

Mock Practical Assessment

Do Pictures Really Say a Thousand Words? A SuperLab Investigation of Recognition Memory for Images and Words

In this Mock Practical, you will be creating a SuperLab study to explore memory recognition of images and words. This study aims to investigate whether people are better at recognising information they originally learned as pictures or as words.

Participants will complete a simple recognition memory task. They will first be shown a grid of stimuli (either images or words) to memorise. They will then see a series of individual test items and must decide whether each item was presented previously. By comparing performance across conditions, this study explores how stimulus format (picture vs. word) influences recognition accuracy.

In addition to the SuperLab task, you will be required to create your study materials (template and examples of these are available via the Module Moodle page). These include:

- 1. Study Information Sheet**
- 2. Consent Form**
- 3. Debrief Sheet**
- 4. Study Protocol**

Finally you will need to run this study on one of the academic staff available – they will be acting as your participant so treat them as you would a normal participant who has no background in Psychology.

Run through the programme yourself first to ensure it all works well. **This is included in your assessment time so please allow yourself 15 minutes at the end to complete this element of the assessment.**

Understanding the Literature Behind The Task:

Recognition memory for words, sentences, and pictures ([Shepard, 1967](#))

One of the first studies to demonstrate that participants showed near-perfect recognition memory for pictures compared to relatively poor memory for words. This paper provided early evidence that pictures have a strong mnemonic advantage in recognition tasks.

Recognition memory for pictures and words ([Mintzer & Snodgrass, 1999](#)):

This paper explores why the picture superiority effect occurs, comparing explanations based on dual coding and distinctiveness. It demonstrates that pictures are encoded with greater perceptual detail, making them easier to discriminate from new items during recognition.

The picture superiority effect in associative recognition ([Hockley, 2008](#)):

Hockley extended picture superiority findings to more complex recognition tasks, showing that pictures are not only remembered better as individual items, but also when participants need to remember relationships between items.

Why this matters in real life:

Understanding how stimulus format affects memory has important real-world applications:

1. Education: Learning materials that combine images and words are often more memorable than text alone. This research helps explain why diagrams, flashcards, and visual aids are effective learning tools.
2. Eyewitness memory: Visual information is often assumed to be reliable, yet understanding how pictures are encoded and recognised helps clarify both strengths and limitations of memory in legal contexts.
3. Advertising and communication: Marketers rely heavily on imagery because visual content is more likely to be remembered; this study demonstrates the cognitive mechanisms behind that effect.
4. Human–computer interaction: Interface icons, warning symbols, and visual displays are designed using principles that exploit the picture superiority effect.

Your Task: Create a study to test whether stimulus format impacts recognition

Condition One:

- You will be presenting participants with 9 **images** in a 3 x 3 grid format.
- Participants will then be presented with 15 individual **words** (one word per screen) which may or may not correspond to the pictures initially displayed in the grid.
- Participants will need to identify whether the word presented was one of the 9 images originally displayed or not (for example, one of the nine images is an elephant, later you will display the word elephant and the participant must decide whether or not they have seen the image).

Condition Two:

- You will be presenting participants with 9 **words** in a 3 x 3 grid format.
- Participants will then be presented with 15 individual **images** (one image per screen) which may or may not correspond with the words that were initially displayed in the grid.
- Participants will need to identify whether the picture presented was one of the 9 words originally displayed (for example, one of the nine words is 'elephant', later you will display an image of an elephant and participants must decide whether or not they have seen the word).

Materials:

Create your materials **before** you start your SuperLab design.

1. Images:

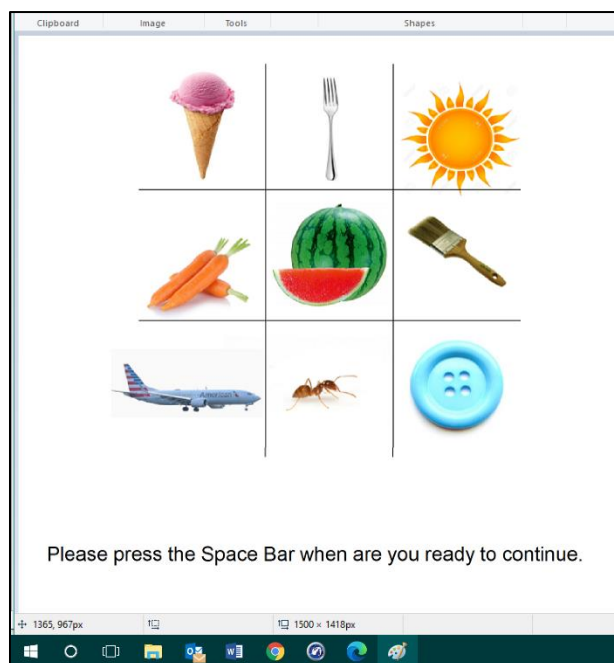
- Use the Appendices of the [paper provided on Moodle](#) to select your images and words. You may use Google Images to source visually similar versions of the selected images
- Participants will see 9 images for Condition One.
- Participants will see 15 images for Condition Two.

2. Words:

- Use the Appendices of the paper provided on Moodle to identify which words you will be using in your study.
- Participants will see 15 words for Condition One.
- Participants will see 9 word for Condition Two.

3. Create the grids:

- Use the words and images sourced from the paper
- **Condition One:**
 - Create a grid of 9 images in a 3 x 3 format.
 - Do this on Microsoft Word
 - Add Text below the grid with instructions
- **Condition Two:**
 - Create a grid of 9 words in a 3 x 3 format.
 - Do this on Microsoft Word
 - Add Text below the grid with instructions



4. Creating a picture file:

- You will need to create your Picture file in a Word Document and convert it to a Jpeg format, ready to upload into SuperLab.
- The easiest way to do this is to create the image in a Word Document, take a Screenshot and paste into a new Word document. You can then save the image as a Jpeg file.

Procedure:

1. Participants will be tested individually; all aspects of the study will take place in an individual lab booth.
2. Participants will first be presented with an information sheet, and then a consent form. After signing the consent form, participants will complete the SuperLab task.
3. During the SuperLab task, participants will first be presented with a set of instructions, and then they will be shown the grid with 9 images (Condition One)
4. Participants will be shown 15 words presented individually on the screen (Condition One). Participants will be asked to identify whether they have seen the word corresponding to the images shown in the grid using a designated keyboard key (A = Yes or L = No)
5. Participants will be shown a second instruction screen, and then they will be shown the grid with 9 words (Condition Two)
6. Participants will be shown 15 images presented individually on the screen (Condition Two). Participants will be asked to identify whether they have seen the image corresponding to the words shown in the grid using a designated keyboard key (Yes or No)
7. Participants will be verbally debriefed and handed a debrief form.

Step-by-step instructions:

1. Create new experiment:

- Open SuperLab 6
- Create a New Experiment
- Blank Experiment

2. Create reusable inter-stimulus events:

Create two Events you'll insert between stimuli:

- Fixation Cross:
 - Create a new Event
 - Event Type: 'Text' and type in a '+'
 - Change font size 72
 - Input: Only tick 'only after a time limit' and set to 500ms
- Blank Screen:
 - Create a new Event
 - Event Type: 'Text' and leave blank
 - Input: Only tick 'only after a time limit' and set to 500ms

2. Block 1: Instruction (Condition One)

- Create a new Block (e.g., 'Instructions1')
- Create a new Trial (e.g., 'Instructions1')
- Create a new Event (e.g., 'Instructions1')
- Event Type: 'Text'
 - Type in a clear set of instructions (see appendix)
 - Space the text out nicely, so it is readable and easy to understand
- Set the 'Correct Response':
 - Click 'Edit Response' and then click 'New'
 - Call the response 'SPACEBAR' and add a space into 'The Following Key' box
 - Within the 'Correct Response' tab, change '...the correct response is:' to 'One or more of the following' and tick SPACEBAR
- Input: Only tick 'After a correct response..'
- Link the Instruction Block, Trial and Event:
 - When the Block is highlighted, tick the corresponding Trial(s)
 - When the Trial is highlighted, tick the corresponding Event(s)

3. Block 2: Image Grid (Condition One)

- Create a new Block (e.g., 'Image Grid')
- Create a new Trial (e.g., 'Image Grid')
- Create a new Event (e.g., 'Image Grid')
- Event Type: 'Picture File'.
 - Select your saved image file
 - Change the settings to ensure the image is centralised and presented clearly
- Set the 'Correct Response' as SPACEBAR
 - Within the 'Correct Response' tab, change '...the correct response is:' to 'One or more of the following' and tick SPACEBAR
- Input: Only tick 'After a correct response..'
- Link the Instruction Block, Trial and Event.

4. Block 3: Individual Words (Condition One)

- Create a new Block (e.g., 'Words')
- Create 15 new Trials (e.g., W1, W2, W3...)
- Create 15 new Events (e.g., W1, W2, W3...)
- Event Type: 'Text' and type in your chosen 15 words into the 15 events
- Add new Correct Responses (same process as before):
 - Yes = a (see before)
 - No = l (not seen before)
 - Within the 'Correct Response' tab, change '...the correct response is:' to 'One or more of the following' and tick BOTH 'Yes' and 'No'
- Input: Only tick 'After a correct response..'
- Link the Block, Trials and Events. Add Fixation Cross and Blank Screen
- Randomise Block

5. Block 4: Instruction (Condition Two)

- Follow steps for Block 1
- Type in a clear set of instructions (adapt wording from Condition One instructions)
- Use the Spacebar as the 'Correct Response'

6. Block 5: Word Grid (Condition Two)

- Follow steps for Block 2

7. Block 6: Individual Images (Condition Two)

- Create a new Block (e.g., 'Images')
- Create 15 new Trials (e.g., I1, I2, I3...)
- Create 15 new Events (e.g., I1, I2, I3...)
- Event Type: 'Picture File' and add your chosen 15 images into the 15 events
- Set the 'Correct Response' as 'Yes' and 'No' (same as before)
- Input: Only tick 'After a correct response..'
- Link the Block, Trials and Events. Add Fixation Cross and Blank Screen
- Randomise Block

8. Block 7: Thank you page

- Create a new Block (e.g., 'End')
- Create a new Trial (e.g., 'End')
- Create a new Event (e.g., 'End')
- Event Type: Text and type in your end message
- Link the Instruction Block, Trial and Event

Appendix:

Instructions Example:

"In this task, you will first see nine pictures displayed together in a grid on the screen.
Please pay close attention and try to remember the pictures you see.

Then, you will be shown a series of individual words, one at a time.

For each word, decide whether it matches one of the pictures you saw in the grid.

Press the A key if the word matches one of the pictures you saw earlier.

Press the L key if the word does NOT match any of the pictures.

Please respond as accurately as possible.

Press the space bar to begin"