

WORKING MEMORY: EPISODIC BUFFER

Worksheet



RETTORE
REMEMBER TO REMEMBER



Co-funded by
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WORKING MEMORY: EPISODIC BUFFER

INTRODUCTION

Note for the administrator

Principle of the task

Working memory refers to the brain's capacity for short-term abstraction and manipulation of information. It represents a fundamental neurocognitive process in various aspects of everyday functioning. Episodic buffer, another component of working memory, forms an important phase of long-term episodic learning. The buffer functions as a storage unit for the other two working memory components (phonological loop and visuospatial sketchpad). It also functions as a link between information stored in working memory and perception alongside long-term memory. In everyday life, the buffer is used to integrate information, for instance about an unfamiliar person who is introduced to us. We rarely remember the name alone, but if we also focus on appearance, behaviour, and other information about that person, we can more easily store it in our minds. Tasks in the present sheet involve a combination of visual and auditory information manipulation and reproduction.

Reasons for practice

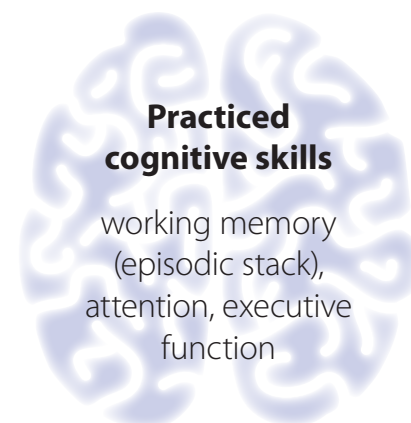
Working memory contains thoughts which are made available to the mind just when it is needed to carry out a mental task or to solve a problem. It is essential to practise using the episodic buffer since without its proper functioning one would not be able to integrate various sorts of information and therefore could not function in everyday life.

Information for the client

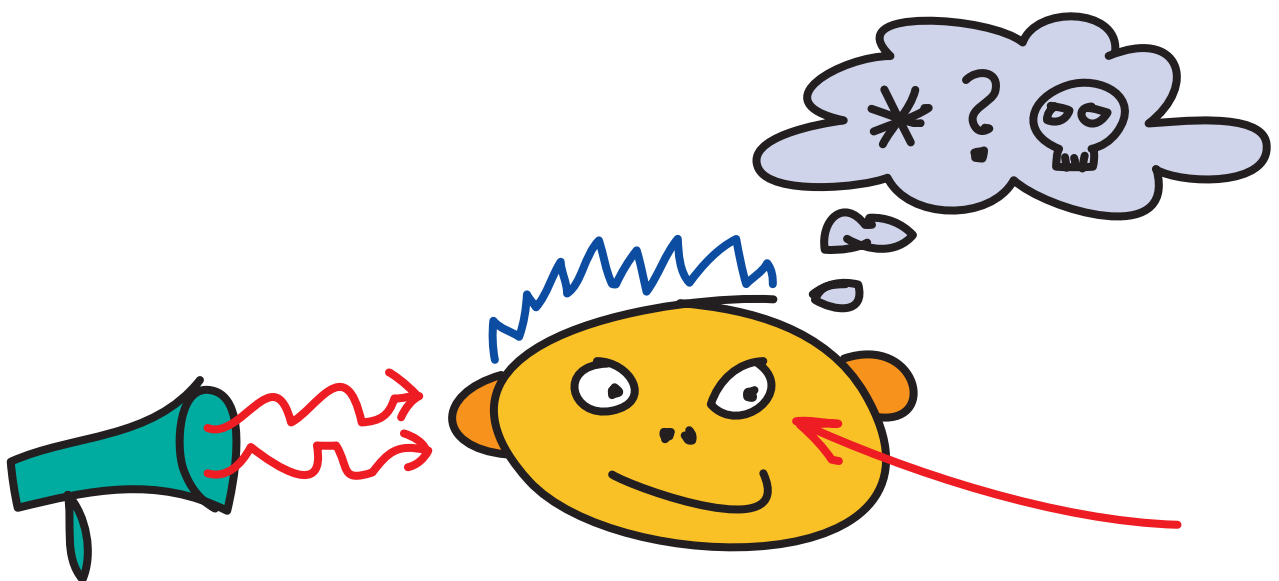
We use working memory in everyday situations without realising it. Have you ever been in a shop wondering what else you wanted to buy and could not remember? Or stopped in a room in your house and could not remember what you were going to get? Working memory training increases working memory capacity, which affects the level of storytelling, decision-making skills, the ability to think quickly and accurately, and organizational skills. Working memory training improves performance on tasks requiring attention and executive functions (planning, reasoning, etc.).

Equipment

- Stationery
- Client Worksheet
- Administrator Worksheet



WORKING MEMORY: EPISODIC BUFFER TASKS



1) Task

Please look carefully at the pictures provided. Concentrate mainly on the number of individual pictures in a line. After 30 seconds, I will cover the sheet. Then I will tell you a series of numbers and letters. When you hear a number that corresponds to the number of pictures in the line, say the name of the picture.

A series of numbers and letters:

A B D E 4 D E G 3 D F 1 M K 2 B D 5 O W 6 L T R 7 M

Practice:

Read: **K A 3 B D 1 O**

Correct answer: 3 = ball, 1 = bicycle



Appendix 1/2

Bicycle



Ball



Appendix 2/2

Sun



Dinosaur



Mouth



House



Clocks



Star



Eye



2) Task

I will tell you a pair of words containing a colour and a name of an object, for example a black shoe. You will hear the pair of words twice. Then I will lay out colours and black and white pictures on the table in front of you. Your task is to match the black and white pictures with the right colour, according to the pairs of words I told you.

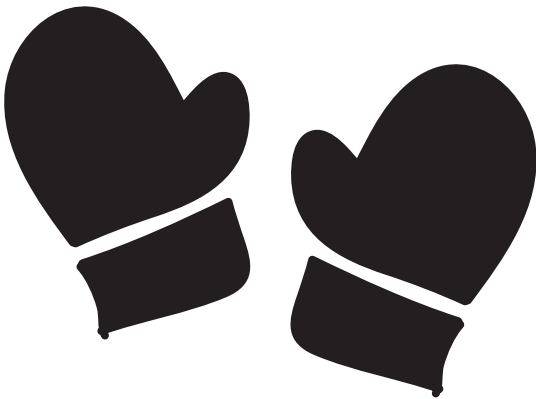
Pairs of words:

**YELLOW ALARM CLOCK, RED DRESS, GREEN GLOVES, BLUE COMB,
BLACK CAT, PURPLE BED**

Appendix 1/2



Appendix 2/2



3) Task

I will show you tables containing symbols in various colours and locations. Your task is to say yes if the symbol just presented.

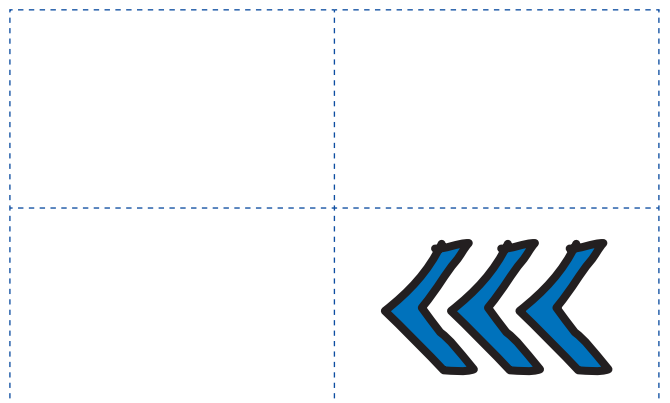
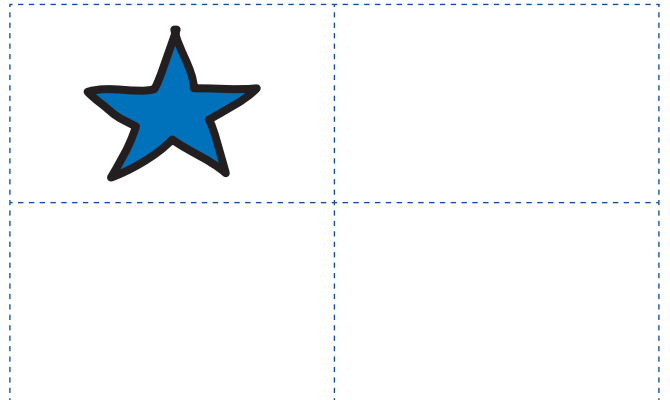
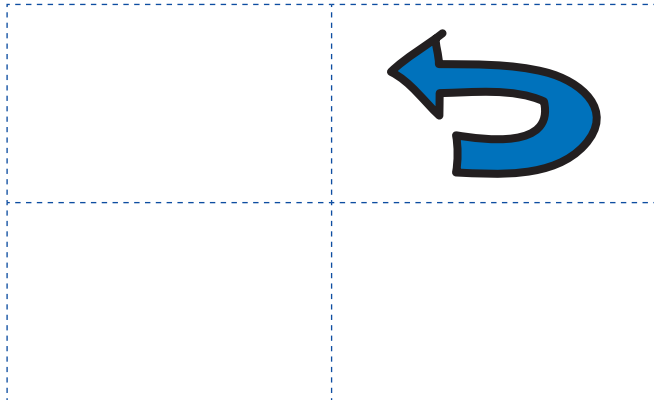
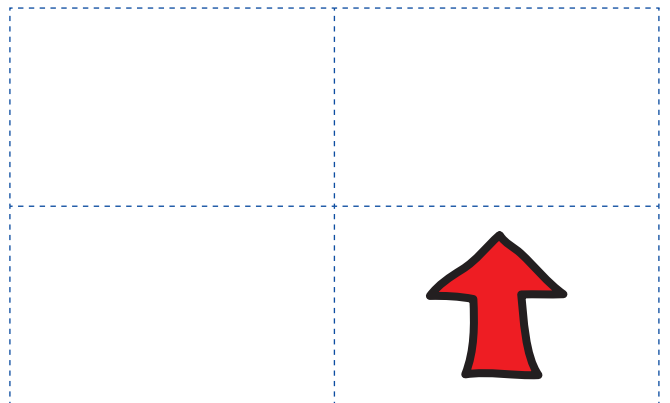
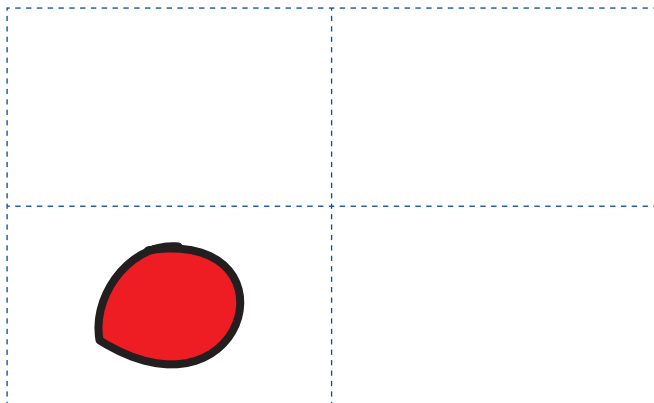
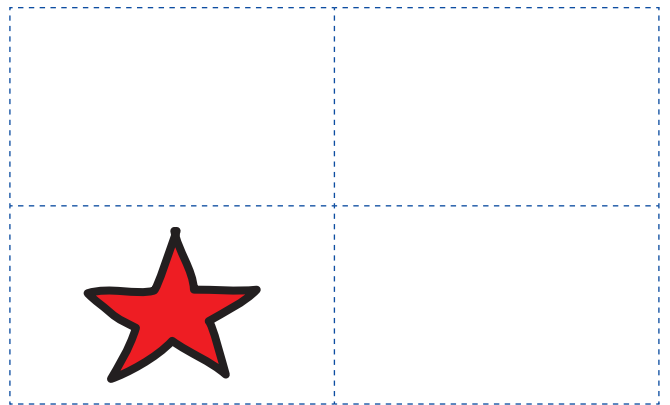
a) is the same color as the one before it,

or









b) has the same shape, color, and position in the table as the symbol before.

Note: Make sure the tables are presented in the same order as in the original document. Otherwise the task will not work.

Appendix 1/3

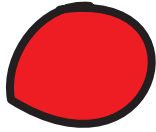



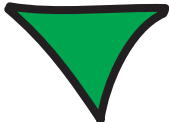
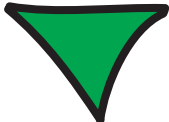




Appendix 2/3



Appendix 3/3



4) Task

You will now hear a story. Listen carefully because once I finish reading, you will be given a task related to the story.

Story:



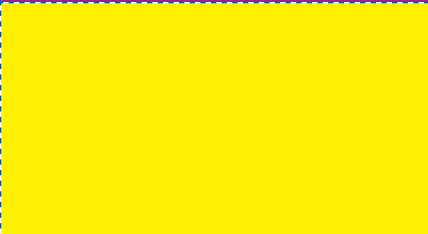


I woke up with the sun shining in my eyes. At first, I did not know what day it was, but then my mother knocked on my door and it dawned on me. It was the last week of holidays and we were going shopping for school! Since I loved school, I had been looking forward to this day for a long time. Mommy and I had a list of things I needed. It was a good thing we made that list! All I could remember was a blue book...

There really was a lot of stuff in the store! I saw yellow folders and green notebooks all around me. When I looked behind me, I also saw pink pens and orange rubbers. Mummy was already carrying a basket into which we put all the necessary things. We spent a whole hour in the store!

Afterwards, we were heading home so I could put all my stuff into my new purple bag. I could not wait for school to start!

I will now present you with objects and colours. Your task is to connect them based on what you heard in the story.

Appendix 1

book	
briefcase	
folder	
workbook	
pen	
rubber	



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