		W (Positive)	Yes/No	6 s	5
501		Q (Positive)	Yes/No	6 s	5
502		N (Negative)	Yes/No	6 s	5
503		F (Negative)	Yes/No	6 s	5
504		G (Positive)	Yes/No	6 s	5
505		I (Negative)	Yes/No	6 s	5
506		W (Positive)	Yes/No	6 s	5
507		J (Negative)	Yes/No	6 s	5
508		C (Positive)	Yes/No	6 s	5
509		M (Positive)	Yes/No	6 s	5

510		V (Negative)	Yes/No	6 s	5
511		W (Positive)	Yes/No	6 s	5
512		Q (Positive)	Yes/No	6 s	5
513		A (Negative)	Yes/No	6 s	5
514		K (Negative)	Yes/No	6 s	5
515		G (Positive)	Yes/No	6 s	5
516		H (Negative)	Yes/No	6 s	5
517		B (Negative)	Yes/No	6 s	5
518		C (Positive)	Yes/No	6 s	5
519		M (Positive)	Yes/No	6 s	5
520		D (Negative)	Yes/No	6 s	5

Main Task Flow Table Adolescents Version- 5th triad of stimuli (1,3,5) (to be displayed in the interface in the same order)

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	M			1.1 seconds	
521		M (Positive)	Yes/No	6 s	1
522		C (Negative)	Yes/No	6 s	1
523		M (Positive)	Yes/No	6 s	1
524		M (Positive)	Yes/No	6 s	1
525		K (Negative)	Yes/No	6 s	1
526		D (Negative)	Yes/No	6 s	1
527		M (Positive)	Yes/No	6 s	1

528		R (Negative)	Yes/No	6 s	1
529		M (Positive)	Yes/No	6 s	1
530		T (Negative	Yes/No	6 s	1
531		U (Negative)	Yes/No	6 s	1
532		O (Negative)	Yes/No	6 s	1
533		M (Positive)	Yes/No	6 s	1
534		M (Positive)	Yes/No	6 s	1
535		M (Positive)	Yes/No	6 s	1
536		N (Negative)	Yes/No	6 s	1
537		P (Negative)	Yes/No	6 s	1
538		M (Positive)	Yes/No	6 s	1

539		M (Positive)	Yes/No	6 s	1
540		G (Negative)	Yes/No	6 s	1
541		Q (Negative)	Yes/No	6 s	1
542		M (Positive)	Yes/No	6 s	1
543		B (Negative)	Yes/No	6 s	1
544		M (Positive)	Yes/No	6 s	1
545		M (Positive)	Yes/No	6 s	1
546		E (Negative)	Yes/No	6 s	1
547		M (Positive)	Yes/No	6 s	1
548		Y (Negative)	Yes/No	6 s	1
549		Z (Negative)	Yes/No	6 s	1

550		M (Positive)	Yes/No	6 s	1
-----	--	--------------	--------	-----	---

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	B W L			1.1 seconds each	
551		B (Positive)	Yes/No	6 s	3
552		T (Negative)	Yes/No	6 s	3
553		W (Positive)	Yes/No	6 s	3
554		L (Positive)	Yes/No	6 s	3
555		G (Negative)	Yes/No	6 s	3
556		W (Positive)	Yes/No	6 s	3

557		B (Positive)	Yes/No	6 s	3
558		C (Negative)	Yes/No	6 s	3
559		W (Positive)	Yes/No	6 s	3
560		O (Negative)	Yes/No	6 s	3
561		L (Positive)	Yes/No	6 s	3
562		P (Negative)	Yes/No	6 s	3
563		J (Negative)	Yes/No	6 s	3
564		B (Positive)	Yes/No	6 s	3
565		Q (Negative)	Yes/No	6 s	3
566		L (Positive)	Yes/No	6 s	3
567		W (Positive)	Yes/No	6 s	3

568		B (Positive)	Yes/No	6 s	3
569		L (Positive)	Yes/No	6 s	3
570		K (Negative)	Yes/No	6 s	3
571		Z (Negative)	Yes/No	6 s	3
572		W (Positive)	Yes/No	6 s	3
573		F (Negative)	Yes/No	6 s	3
574		H (Negative)	Yes/No	6 s	3
575		B (Positive)	Yes/No	6 s	3
576		M (Negative)	Yes/No	6 s	3
577		Y (Negative)	Yes/No	6 s	3
578		L (Positive)	Yes/No	6 s	3

579		D (Negative)	Yes/No	6 s	3
580		B (Positive)	Yes/No	6 s	3
581		N (Negative)	Yes/No	6 s	3
582		W (Positive)	Yes/No	6 s	3
583		S (Negative)	Yes/No	6 s	3
584		U (Negative)	Yes/No	6 s	3
585		L (Positive)	Yes/No	6 s	3
586		R (Negative)	Yes/No	6 s	3
587		W (Positive)	Yes/No	6 s	3
588		B (Positive)	Yes/No	6 s	3
589		L (Positive)	Yes/No	6 s	3

590		C (Negative)	Yes/No	6 s	3
591		G (Negative)	Yes/No	6 s	3
592		Z (Negative)	Yes/No	6 s	3
593		O (Negative)	Yes/No	6 s	3
594		B (Positive)	Yes/No	6 s	3
595		W (Positive)	Yes/No	6 s	3
596		E (Negative)	Yes/No	6 s	3
597		T (Negative)	Yes/No	6 s	3
598		L (Positive)	Yes/No	6 s	3
599		B (Positive)	Yes/No	6 s	3
600		X (Negative)	Yes/No	6 s	3

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	H L P T Z			1.1 seconds each	
601		Q (Negative)	Yes/No	6 s	5
602		M (Negative)	Yes/No	6 s	5
603		T (Positive)	Yes/No	6 s	5
604		L (Positive)	Yes/No	6 s	5
605		Z (Positive)	Yes/No	6 s	5
606		J (Negative)	Yes/No	6 s	5

607		B (Negative)	Yes/No	6 s	5
608		P (Positive)	Yes/No	6 s	5
609		H (Positive)	Yes/No	6 s	5
610		L (Positive)	Yes/No	6 s	5
611		K (Negative)	Yes/No	6 s	5
612		Y (Negative)	Yes/No	6 s	5
613		T (Positive)	Yes/No	6 s	5
614		G (Negative)	Yes/No	6 s	5
615		P (Positive)	Yes/No	6 s	5
616		D (Negative)	Yes/No	6 s	5
617		W (Negative)	Yes/No	6 s	5

618		H (Positive)	Yes/No	6 s	5
619		Z (Positive)	Yes/No	6 s	5
620		F (Negative)	Yes/No	6 s	5
621		C (Negative)	Yes/No	6 s	5
622		L (Positive)	Yes/No	6 s	5
623		X (Negative)	Yes/No	6 s	5
624		T (Positive)	Yes/No	6 s	5
625		H (Positive)	Yes/No	6 s	5
626		P (Positive)	Yes/No	6 s	5
627		V (Negative)	Yes/No	6 s	5
628		Z (Positive)	Yes/No	6 s	5

629		A (Negative)	Yes/No	6 s	5
630		B (Negative)	Yes/No	6 s	5
631		M (Negative)	Yes/No	6 s	5
632		L (Positive)	Yes/No	6 s	5
633		O (Negative)	Yes/No	6 s	5
634		P (Positive)	Yes/No	6 s	5
635		Z (Positive)	Yes/No	6 s	5
636		E (Negative)	Yes/No	6 s	5
637		R (Negative)	Yes/No	6 s	5
638		W (Negative)	Yes/No	6 s	5
639		H (Positive)	Yes/No	6 s	5

640		L (Positive)	Yes/No	6 s	5
641		J (Negative)	Yes/No	6 s	5
642		S (Negative)	Yes/No	6 s	5
643		T (Positive)	Yes/No	6 s	5
644		Q (Negative)	Yes/No	6 s	5
645		P (Positive)	Yes/No	6 s	5
646		Z (Positive)	Yes/No	6 s	5
647		L (Positive)	Yes/No	6 s	5
648		U (Negative)	Yes/No	6 s	5
649		N (Negative)	Yes/No	6 s	5
650		H (Positive)	Yes/No	6 s	5

Main Task Trial Flow – Adults (18–22 years)

- **Memory Set Spans:** 2- alphanumeric digit, 4- alphanumeric digit, 6- alphanumeric digit
- **Presentation:** Letters will be presented one by one in an alternating digit span presentation (2→4→6)
- **Trial Steps:**
 1. **Fixation Cross:** “+” for 0.3s
 2. **Memory Set:** Present a 2 alphanumeric digits for 1.3s
 3. **Retention Interval:** Blank screen for 1 s
 4. **Probe Display:** Centered alphanumeric character with Yes/No buttons, remains visible until response or time-out each for 4.5 seconds
 - a) **Participant Response:** Chosen option highlighted in light blue
 - b) **No Response:** Display “Time is up!” for 1 s.
 5. **Fixation Cross:** “+” for 0.3s
 6. **Next :**
 - Repeat steps 4–5 for all probe trials of the current span
 - After completing all probes of 2-digit span, move to 4-digit span
- **Trial Steps:**

7. Fixation Cross: “+” for 0.3s

8. Memory Set: Present a 4 alphanumeric digits stimuli for 1.3s

9. Retention Interval: Blank screen for 1s

10. Probe Display: Centered alphanumeric character with Yes/No buttons, remains visible until response or time-out each for 4.5 seconds

a) **Participant Response:** Chosen option highlighted in light blue

b) **No Response:** Display “Time is up!” for 1s.

11) Fixation Cross: “+” for 0.3s

12) Next :

- Repeat steps 10- 11 for all the respective probe trials of the current stimuli
- After completing all probes of 4-digit span, move to 6-digit span

● **Trial Steps:**

13) Fixation Cross: “+” for 0.3s

14) Memory Set: Present a 6 alphanumeric digits for 1.3s

15) Retention Interval: Blank screen for 1s

16) Probe Display: Centered alphanumeric character with Yes/No buttons, remains visible until response or time-out each for 4.5 seconds

a) **Participant Response:** Chosen option highlighted in light blue

b) **No Response:** Display “Time is up!” for 1s.

17) Fixation Cross: “+” for 0.3s

18) Next :

- Repeat steps 16-17 for all probe trials of the current stimuli.
- After completing all probes of 5-letter span, we move alternating back to back presentation of 1- letter span (1-6), then 3letter - span (7-12) and 5- span (13-18) and so on until all the display of the main stimuli and its respective probe stimuli are completed.

Main Task Flow Table Adults Version- 1st triad of stimuli (2,4,6) (to be displayed in the same order)

Instructions for Adults:

“Now it’s time for the full game! You will see a set of letter-number pairs appear on the screen one by one. After a short pause, you will see a series of letter-number pairs and need to decide whether it was part of the set you just saw. Use the Yes or No buttons to make your choice. The number of letters may gradually increase, making the game more challenging. Stay sharp and have fun!”

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	B1 D3			1.3 seconds each	
01		B1 (Positive)	Yes/No	4.5 seconds	2
02		D3 (Positive)	Yes/No	4.5 seconds	2
03		D3 (Positive)	Yes/No	4.5 seconds	2
04		K9 (Negative)	Yes/No	4.5 seconds	2
05		Q5 (Negative)	Yes/No	4.5 seconds	2
06		B1 (Positive)	Yes/No	4.5 seconds	2
07		L2 (Negative)	Yes/No	4.5 seconds	2
08		D3 (Positive)	Yes/No	4.5 seconds	2

09		B1 (Positive)	Yes/No	4.5 seconds	2
10		H8 (Negative)	Yes/No	4.5 seconds	2
11		M4 (Negative)	Yes/No	4.5 seconds	2
12		D3 (Positive)	Yes/No	4.5 seconds	2
13		Z6 (Negative)	Yes/No	4.5 seconds	2
14		R7 (Negative)	Yes/No	4.5 seconds	2
15		B1 (Positive)	Yes/No	4.5 seconds	2
16		V2 (Negative)	Yes/No	4.5 seconds	2
17		B1 (Positive)	Yes/No	4.5 seconds	2
18		D3 (Positive)	Yes/No	4.5 seconds	2
19		X9 (Negative)	Yes/No	4.5 seconds	2

20		Y1 (Negative)	Yes/No	4.5 seconds	2
21		D3 (Positive)	Yes/No	4.5 seconds	2
22		G5 (Negative)	Yes/No	4.5 seconds	2
23		B1 (Positive)	Yes/No	4.5 seconds	2
24		C8 (Negative)	Yes/No	4.5 seconds	2
25		D3 (Positive)	Yes/No	4.5 seconds	2
26		W7 (Negative)	Yes/No	4.5 seconds	2
27		U4 (Negative)	Yes/No	4.5 seconds	2
28		B1 (Positive)	Yes/No	4.5 seconds	2
29		D3 (Positive)	Yes/No	4.5 seconds	2
30		S6 (Negative)	Yes/No	4.5 seconds	2

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	H6 J4 M2 R8			1.3 seconds each	
31		M2 (Positive)	Yes/No	4.5 seconds	4
32		P5 (Negative)	Yes/No	4.5 seconds	4
33		J4 (Positive)	Yes/No	4.5 seconds	4
34		R8 (Positive)	Yes/No	4.5 seconds	4
35		G1 (Negative)	Yes/No	4.5 seconds	4
36		H6 (Positive)	Yes/No	4.5 seconds	4
37		Z9 (Negative)	Yes/No	4.5 seconds	4

38		N7 (Negative)	Yes/No	4.5 seconds	4
39		M2 (Positive)	Yes/No	4.5 seconds	4
40		J4 (Positive)	Yes/No	4.5 seconds	4
41		X3 (Negative)	Yes/No	4.5 seconds	4
42		L5 (Negative)	Yes/No	4.5 seconds	4
43		H6 (Positive)	Yes/No	4.5 seconds	4
44		C2 (Negative)	Yes/No	4.5 seconds	4
45		R8 (Positive)	Yes/No	4.5 seconds	4
46		J4 (Positive)	Yes/No	4.5 seconds	4
47		H6 (Positive)	Yes/No	4.5 seconds	4
48		E1 (Negative)	Yes/No	4.5 seconds	4

49		F4 (Negative)	Yes/No	4.5 seconds	4
50		M2 (Positive)	Yes/No	4.5 seconds	4
51		Q3 (Negative)	Yes/No	4.5 seconds	4
52		W2 (Negative)	Yes/No	4.5 seconds	4
53		R8 (Positive)	Yes/No	4.5 seconds	4
54		H6 (Positive)	Yes/No	4.5 seconds	4
55		J4 (Positive)	Yes/No	4.5 seconds	4
56		D5 (Negative)	Yes/No	4.5 seconds	4
57		T1 (Negative)	Yes/No	4.5 seconds	4
58		Z8 (Negative)	Yes/No	4.5 seconds	4
59		M2 (Positive)	Yes/No	4.5 seconds	4

60		R8 (Positive)	Yes/No	4.5 seconds	4
61		J4 (Positive)	Yes/No	4.5 seconds	4
62		L7 (Negative)	Yes/No	4.5 seconds	4
63		O9 (Negative)	Yes/No	4.5 seconds	4
64		H6 (Positive)	Yes/No	4.5 seconds	4
65		P3 (Negative)	Yes/No	4.5 seconds	4
66		A4 (Negative)	Yes/No	4.5 seconds	4
67		B6 (Negative)	Yes/No	4.5 seconds	4
68		R8 (Positive)	Yes/No	4.5 seconds	4
69		H6 (Positive)	Yes/No	4.5 seconds	4
70		C1 (Negative)	Yes/No	4.5 seconds	4

71		J4 (Positive)	Yes/No	4.5 seconds	4
72		P2 (Negative)	Yes/No	4.5 seconds	4
73		Z3 (Negative)	Yes/No	4.5 seconds	4
74		M2 (Positive)	Yes/No	4.5 seconds	4
75		J4 (Positive)	Yes/No	4.5 seconds	4
76		R8 (Positive)	Yes/No	4.5 seconds	4
77		V7 (Negative)	Yes/No	4.5 seconds	4
78		K5 (Negative)	Yes/No	4.5 seconds	4
79		H6 (Positive)	Yes/No	4.5 seconds	4
80		M2 (Positive)	Yes/No	4.5 seconds	4
81		Y9 (Negative)	Yes/No	4.5 seconds	4

82		D6 (Negative)	Yes/No	4.5 seconds	4
83		R8 (Positive)	Yes/No	4.5 seconds	4
84		J4 (Positive)	Yes/No	4.5 seconds	4
85		H6 (Positive)	Yes/No	4.5 seconds	4
86		X8 (Negative)	Yes/No	4.5 seconds	4
87		F3 (Negative)	Yes/No	4.5 seconds	4
88		L4 (Negative)	Yes/No	4.5 seconds	4
89		Z9 (Negative)	Yes/No	4.5 seconds	4
90		M2 (Positive)	Yes/No	4.5 seconds	4
91		R8 (Positive)	Yes/No	4.5 seconds	4
92		J4 (Positive)	Yes/No	4.5 seconds	4

93		P7 (Negative)	Yes/No	4.5 seconds	4
94		T3 (Negative)	Yes/No	4.5 seconds	4
95		H6 (Positive)	Yes/No	4.5 seconds	4

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	F5 K9 L7 P3 T2 U6			1.3 seconds each	
96		V2 (Negative)	Yes/No	4.5 seconds	6
97		G1 (Negative)	Yes/No	4.5 seconds	6

98		P3 (Positive)	Yes/No	4.5 seconds	6
99		Z4 (Negative)	Yes/No	4.5 seconds	6
100		U6 (Positive)	Yes/No	4.5 seconds	6
101		R9 (Negative)	Yes/No	4.5 seconds	6
102		K9 (Positive)	Yes/No	4.5 seconds	6
103		T2 (Positive)	Yes/No	4.5 seconds	6
104		F5 (Positive)	Yes/No	4.5 seconds	6
105		Q7 (Negative)	Yes/No	4.5 seconds	6
106		C3 (Negative)	Yes/No	4.5 seconds	6
107		L7 (Positive)	Yes/No	4.5 seconds	6
108		V2 (Negative)	Yes/No	4.5 seconds	6

109		U6 (Positive)	Yes/No	4.5 seconds	6
110		K9 (Positive)	Yes/No	4.5 seconds	6
111		P3 (Positive)	Yes/No	4.5 seconds	6
112		D8 (Negative)	Yes/No	4.5 seconds	6
113		J5 (Negative)	Yes/No	4.5 seconds	6
114		H4 (Negative)	Yes/No	4.5 seconds	6
115		T2 (Positive)	Yes/No	4.5 seconds	6
116		L7 (Positive)	Yes/No	4.5 seconds	6
117		M1 (Negative)	Yes/No	4.5 seconds	6
118		F5 (Positive)	Yes/No	4.5 seconds	6
119		Z9 (Negative)	Yes/No	4.5 seconds	6

120		Q6 (Negative)	Yes/No	4.5 seconds	6
121		P3 (Positive)	Yes/No	4.5 seconds	6
122		K9 (Positive)	Yes/No	4.5 seconds	6
123		U6 (Positive)	Yes/No	4.5 seconds	6
124		R7 (Negative)	Yes/No	4.5 seconds	6
125		G2 (Negative)	Yes/No	4.5 seconds	6
126		W1 (Negative)	Yes/No	4.5 seconds	6
127		L7 (Positive)	Yes/No	4.5 seconds	6
128		C8 (Negative)	Yes/No	4.5 seconds	6
129		T2 (Positive)	Yes/No	4.5 seconds	6
130		P3 (Positive)	Yes/No	4.5 seconds	6

131		S4 (Negative)	Yes/No	4.5 seconds	6
132		H9 (Negative)	Yes/No	4.5 seconds	6
133		U6 (Positive)	Yes/No	4.5 seconds	6
134		F5 (Positive)	Yes/No	4.5 seconds	6
135		J4 (Negative)	Yes/No	4.5 seconds	6
136		L7 (Positive)	Yes/No	4.5 seconds	6
137		K9 (Positive)	Yes/No	4.5 seconds	6
138		W8 (Negative)	Yes/No	4.5 seconds	6
139		U6 (Positive)	Yes/No	4.5 seconds	6
140		R8 (Negative)	Yes/No	4.5 seconds	6
141		T2 (Positive)	Yes/No	4.5 seconds	6

142		M7 (Negative)	Yes/No	4.5 seconds	6
143		L7 (Positive)	Yes/No	4.5 seconds	6
144		H5 (Negative)	Yes/No	4.5 seconds	6
145		L7 (Positive)	Yes/No	4.5 seconds	6
146		U6 (Positive)	Yes/No	4.5 seconds	6
147		A3 (Negative)	Yes/No	4.5 seconds	6
148		T2 (Positive)	Yes/No	4.5 seconds	6
149		P3 (Positive)	Yes/No	4.5 seconds	6
150		N9 (Negative)	Yes/No	4.5 seconds	6
151		G8 (Negative)	Yes/No	4.5 seconds	6
152		X5 (Negative)	Yes/No	4.5 seconds	6

153		K9 (Positive)	Yes/No	4.5 seconds	6
154		J2 (Negative)	Yes/No	4.5 seconds	6
155		C1 (Negative)	Yes/No	4.5 seconds	6
156		R6 (Negative)	Yes/No	4.5 seconds	6
157		U6 (Positive)	Yes/No	4.5 seconds	6
158		F5 (Positive)	Yes/No	4.5 seconds	6
159		K8 (Negative)	Yes/No	4.5 seconds	6
160		P3 (Positive)	Yes/No	4.5 seconds	6

Main Task Flow Table Adults Version- 2nd triad of stimuli (2,4,6) (to be displayed in the computer interface in the same order)

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
------------------	-------------------	-----------------------------------	------------------------	-----------------------	--------------------

	C2 F4			1.3 seconds each	
161		C2 (Positive)	Yes/No	4.5 seconds	2
162		K7 (Negative)	Yes/No	4.5 seconds	2
163		F4 (Positive)	Yes/No	4.5 seconds	2
164		P8 (Negative)	Yes/No	4.5 seconds	2
165		J1 (Negative)	Yes/No	4.5 seconds	2
166		C2 (Positive)	Yes/No	4.5 seconds	2
167		F4 (Positive)	Yes/No	4.5 seconds	2
168		C2 (Positive)	Yes/No	4.5 seconds	2
169		M6 (Negative)	Yes/No	4.5 seconds	2
170		G9 (Negative)	Yes/No	4.5 seconds	2

171		F4 (Positive)	Yes/No	4.5 seconds	2
172		C2 (Positive)	Yes/No	4.5 seconds	2
173		F4 (Positive)	Yes/No	4.5 seconds	2
174		Q3 (Negative)	Yes/No	4.5 seconds	2
175		V5 (Negative)	Yes/No	4.5 seconds	2
176		L8 (Negative)	Yes/No	4.5 seconds	2
177		F4 (Positive)	Yes/No	4.5 seconds	2
178		R2 (Negative)	Yes/No	4.5 seconds	2
179		H7 (Negative)	Yes/No	4.5 seconds	2
180		C2 (Positive)	Yes/No	4.5 seconds	2
181		F4 (Positive)	Yes/No	4.5 seconds	2

182		Z9 (Negative)	Yes/No	4.5 seconds	2
183		T6 (Negative)	Yes/No	4.5 seconds	2
184		C2 (Positive)	Yes/No	4.5 seconds	2
185		P5 (Negative)	Yes/No	4.5 seconds	2
186		W1 (Negative)	Yes/No	4.5 seconds	2
187		F4 (Positive)	Yes/No	4.5 seconds	2
188		C2 (Positive)	Yes/No	4.5 seconds	2
189		F4 (Positive)	Yes/No	4.5 seconds	2
190		D7 (Negative)	Yes/No	4.5 seconds	2

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	L8 Q1 G5 S3			1.3 seconds each	
191		A3 (Negative)	Yes/No	4.5 seconds	4
192		Z6 (Negative)	Yes/No	4.5 seconds	4
193		L8 (Positive)	Yes/No	4.5 seconds	4
194		D9 (Negative)	Yes/No	4.5 seconds	4
195		Q1 (Positive)	Yes/No	4.5 seconds	4
196		N2 (Negative)	Yes/No	4.5 seconds	4
197		S3 (Positive)	Yes/No	4.5 seconds	4

198		J5 (Negative)	Yes/No	4.5 seconds	4
199		Q1 (Positive)	Yes/No	4.5 seconds	4
200		G5 (Positive)	Yes/No	4.5 seconds	4
201		R4 (Negative)	Yes/No	4.5 seconds	4
202		H7 (Negative)	Yes/No	4.5 seconds	4
203		L8 (Positive)	Yes/No	4.5 seconds	4
204		Y9 (Negative)	Yes/No	4.5 seconds	4
205		S3 (Positive)	Yes/No	4.5 seconds	4
206		Q1 (Positive)	Yes/No	4.5 seconds	4
207		G5 (Positive)	Yes/No	4.5 seconds	4
208		V8 (Negative)	Yes/No	4.5 seconds	4

209		T2 (Negative)	Yes/No	4.5 seconds	4
210		L8 (Positive)	Yes/No	4.5 seconds	4
211		M6 (Negative)	Yes/No	4.5 seconds	4
212		Q1 (Positive)	Yes/No	4.5 seconds	4
213		Z4 (Negative)	Yes/No	4.5 seconds	4
214		G5 (Positive)	Yes/No	4.5 seconds	4
215		C7 (Negative)	Yes/No	4.5 seconds	4
216		Z1 (Negative)	Yes/No	4.5 seconds	4
217		Q1 (Positive)	Yes/No	4.5 seconds	4
218		P4 (Negative)	Yes/No	4.5 seconds	4
219		L8 (Positive)	Yes/No	4.5 seconds	4

220		G5 (Positive)	Yes/No	4.5 seconds	4
221		Q1 (Positive)	Yes/No	4.5 seconds	4
222		B2 (Negative)	Yes/No	4.5 seconds	4
223		S3 (Positive)	Yes/No	4.5 seconds	4
224		W6 (Negative)	Yes/No	4.5 seconds	4
225		R9 (Negative)	Yes/No	4.5 seconds	4
226		Q1 (Positive)	Yes/No	4.5 seconds	4
227		L8 (Positive)	Yes/No	4.5 seconds	4
228		J8 (Negative)	Yes/No	4.5 seconds	4
229		G5 (Positive)	Yes/No	4.5 seconds	4
230		S3 (Positive)	Yes/No	4.5 seconds	4

231		K3 (Negative)	Yes/No	4.5 seconds	4
232		Y7 (Negative)	Yes/No	4.5 seconds	4
233		Q1 (Positive)	Yes/No	4.5 seconds	4
234		G5 (Positive)	Yes/No	4.5 seconds	4
235		X5 (Negative)	Yes/No	4.5 seconds	4
236		L8 (Positive)	Yes/No	4.5 seconds	4
237		H2 (Negative)	Yes/No	4.5 seconds	4
238		U5 (Negative)	Yes/No	4.5 seconds	4
239		Z4 (Negative)	Yes/No	4.5 seconds	4
240		G5 (Positive)	Yes/No	4.5 seconds	4
241		Q1 (Positive)	Yes/No	4.5 seconds	4

242		L8 (Positive)	Yes/No	4.5 seconds	4
243		V9 (Negative)	Yes/No	4.5 seconds	4
244		D1 (Negative)	Yes/No	4.5 seconds	4
245		S3 (Positive)	Yes/No	4.5 seconds	4
246		G5 (Positive)	Yes/No	4.5 seconds	4
247		L8 (Positive)	Yes/No	4.5 seconds	4
248		T6 (Negative)	Yes/No	4.5 seconds	4
249		Q1 (Positive)	Yes/No	4.5 seconds	4
250		J9 (Negative)	Yes/No	4.5 seconds	4
251		Z5 (Negative)	Yes/No	4.5 seconds	4
252		S3 (Positive)	Yes/No	4.5 seconds	4

253		F8 (Negative)	Yes/No	4.5 seconds	4
254		G5 (Positive)	Yes/No	4.5 seconds	4
255		V3 (Negative)	Yes/No	4.5 seconds	4

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
	A7 D9 R6 U2 K3 V4			1.3 seconds each	
256		R6 (Positive)	Yes/No	4.5 seconds	6
257		H8 (Negative)	Yes/No	4.5 seconds	6

258		V4 (Positive)	Yes/No	4.5 seconds	6
259		V2 (Negative)	Yes/No	4.5 seconds	6
260		T5 (Negative)	Yes/No	4.5 seconds	6
261		U2 (Positive)	Yes/No	4.5 seconds	6
262		A7 (Positive)	Yes/No	4.5 seconds	6
263		K9 (Negative)	Yes/No	4.5 seconds	6
264		M3 (Negative)	Yes/No	4.5 seconds	6
265		K3 (Positive)	Yes/No	4.5 seconds	6
266		R6 (Positive)	Yes/No	4.5 seconds	6
267		Y1 (Negative)	Yes/No	4.5 seconds	6
268		U2 (Positive)	Yes/No	4.5 seconds	6

269		Z3 (Negative)	Yes/No	4.5 seconds	6
270		J7 (Negative)	Yes/No	4.5 seconds	6
271		A7 (Positive)	Yes/No	4.5 seconds	6
272		S8 (Negative)	Yes/No	4.5 seconds	6
273		D9 (Positive)	Yes/No	4.5 seconds	6
274		G2 (Negative)	Yes/No	4.5 seconds	6
275		U2 (Positive)	Yes/No	4.5 seconds	6
276		V4 (Positive)	Yes/No	4.5 seconds	6
277		K3 (Positive)	Yes/No	4.5 seconds	6
278		Z6 (Negative)	Yes/No	4.5 seconds	6
279		R6 (Positive)	Yes/No	4.5 seconds	6

280		B1 (Negative)	Yes/No	4.5 seconds	6
281		D9 (Positive)	Yes/No	4.5 seconds	6
282		C5 (Negative)	Yes/No	4.5 seconds	6
283		F4 (Negative)	Yes/No	4.5 seconds	6
284		H1 (Negative)	Yes/No	4.5 seconds	6
285		V4 (Positive)	Yes/No	4.5 seconds	6
286		U2 (Positive)	Yes/No	4.5 seconds	6
287		K3 (Positive)	Yes/No	4.5 seconds	6
288		X9 (Negative)	Yes/No	4.5 seconds	6
289		L4 (Negative)	Yes/No	4.5 seconds	6
290		R6 (Positive)	Yes/No	4.5 seconds	6

291		J3 (Negative)	Yes/No	4.5 seconds	6
292		A7 (Positive)	Yes/No	4.5 seconds	6
293		D9 (Positive)	Yes/No	4.5 seconds	6
294		W5 (Negative)	Yes/No	4.5 seconds	6
295		T1 (Negative)	Yes/No	4.5 seconds	6
296		K3 (Positive)	Yes/No	4.5 seconds	6
297		H7 (Negative)	Yes/No	4.5 seconds	6
298		U2 (Positive)	Yes/No	4.5 seconds	6
299		R6 (Positive)	Yes/No	4.5 seconds	6
300		V4 (Positive)	Yes/No	4.5 seconds	6
301		Q2 (Negative)	Yes/No	4.5 seconds	6

302		G8 (Negative)	Yes/No	4.5 seconds	6
303		A7 (Positive)	Yes/No	4.5 seconds	6
304		F9 (Negative)	Yes/No	4.5 seconds	6
305		D9 (Positive)	Yes/No	4.5 seconds	6
306		K3 (Positive)	Yes/No	4.5 seconds	6
307		S3 (Negative)	Yes/No	4.5 seconds	6
308		Y6 (Negative)	Yes/No	4.5 seconds	6
309		B1 (Negative)	Yes/No	4.5 seconds	6
310		V4 (Positive)	Yes/No	4.5 seconds	6
311		D9 (Positive)	Yes/No	4.5 seconds	6
312		A7 (Positive)	Yes/No	4.5 seconds	6

313		H2 (Negative)	Yes/No	4.5 seconds	6
314		S5 (Negative)	Yes/No	4.5 seconds	6
315		U2 (Positive)	Yes/No	4.5 seconds	6
316		K3 (Positive)	Yes/No	4.5 seconds	6
317		Z7 (Negative)	Yes/No	4.5 seconds	6
318		B2 (Negative)	Yes/No	4.5 seconds	6
319		V4 (Positive)	Yes/No	4.5 seconds	6
320		J8 (Negative)	Yes/No	4.5 seconds	6

Main Task Flow Table Adults Version- 3rd triad of stimuli (2,4,6) (to be displayed in the interface in the same order)

Trial No.	Memory Set	Probe (Positive/Negative)	Option (Yes/No)	Time Displayed	Letter Span
------------------	-------------------	-----------------------------------	------------------------	-----------------------	--------------------

	G1 E7			1.3 seconds each	
321		G1 (Positive)	Yes/No	4.5 seconds	2
322		M4 (Negative)	Yes/No	4.5 seconds	2
323		S2 (Negative)	Yes/No	4.5 seconds	2
324		Q5 (Negative)	Yes/No	4.5 seconds	2
325		G1 (Positive)	Yes/No	4.5 seconds	2
326		Z9 (Negative)	Yes/No	4.5 seconds	2
327		E7 (Positive)	Yes/No	4.5 seconds	2
328		G1 (Positive)	Yes/No	4.5 seconds	2
329		E7 (Positive)	Yes/No	4.5 seconds	2
330		H6 (Negative)	Yes/No	4.5 seconds	2

331		J3 (Negative)	Yes/No	4.5 seconds	2
332		G1 (Positive)	Yes/No	4.5 seconds	2
333		E7 (Positive)	Yes/No	4.5 seconds	2
334		L8 (Negative)	Yes/No	4.5 seconds	2
335		P2 (Negative)	Yes/No	4.5 seconds	2
336		G1 (Positive)	Yes/No	4.5 seconds	2
337		M7 (Negative)	Yes/No	4.5 seconds	2
338		T4 (Negative)	Yes/No	4.5 seconds	2
339		E7 (Positive)	Yes/No	4.5 seconds	2
340		G1 (Positive)	Yes/No	4.5 seconds	2
341		E7 (Positive)	Yes/No	4.5 seconds	2

342		K9 (Negative)	Yes/No	4.5 seconds	2
343		F5 (Negative)	Yes/No	4.5 seconds	2
344		C6 (Negative)	Yes/No	4.5 seconds	2
345		E7 (Positive)	Yes/No	4.5 seconds	2
346		G1 (Positive)	Yes/No	4.5 seconds	2
347		X8 (Negative)	Yes/No	4.5 seconds	2
348		B4 (Negative)	Yes/No	4.5 seconds	2
349		E7 (Positive)	Yes/No	4.5 seconds	2
350		G1 (Positive)	Yes/No	4.5 seconds	2

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	N6 T4 P7 H9				1.3 seconds each	
351		N6	Positive	Yes / No	4.5 seconds	4
352		T4	Positive	Yes / No	4.5 seconds	4
353		P7	Positive	Yes / No	4.5 seconds	4
354		A1	Negative	Yes / No	4.5 seconds	4
355		T4	Positive	Yes / No	4.5 seconds	4
356		C3	Negative	Yes / No	4.5 seconds	4
357		H9	Positive	Yes / No	4.5 seconds	4
358		D4	Negative	Yes / No	4.5 seconds	4
359		E5	Negative	Yes / No	4.5 seconds	4

360		N6	Positive	Yes / No	4.5 seconds	4
361		F6	Negative	Yes / No	4.5 seconds	4
362		G7	Negative	Yes / No	4.5 seconds	4
363		T4	Positive	Yes / No	4.5 seconds	4
364		P7	Positive	Yes / No	4.5 seconds	4
365		H9	Positive	Yes / No	4.5 seconds	4
366		I1	Negative	Yes / No	4.5 seconds	4
367		N6	Positive	Yes / No	4.5 seconds	4
368		K3	Negative	Yes / No	4.5 seconds	4
369		N6	Positive	Yes / No	4.5 seconds	4
370		L4	Negative	Yes / No	4.5 seconds	4
371		T4	Positive	Yes / No	4.5 seconds	4
372		M5	Negative	Yes / No	4.5 seconds	4
373		P7	Positive	Yes / No	4.5 seconds	4

374		H9	Positive	Yes / No	4.5 seconds	4
375		N6	Positive	Yes / No	4.5 seconds	4
376		N1	Negative	Yes / No	4.5 seconds	4
377		O2	Negative	Yes / No	4.5 seconds	4
378		P7	Positive	Yes / No	4.5 seconds	4
379		Q3	Negative	Yes / No	4.5 seconds	4
380		R4	Negative	Yes / No	4.5 seconds	4
381		H9	Positive	Yes / No	4.5 seconds	4
382		S5	Negative	Yes / No	4.5 seconds	4
383		T4	Positive	Yes / No	4.5 seconds	4
384		U6	Negative	Yes / No	4.5 seconds	4
385		V7	Negative	Yes / No	4.5 seconds	4
386		N6	Positive	Yes / No	4.5 seconds	4
387		T4	Positive	Yes / No	4.5 seconds	4

388		W8	Negative	Yes / No	4.5 seconds	4
389		P7	Positive	Yes / No	4.5 seconds	4
390		X9	Negative	Yes / No	4.5 seconds	4
391		H9	Positive	Yes / No	4.5 seconds	4
392		Y1	Negative	Yes / No	4.5 seconds	4
393		N6	Positive	Yes / No	4.5 seconds	4
394		P7	Positive	Yes / No	4.5 seconds	4
395		A3	Negative	Yes / No	4.5 seconds	4
396		T4	Positive	Yes / No	4.5 seconds	4
397		B4	Negative	Yes / No	4.5 seconds	4
398		C5	Negative	Yes / No	4.5 seconds	4
399		P7	Positive	Yes / No	4.5 seconds	4
400		D6	Negative	Yes / No	4.5 seconds	4
401		H9	Positive	Yes / No	4.5 seconds	4

402		E7	Negative	Yes / No	4.5 seconds	4
403		N6	Positive	Yes / No	4.5 seconds	4
404		F8	Negative	Yes / No	4.5 seconds	4
405		G9	Negative	Yes / No	4.5 seconds	4
406		T4	Positive	Yes / No	4.5 seconds	4
407		H1	Negative	Yes / No	4.5 seconds	4
408		P7	Positive	Yes / No	4.5 seconds	4
409		I2	Negative	Yes / No	4.5 seconds	4
410		J3	Negative	Yes / No	4.5 seconds	4
411		N6	Positive	Yes / No	4.5 seconds	4
412		K4	Negative	Yes / No	4.5 seconds	4
413		T4	Positive	Yes / No	4.5 seconds	4
414		L5	Negative	Yes / No	4.5 seconds	4
415		H9	Positive	Yes / No	4.5 seconds	4

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	B5 C8 F2 J6 W3 Z1				1.3 seconds each	
416		B5	Positive	Yes / No	4.5 seconds	6
417		D4	Negative	Yes / No	4.5 seconds	6
418		C8	Positive	Yes / No	4.5 seconds	6
419		F2	Positive	Yes / No	4.5 seconds	6
420		A7	Negative	Yes / No	4.5 seconds	6

421		H3	Negative	Yes / No	4.5 seconds	6
422		J6	Positive	Yes / No	4.5 seconds	6
423		Z1	Positive	Yes / No	4.5 seconds	6
424		P9	Negative	Yes / No	4.5 seconds	6
425		W3	Positive	Yes / No	4.5 seconds	6
426		E4	Negative	Yes / No	4.5 seconds	6
427		Q4	Negative	Yes / No	4.5 seconds	6
428		L2	Negative	Yes / No	4.5 seconds	6
429		F2	Positive	Yes / No	4.5 seconds	6
430		B5	Positive	Yes / No	4.5 seconds	6

431		N7	Negative	Yes / No	4.5 seconds	6
432		T6	Negative	Yes / No	4.5 seconds	6
433		Z1	Positive	Yes / No	4.5 seconds	6
434		M8	Negative	Yes / No	4.5 seconds	6
435		J6	Positive	Yes / No	4.5 seconds	6
436		C8	Positive	Yes / No	4.5 seconds	6
437		B5	Positive	Yes / No	4.5 seconds	6
438		R5	Negative	Yes / No	4.5 seconds	6
439		Y4	Negative	Yes / No	4.5 seconds	6
440		W3	Positive	Yes / No	4.5 seconds	6

441		F2	Positive	Yes / No	4.5 seconds	6
442		E7	Negative	Yes / No	4.5 seconds	6
443		K9	Negative	Yes / No	4.5 seconds	6
444		C8	Positive	Yes / No	4.5 seconds	6
445		V6	Negative	Yes / No	4.5 seconds	6
446		J6	Positive	Yes / No	4.5 seconds	6
447		U2	Negative	Yes / No	4.5 seconds	6
448		S1	Negative	Yes / No	4.5 seconds	6
449		B5	Positive	Yes / No	4.5 seconds	6
450		W3	Positive	Yes / No	4.5 seconds	6

451		F2	Positive	Yes / No	4.5 seconds	6
452		H4	Negative	Yes / No	4.5 seconds	6
453		Z1	Positive	Yes / No	4.5 seconds	6
454		G7	Negative	Yes / No	4.5 seconds	6
455		J6	Positive	Yes / No	4.5 seconds	6
456		Q8	Negative	Yes / No	4.5 seconds	6
457		F2	Positive	Yes / No	4.5 seconds	6
458		Z1	Positive	Yes / No	4.5 seconds	6
459		D9	Negative	Yes / No	4.5 seconds	6
460		B5	Positive	Yes / No	4.5 seconds	6

461		E3	Negative	Yes / No	4.5 seconds	6
462		W3	Positive	Yes / No	4.5 seconds	6
463		F2	Positive	Yes / No	4.5 seconds	6
464		J6	Positive	Yes / No	4.5 seconds	6
465		O5	Negative	Yes / No	4.5 seconds	6
466		L6	Negative	Yes / No	4.5 seconds	6
467		C8	Positive	Yes / No	4.5 seconds	6
468		W3	Positive	Yes / No	4.5 seconds	6
469		N4	Negative	Yes / No	4.5 seconds	6
470		R7	Negative	Yes / No	4.5 seconds	6

471		Z1	Positive	Yes / No	4.5 seconds	6
472		J6	Positive	Yes / No	4.5 seconds	6
473		T8	Negative	Yes / No	4.5 seconds	6
474		D4	Negative	Yes / No	4.5 seconds	6
475		X2	Negative	Yes / No	4.5 seconds	6
476		C8	Positive	Yes / No	4.5 seconds	6
477		V5	Negative	Yes / No	4.5 seconds	6
478		K1	Negative	Yes / No	4.5 seconds	6
479		G8	Negative	Yes / No	4.5 seconds	6
480		W3	Positive	Yes / No	4.5 seconds	6

Main Task Flow Table Adults Version- 4th triad of stimuli (2,4,6) (to be displayed in the computer interface in the same order).

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	J5 H2				1.3 seconds each	
481		J5	Positive	Yes / No	4.5 seconds	2
482		H2	Positive	Yes / No	4.5 seconds	2
483		J5	Positive	Yes / No	4.5 seconds	2
484		A1	Negative	Yes / No	4.5 seconds	2
485		B2	Negative	Yes / No	4.5 seconds	2
486		C3	Negative	Yes / No	4.5 seconds	2

487		H2	Positive	Yes / No	4.5 seconds	2
488		D4	Negative	Yes / No	4.5 seconds	2
489		J5	Positive	Yes / No	4.5 seconds	2
490		E5	Negative	Yes / No	4.5 seconds	2
491		F6	Negative	Yes / No	4.5 seconds	2
492		H2	Positive	Yes / No	4.5 seconds	2
493		J5	Positive	Yes / No	4.5 seconds	2
494		J5	Positive	Yes / No	4.5 seconds	2
495		H2	Positive	Yes / No	4.5 seconds	2
496		G7	Negative	Yes / No	4.5 seconds	2

497		H8	Negative	Yes / No	4.5 seconds	2
498		I9	Negative	Yes / No	4.5 seconds	2
499		J5	Positive	Yes / No	4.5 seconds	2
500		K1	Negative	Yes / No	4.5 seconds	2
501		L2	Negative	Yes / No	4.5 seconds	2
502		H2	Positive	Yes / No	4.5 seconds	2
503		M3	Negative	Yes / No	4.5 seconds	2
504		N4	Negative	Yes / No	4.5 seconds	2
505		O5	Negative	Yes / No	4.5 seconds	2
506		J5	Positive	Yes / No	4.5 seconds	2

507		H2	Positive	Yes / No	4.5 seconds	2
508		P6	Negative	Yes / No	4.5 seconds	2
509		J5	Positive	Yes / No	4.5 seconds	2
510		H2	Positive	Yes / No	4.5 seconds	2

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	M8 Q5 K4 S7				1.3 seconds each	
511		M8	Positive	Yes / No	4.5 seconds	4
512		Q5	Positive	Yes / No	4.5 seconds	4

513		K4	Positive	Yes / No	4.5 seconds	4
514		S7	Positive	Yes / No	4.5 seconds	4
515		A1	Negative	Yes / No	4.5 seconds	4
516		B2	Negative	Yes / No	4.5 seconds	4
517		C3	Negative	Yes / No	4.5 seconds	4
518		M8	Positive	Yes / No	4.5 seconds	4
519		Q5	Positive	Yes / No	4.5 seconds	4
520		D4	Negative	Yes / No	4.5 seconds	4
521		E5	Negative	Yes / No	4.5 seconds	4
522		K4	Positive	Yes / No	4.5 seconds	4
523		S7	Positive	Yes / No	4.5 seconds	4

524		F6	Negative	Yes / No	4.5 seconds	4
525		G7	Negative	Yes / No	4.5 seconds	4
526		H8	Negative	Yes / No	4.5 seconds	4
527		M8	Positive	Yes / No	4.5 seconds	4
528		Q5	Positive	Yes / No	4.5 seconds	4
529		K4	Positive	Yes / No	4.5 seconds	4
530		I9	Negative	Yes / No	4.5 seconds	4
531		J1	Negative	Yes / No	4.5 seconds	4
532		S7	Positive	Yes / No	4.5 seconds	4
533		M8	Positive	Yes / No	4.5 seconds	4
534		Q5	Positive	Yes / No	4.5 seconds	4

535		K4	Positive	Yes / No	4.5 seconds	4
536		L2	Negative	Yes / No	4.5 seconds	4
537		M3	Negative	Yes / No	4.5 seconds	4
538		N4	Negative	Yes / No	4.5 seconds	4
539		S7	Positive	Yes / No	4.5 seconds	4
540		O5	Negative	Yes / No	4.5 seconds	4
541		P6	Negative	Yes / No	4.5 seconds	4
542		Q5	Positive	Yes / No	4.5 seconds	4
543		K4	Positive	Yes / No	4.5 seconds	4
544		R7	Negative	Yes / No	4.5 seconds	4
545		S7	Positive	Yes / No	4.5 seconds	4

546		T1	Negative	Yes / No	4.5 seconds	4
547		U2	Negative	Yes / No	4.5 seconds	4
548		V3	Negative	Yes / No	4.5 seconds	4
549		M8	Positive	Yes / No	4.5 seconds	4
550		Q5	Positive	Yes / No	4.5 seconds	4
551		W4	Negative	Yes / No	4.5 seconds	4
552		X5	Negative	Yes / No	4.5 seconds	4
553		Y6	Negative	Yes / No	4.5 seconds	4
554		K4	Positive	Yes / No	4.5 seconds	4
555		Z7	Negative	Yes / No	4.5 seconds	4
556		S7	Positive	Yes / No	4.5 seconds	4

557		M8	Positive	Yes / No	4.5 seconds	4
558		Q5	Positive	Yes / No	4.5 seconds	4
559		A8	Negative	Yes / No	4.5 seconds	4
560		B9	Negative	Yes / No	4.5 seconds	4
561		C1	Negative	Yes / No	4.5 seconds	4
562		K4	Positive	Yes / No	4.5 seconds	4
563		S7	Positive	Yes / No	4.5 seconds	4
564		D2	Negative	Yes / No	4.5 seconds	4
565		M8	Positive	Yes / No	4.5 seconds	4
566		Q5	Positive	Yes / No	4.5 seconds	4
567		E3	Negative	Yes / No	4.5 seconds	4

568		F4	Negative	Yes / No	4.5 seconds	4
569		K4	Positive	Yes / No	4.5 seconds	4
570		S7	Positive	Yes / No	4.5 seconds	4
571		G5	Negative	Yes / No	4.5 seconds	4
572		H6	Negative	Yes / No	4.5 seconds	4
573		M8	Positive	Yes / No	4.5 seconds	4
574		Q5	Positive	Yes / No	4.5 seconds	4
575		L2	Negative	Yes / No	4.5 seconds	4

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
------------------	-------------------	--------------	-------------	----------------	-----------------------	--------------------

	A3 C6 G8 L9 P2 Y5				1.3 seconds each	
576		A3	Positive	Yes / No	4.5 seconds	6
577		C6	Positive	Yes / No	4.5 seconds	6
578		G8	Positive	Yes / No	4.5 seconds	6
579		D4	Negative	Yes / No	4.5 seconds	6
580		E1	Negative	Yes / No	4.5 seconds	6
581		L9	Positive	Yes / No	4.5 seconds	6
582		F5	Negative	Yes / No	4.5 seconds	6
583		P2	Positive	Yes / No	4.5 seconds	6

584		H3	Negative	Yes / No	4.5 seconds	6
585		Y5	Positive	Yes / No	4.5 seconds	6
586		I6	Negative	Yes / No	4.5 seconds	6
587		J7	Negative	Yes / No	4.5 seconds	6
588		K8	Negative	Yes / No	4.5 seconds	6
589		A3	Positive	Yes / No	4.5 seconds	6
590		C6	Positive	Yes / No	4.5 seconds	6
591		G8	Positive	Yes / No	4.5 seconds	6
592		K7	Negative	Yes / No	4.5 seconds	6
593		B2	Negative	Yes / No	4.5 seconds	6
594		M1	Negative	Yes / No	4.5 seconds	6

595		P2	Positive	Yes / No	4.5 seconds	6
596		Y5	Positive	Yes / No	4.5 seconds	6
597		N4	Negative	Yes / No	4.5 seconds	6
598		O7	Negative	Yes / No	4.5 seconds	6
599		A3	Positive	Yes / No	4.5 seconds	6
600		C6	Positive	Yes / No	4.5 seconds	6
601		G8	Positive	Yes / No	4.5 seconds	6
602		W3	Negative	Yes / No	4.5 seconds	6
603		P2	Positive	Yes / No	4.5 seconds	6
604		Q3	Negative	Yes / No	4.5 seconds	6
605		R5	Negative	Yes / No	4.5 seconds	6

606		Y5	Positive	Yes / No	4.5 seconds	6
607		S6	Negative	Yes / No	4.5 seconds	6
608		T7	Negative	Yes / No	4.5 seconds	6
609		A3	Positive	Yes / No	4.5 seconds	6
610		C6	Positive	Yes / No	4.5 seconds	6
611		U8	Negative	Yes / No	4.5 seconds	6
612		V9	Negative	Yes / No	4.5 seconds	6
613		G8	Positive	Yes / No	4.5 seconds	6
614		W1	Negative	Yes / No	4.5 seconds	6
615		X2	Negative	Yes / No	4.5 seconds	6
616		L9	Positive	Yes / No	4.5 seconds	6

617		P2	Positive	Yes / No	4.5 seconds	6
618		Y5	Positive	Yes / No	4.5 seconds	6
619		A4	Negative	Yes / No	4.5 seconds	6
620		B5	Negative	Yes / No	4.5 seconds	6
621		C6	Positive	Yes / No	4.5 seconds	6
622		D7	Negative	Yes / No	4.5 seconds	6
623		G8	Positive	Yes / No	4.5 seconds	6
624		M4	Negative	Yes / No	4.5 seconds	6
625		P2	Positive	Yes / No	4.5 seconds	6
626		Y5	Positive	Yes / No	4.5 seconds	6
627		E1	Negative	Yes / No	4.5 seconds	6

628		F3	Negative	Yes / No	4.5 seconds	6
629		A3	Positive	Yes / No	4.5 seconds	6
630		B5	Negative	Yes / No	4.5 seconds	6
631		G8	Positive	Yes / No	4.5 seconds	6
632		L9	Positive	Yes / No	4.5 seconds	6
633		P2	Positive	Yes / No	4.5 seconds	6
634		Y5	Positive	Yes / No	4.5 seconds	6
635		G1	Negative	Yes / No	4.5 seconds	6
636		H2	Negative	Yes / No	4.5 seconds	6
637		I3	Negative	Yes / No	4.5 seconds	6
638		A3	Positive	Yes / No	4.5 seconds	6

639		C6	Positive	Yes / No	4.5 seconds	6
640		V7	Negative	Yes / No	4.5 seconds	6

Main Task Flow Table- Adults Version- 5th triad of stimuli (2,4,6) (to be displayed in the computer interface in the same order)

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	K6 N3				1.3 seconds each	
641		K6	Positive	Yes / No	4.5 seconds	2
642		N3	Positive	Yes / No	4.5 seconds	2
643		A1	Negative	Yes / No	4.5 seconds	2
644		B4	Negative	Yes / No	4.5 seconds	2
645		K6	Positive	Yes / No	4.5 seconds	2
646		C2	Negative	Yes / No	4.5 seconds	2

647		N3	Positive	Yes / No	4.5 seconds	2
648		N3	Positive	Yes / No	4.5 seconds	2
649		E5	Negative	Yes / No	4.5 seconds	2
650		K6	Positive	Yes / No	4.5 seconds	2
651		F9	Negative	Yes / No	4.5 seconds	2
652		N3	Positive	Yes / No	4.5 seconds	2
653		G3	Negative	Yes / No	4.5 seconds	2
654		H6	Negative	Yes / No	4.5 seconds	2
655		K6	Positive	Yes / No	4.5 seconds	2
656		I2	Negative	Yes / No	4.5 seconds	2
657		N3	Positive	Yes / No	4.5 seconds	2
658		J8	Negative	Yes / No	4.5 seconds	2
659		K6	Positive	Yes / No	4.5 seconds	2
660		N3	Positive	Yes / No	4.5 seconds	2

661		K1	Negative	Yes / No	4.5 seconds	2
662		L4	Negative	Yes / No	4.5 seconds	2
663		K6	Positive	Yes / No	4.5 seconds	2
664		N3	Positive	Yes / No	4.5 seconds	2
665		M5	Negative	Yes / No	4.5 seconds	2
666		N6	Negative	Yes / No	4.5 seconds	2
667		K6	Positive	Yes / No	4.5 seconds	2
668		N3	Positive	Yes / No	4.5 seconds	2
669		O7	Negative	Yes / No	4.5 seconds	2
670		P9	Negative	Yes / No	4.5 seconds	2

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
------------------	-------------------	--------------	-------------	----------------	-----------------------	--------------------

	E4 G7 R1 T6				1.3 seconds each	
671		E4	Positive	Yes / No	4.5 seconds	4
672		Y3	Negative	Yes / No	4.5 seconds	4
673		R1	Positive	Yes / No	4.5 seconds	4
674		A3	Negative	Yes / No	4.5 seconds	4
675		T6	Positive	Yes / No	4.5 seconds	4
676		B5	Negative	Yes / No	4.5 seconds	4
677		C8	Negative	Yes / No	4.5 seconds	4
678		E4	Positive	Yes / No	4.5 seconds	4
679		D2	Negative	Yes / No	4.5 seconds	4

680		G7	Positive	Yes / No	4.5 seconds	4
681		R1	Positive	Yes / No	4.5 seconds	4
682		F6	Negative	Yes / No	4.5 seconds	4
683		T6	Positive	Yes / No	4.5 seconds	4
684		H9	Negative	Yes / No	4.5 seconds	4
685		I1	Negative	Yes / No	4.5 seconds	4
686		E4	Positive	Yes / No	4.5 seconds	4
687		G7	Positive	Yes / No	4.5 seconds	4
688		R1	Positive	Yes / No	4.5 seconds	4
689		J3	Negative	Yes / No	4.5 seconds	4
690		T6	Positive	Yes / No	4.5 seconds	4

691		A6	Negative	Yes / No	4.5 seconds	4
692		L7	Negative	Yes / No	4.5 seconds	4
693		E4	Positive	Yes / No	4.5 seconds	4
694		G7	Positive	Yes / No	4.5 seconds	4
695		R1	Positive	Yes / No	4.5 seconds	4
696		M2	Negative	Yes / No	4.5 seconds	4
697		T6	Positive	Yes / No	4.5 seconds	4
698		N4	Negative	Yes / No	4.5 seconds	4
699		O8	Negative	Yes / No	4.5 seconds	4
700		E4	Positive	Yes / No	4.5 seconds	4
701		G7	Positive	Yes / No	4.5 seconds	4

702		D5	Negative	Yes / No	4.5 seconds	4
703		T6	Positive	Yes / No	4.5 seconds	4
704		P1	Negative	Yes / No	4.5 seconds	4
705		Q3	Negative	Yes / No	4.5 seconds	4
706		E4	Positive	Yes / No	4.5 seconds	4
707		C1	Negative	Yes / No	4.5 seconds	4
708		R1	Positive	Yes / No	4.5 seconds	4
709		T6	Positive	Yes / No	4.5 seconds	4
710		R2	Negative	Yes / No	4.5 seconds	4
711		S5	Negative	Yes / No	4.5 seconds	4
712		E4	Positive	Yes / No	4.5 seconds	4

713		G7	Positive	Yes / No	4.5 seconds	4
714		Y3	Negative	Yes / No	4.5 seconds	4
715		T6	Positive	Yes / No	4.5 seconds	4
716		T7	Negative	Yes / No	4.5 seconds	4
717		U8	Negative	Yes / No	4.5 seconds	4
718		E4	Positive	Yes / No	4.5 seconds	4
719		G7	Positive	Yes / No	4.5 seconds	4
720		R1	Positive	Yes / No	4.5 seconds	4
721		V4	Negative	Yes / No	4.5 seconds	4
722		V2	Negative	Yes / No	4.5 seconds	4
723		W3	Negative	Yes / No	4.5 seconds	4

724		E4	Positive	Yes / No	4.5 seconds	4
725		G7	Positive	Yes / No	4.5 seconds	4
726		R1	Positive	Yes / No	4.5 seconds	4
727		T6	Positive	Yes / No	4.5 seconds	4
728		X1	Negative	Yes / No	4.5 seconds	4
729		Y4	Negative	Yes / No	4.5 seconds	4
730		E4	Positive	Yes / No	4.5 seconds	4
731		G7	Positive	Yes / No	4.5 seconds	4
732		U3	Negative	Yes / No	4.5 seconds	4
733		B7	Negative	Yes / No	4.5 seconds	4
734		Z5	Negative	Yes / No	4.5 seconds	4

735		A6	Negative	Yes / No	4.5 seconds	4
-----	--	----	----------	----------	-------------	---

Trial No.	Memory Set	Probe	Type	Options	Time Displayed	Letter Span
	B8 D2 F9 H5 X4 Z7				1.3 seconds each	
736		B8	Positive	Yes / No	4.5 seconds	6
737		D2	Positive	Yes / No	4.5 seconds	6
738		F9	Positive	Yes / No	4.5 seconds	6
739		A1	Negative	Yes / No	4.5 seconds	6
740		H5	Positive	Yes / No	4.5 seconds	6
741		X4	Positive	Yes / No	4.5 seconds	6

742		Z7	Positive	Yes / No	4.5 seconds	6
743		C3	Negative	Yes / No	4.5 seconds	6
744		D2	Negative	Yes / No	4.5 seconds	6
745		B8	Positive	Yes / No	4.5 seconds	6
746		F9	Positive	Yes / No	4.5 seconds	6
747		G5	Negative	Yes / No	4.5 seconds	6
748		H5	Positive	Yes / No	4.5 seconds	6
749		X4	Positive	Yes / No	4.5 seconds	6
750		I2	Negative	Yes / No	4.5 seconds	6
751		Z7	Positive	Yes / No	4.5 seconds	6
752		J3	Negative	Yes / No	4.5 seconds	6
753		B8	Positive	Yes / No	4.5 seconds	6
754		D2	Positive	Yes / No	4.5 seconds	6
755		E5	Negative	Yes / No	4.5 seconds	6

756		K1	Negative	Yes / No	4.5 seconds	6
757		H5	Negative	Yes / No	4.5 seconds	6
758		D2	Positive	Yes / No	4.5 seconds	6
759		Z7	Negative	Yes / No	4.5 seconds	6
760		B8	Positive	Yes / No	4.5 seconds	6
761		D2	Positive	Yes / No	4.5 seconds	6
762		F9	Positive	Yes / No	4.5 seconds	6
763		H5	Negative	Yes / No	4.5 seconds	6
764		X4	Negative	Yes / No	4.5 seconds	6
765		Z7	Negative	Yes / No	4.5 seconds	6
766		B8	Positive	Yes / No	4.5 seconds	6
767		Y6	Negative	Yes / No	4.5 seconds	6
768		F9	Positive	Yes / No	4.5 seconds	6
769		H5	Negative	Yes / No	4.5 seconds	6

770		X4	Negative	Yes / No	4.5 seconds	6
771		Z7	Negative	Yes / No	4.5 seconds	6
772		B8	Positive	Yes / No	4.5 seconds	6
773		J7	Negative	Yes / No	4.5 seconds	6
774		F9	Positive	Yes / No	4.5 seconds	6
775		H5	Positive	Yes / No	4.5 seconds	6
776		X4	Negative	Yes / No	4.5 seconds	6
777		Z7	Negative	Yes / No	4.5 seconds	6
778		B8	Positive	Yes / No	4.5 seconds	6
779		D2	Positive	Yes / No	4.5 seconds	6
780		Z7	Negative	Yes / No	4.5 seconds	6
781		H5	Negative	Yes / No	4.5 seconds	6
782		X4	Negative	Yes / No	4.5 seconds	6
783		F9	Positive	Yes / No	4.5 seconds	6

784		B8	Positive	Yes / No	4.5 seconds	6
785		D2	Positive	Yes / No	4.5 seconds	6
786		F9	Positive	Yes / No	4.5 seconds	6
787		H5	Negative	Yes / No	4.5 seconds	6
788		X4	Negative	Yes / No	4.5 seconds	6
789		Z7	Negative	Yes / No	4.5 seconds	6
790		B8	Positive	Yes / No	4.5 seconds	6
791		X4	Negative	Yes / No	4.5 seconds	6
792		F9	Positive	Yes / No	4.5 seconds	6
793		H5	Negative	Yes / No	4.5 seconds	6
794		D2	Negative	Yes / No	4.5 seconds	6
795		Z7	Negative	Yes / No	4.5 seconds	6
796		B8	Positive	Yes / No	4.5 seconds	6
797		D2	Positive	Yes / No	4.5 seconds	6

798		F9	Positive	Yes / No	4.5 seconds	6
799		H5	Negative	Yes / No	4.5 seconds	6
800		X4	Negative	Yes / No	4.5 seconds	6

5. After the participant completes all the blocks, we would give instructions that emphasize the end of this task.

Adolescents (14–18 years)

"Awesome work! You've completed this challenge — stay sharp, the next one is coming up!"

Adults (18–22 years)

"Well done! You've successfully finished this task — let's move on to the next part."

5. Implementation Notes

- Each span runs all its probe trials before moving to the next span
- Sequential & Alternating Presentation: Memory set spans alternate throughout the task (1→3→5 or 2→4→6)
- Probe remains visible until response
- **Inter-Round Interval (ITI):** 300 ms recommended

6. Scoring Instruction Manual for tech team:

Data Columns Required (will not be shown to participants for interpretation):

- **Round Number:** Sequential number identifying each round.
- **Memory Set Size:** Number of items in the memory set for that round.

- **Probe Item:** The item presented for recognition in the round.
- **Probe Type:** Indicate whether the probe is a Target (included in the memory set) or a Non-Target (not included).
- **Participant Response:** Indicate whether the participant responds 'Yes' (recognizing the probe as in the memory set) or 'No'.
- **Response Accuracy:** Score 1 if the participant correctly identifies the probe ("Yes" for Target, "No" for Non-Target), otherwise 0.
- **Reaction Time (RT):** Time in milliseconds from probe presentation to participant response.

Scoring Instructions:

- When the participant correctly recognizes the probe item as a member (for Targets) or non-member (for Non-Targets), assign a score of 1 (Correct Response).
- When the participant incorrectly responds (e.g., 'Yes' to Non-Target or 'No' to Target), assign a score of 0 (Incorrect Response).
- Record Reaction Time (RT) only for trials where the participant responded.

Additional Scoring Parameters:

- **Total Rounds Answered:** Count of all probe rounds where participants responded.
- **Total Rounds Not Answered:** Count of all probe rounds with no response.
- **Correct Responses:** Sum of all probe rounds with correct response (score = 1).
- **Incorrect Responses:** Sum of all probe rounds with incorrect response (score = 0).
- **Accuracy Rate:**
 - **Accuracy = Correct Responses/ Total Rounds Answered×100.**
- **Mean Reaction Time:** Average RT across all correctly answered rounds.